COMMUNITY FREEZERS SUPPORTING FOOD SECURITY: PERSPECTIVES FROM RESIDENTS OF NAIN, NUNATSIAVUT

by

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The undersigned hereby certify that they have read and recommend to the Faculty of Graduate Studies for acceptance a thesis entitled "COMMUNITY FREEZERS SUPPORTING FOOD SECURITY: PERSPECTIVES FROM RESIDENTS OF NAIN, NUNATSIAVUT" by Jennifer Organ in partial fulfilment of the requirements for the degree of Master of Environmental Studies.

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ABSTRACT

Changing environments are challenging access to wild foods; resources, which are valued by Inuit for health benefits, often surpass that of available market foods. Community freezer initiatives are gaining popularity as one option to help support wild food access, and thus food security, in northern Canada. Little information exists, however, about how these initiatives help facilitate wild food access for residents. A case study was undertaken in Nain, Nunatsiavut to understand: (1) how the Nain community freezer influences access to wild foods; and (2) key factors that community freezer management could consider to better support food security in their communities. Results indicate characteristics of the socio-cultural, economic, and natural environment are challenging wild food access for Nain community freezer users. Factors for consideration in future management include: issues of supply, dependency, social exclusion, and tensions between the feasibility of operations and the representation of traditional values.

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CHAPTER ONE: INTRODUCTION

1.1 Introduction

1.1.1 Food Security

Accelerated environmental changes, largely due to anthropogenic influences, around the world are stressing the human population's ability to adequately access quality foods (FAO, 2009; FAO, 2011). Food security, defined by the FAO as a threshold "when all people at all times have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (2009, p.8), was once primarily perceived as a common challenge in developing countries (Maxwell & Smith, 1992). It is now a growing international concern that spans both space and time and challenges some populations even within developed nations (Maxwell, 1996; Maxwell & Smith, 1992). Limited access to foods has adverse affects on the health and well-being of an individual, household, and community. In the most extreme cases limited access to food can result in severe hunger or starvation (Tarasuk, 2001). But other health concerns are equally worthy of attention, such as malnutrition and emotional stress, which might ensue when people or communities do not have access to an appropriate amount of healthy foods for extended periods of time (Tarasuk, 2001; Vozoris & Tarasuk, 2003). It is for these reasons that food security is recognized as a critical determinant of health (WHO, 2011), and "the most precious of all material needs" (McIntyre, 2003).

1.1.2 Food Security in Canada

Canada, a developed country and a major exporter and importer of foods, is experiencing increased rates of food insecurity among some segments of its population as changing social and economic conditions are forcing people to compromise the quantity and quality of foods they consume (McIntyre, 2003; Tarasuk, 2005). Food bank usage, one indicator of the prevalence of food insecurity in Canada, has increased considerably since the establishment of these initiatives in the 1980s, at a rate that is disproportionate to the growing Canadian population (McIntyre, 2003; Riches, 2002). For example, between

2008 and 2011 alone, food bank use increased by 28 percent (Food Banks Canada, 2011). What was once established as a short-term emergency initiative in response to poor economic conditions has now become the norm for many Canadians (Riches, 2002; Tarasuk, 2005). In response to the 1996 World Food Summit, 'Canada's Action Plan for Food Security' was developed in 1998 as a commitment to help reduce hunger levels in Canada and abroad by 2015 (AAFC, 1998). A follow-up report on Canada's Action Plan, and a Canadian Community Health Survey that identified approximately 7.7 percent (961,000) households as food insecure in 2007-2008[1] suggested that food security remains an important Canadian public health challenge and concern (AAFC, 2006; Health Canada, 2011).

1.1.3 Food Security for Aboriginal Peoples of Canada

The original inhabitants of Canada are the Inuit, Métis and First Nations, or collectively, the Aboriginal peoples of this country (AANDC, 2010). In 2005, the Aboriginal population comprised approximately five percent of the Canadian population, with a growth rate six times faster than the rest of Canada, representing the fastest growing and youngest demographic in the country (Statistics Canada, 2009). This population also experiences the highest rates of food insecurity in the country; in 2007-2008, over 20 percent of Aboriginal households experienced food insecurity compared to approximately seven percent of non-Aboriginal households (Health Canada, 2011). It is argued that this is largely because, as subjects of colonial and racist policies and practices, their social, economic, and environmental positioning places these individuals at a disadvantage when accessing preferred and healthy foods compared to non-Aboriginal Canadians (Loppie & Wein, 2009). For example, limited and expensive food choices, as well as difficulties accessing traditional harvesting locations means that access to both market and wild foods is, at times, no longer possible (Boult, 2004; Loppie & Wein, 2009; Rosol et al., 2011).

[1] The data from the 2004 Canadian Community Health Survey (which was also the first nation-wide survey to measure food insecurity) are not comparable because they measured food insecurity differently. Although it shows that more households were food insecure in 2004 (9.2%).

Colonization, defined as "the oppression of one distinct people by another, usually separated by a significant spatial distance" (Kulchyski, 2005), has often resulted in the displacement of Aboriginal peoples from their traditional lands, the impact of which has been immediate and lasting negative health effects on individuals and communities (INAC, 1996; Kulchyski, 2005). Historic events (e.g. the Indian Act which remains in place to this day, forced attendance at residential schools, banning spiritual practices, out-of-culture adoptions) brought on by colonization, also known as 'distal determinants of health' (Loppie & Wien, 2009), have much to do with the racism and social exclusion that Aboriginal people face today and restricts their access to food and other resources that are critical to their health (Battiste & Henderson, 2002; INAC, 1996; Loppie & Wien, 2009; Waldram et al., 2006)

1.1.4 Inuit Food Security

Canadian Inuit have inhabited the Canadian Arctic landmass for thousands of years living in flux with the natural environments while maintaining a close relationship with their land-based resources (Fossett, 2001). This region is referred to as Inuit Nunangat[2], meaning Inuit homelands (see Figure 1.1: Map of the Inuit Regions of Canada) (ITK 2008). After the 1950s, when the majority of Inuit were forcibly relocated to permanent settlements, unprecedented new challenges made it difficult for them to maintain their participation in traditional land- and sea-based activities (Berkes & Jolly, 2001; Kulchyski, 2005). For example, engagement in the wage-based economy has meant that there is less time available to harvest foods for personal subsistence, and the proximity of preferred harvesting areas in relation to permanent settlements required more time and financial resources to harvest wild foods (Kulchyski, 2005). Despite these and other challenges, Inuit have been able to maintain a mixed economy (Usher et al., 2004).

Individuals were and still are encouraged to maintain full time hunting practices because of the lack of employment opportunities, while others who are involved in the wage

[2] In 2009, ITK adopted a new terminology to describe their homelands. What was once referred to as Inuit Nunaat is now Inuit Nunangat.

economy can afford new technologies (e.g. skidoos and motorized boats) and can participate in hunting part-time (Myers, 2002).

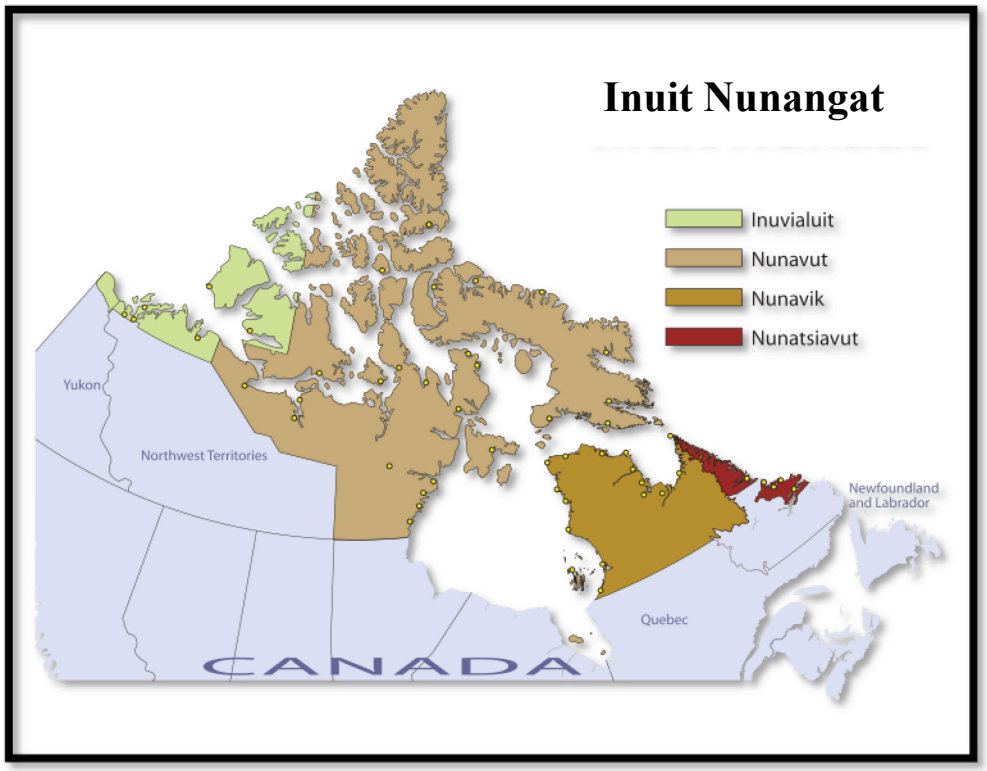

Figure 1.1: Map of the Inuit Regions of Canada (ITK, 2012b)

According to 2006 statistics, approximately 50,500 Inuit reside in Canada, with 39,500 living in the 53 communities located in Inuit Nunangat (ITK, 2008); these numbers are growing (Statistics Canada, 2009). Wild foods - those foods harvested from the local environment for consumption, also known as traditional or country foods such as seal, caribou, and berries - continue to be valued by Inuit for the important physical, emotional, mental and spiritual health benefits that the acquisition, distribution and consumption of these foods provide so much so that they often surpass that of market foods (Kuhnlein et al., 2003; Lambden et al., 2007). In 2005, 68 percent of Inuit adults living in Inuit regions harvested wild foods, and in 2006, 65 percent of Inuit "lived in homes where at least half of the meat and fish consumed was country food" (Statistics Canada, 2008. p.3). In addition to the multiple social and economic benefits, the

important health attributes of wild foods have led some to suggest that food security for northern communities is contingent on access to these wild foods (Lambden et al., 2007).

Despite a high prevalence of harvesting activities, Inuit experience the highest levels of food insecurity in Canada (Boult, 2004; Rosol et al., 2011), and one report from the National Aboriginal Health Organization (NAHO) suggests "Inuit food security remains elusive for too many Inuit families." (Boult, 2004, p.11). Findings from an Inuit Health Survey completed in 2007-2008 revealed that Nunavut "had by far the highest documented food insecurity prevalence rate (68.8 percent) for any Aboriginal population residing in a developed country" (Egeland, 2011, p. 444). Factors such as expensive and low quality market foods and changing wildlife populations have immediate and long-term consequences for the health and well-being of many residents (Boult, 2004; Furgal & Seguin 2006). It is important to note that these measurements do not explicitly include considerations for wild food access in their calculations, although Inuit food security studies to date have highlighted the stresses on wild food access in relation to changes in the natural environment that have had visible implications on the daily lives of Inuit (see, for example, Beaumier & Ford, 2010; Guyot et al., 2006; Laidler et al., 2009; Wesche et al., 2010). Critical habitats for seals, walrus, and other important wild marine foods, for example, have been threatened by the changing sea ice conditions that also pose new challenges for hunters who rely on sea ice travel to harvest these foods (Furgal & Sequin, 2006; Laidler et al., 2009).

At the same time that these multiple stressors have been influencing Inuit communities, Inuit residents have been able to maintain a high level of socio-ecological resilience in their pursuit of access to foods that stem from a relationship with the social and natural environments that has existed for thousands of years (Berkes & Jolly, 2001; Kulchyski, 2005). Experienced hunters have been able to adjust their harvesting practices to accommodate new travel conditions (Laidler et al., 2009); family members who are separated by distance send each other wild foods; some communities have agreements with each other to exchange wild foods that are otherwise not available for harvest in their local environment (Berkes & Jolly, 2001); and, reaching beyond their own

communities, volunteer Inuit hunters in Nunavik and Nunavut donate wild foods to Inuit residents of Montreal for monthly feasts (Lowi, 2001).

1.1.5 Community Freezers

The recognition of continued stresses on access to wild foods has encouraged communities to reach out to academic research partners to further identify options available to maintain access to wild foods for all residents in order to support the health and well-being of communities (Chan et al., 2006; Furgal & Sequin, 2006). One possible support option for the continued access to wild foods in the face of economic instability and environmental change and a variety of forms of stress, is the operation of a community freezer. Although no strict definitions exist for what a community freezer is, and it appears that management approaches of existing freezers vary among communities and regions across the North, they generally serve as a wild food distribution initiative for individuals who are unable to access wild foods on their own. Community freezers began to emerge in the 1970s under the Hunter Support Program in Nunavik (KRG, 2009), and in the 1980s in the Northwest Territories in response to shifts in the socio-cultural environment (Myers, 2002), and are perceived by some to help support access to wild foods for residents (Chan et al., 2006; Duhaime et al., 2002; Furgal & Sequin, 2006). While some community freezer initiatives have been discontinued due to maintenance issues (Chan et al., 2006), reinvestments into these initiatives are now underway in Nunavut (George, 2011).

Despite the apparent growth in interest and activity around community freezers as a response strategy to climate, social, economic, and other forms of change as well as stress on wild food access in Inuit communities, the influence or benefit of community freezers and their direct impact on food access and household food security status has received little to no attention in the scholarly literature to date. The sparse research that does exist concerning community freezers has focused on the role and acceptability of the community freezers associated with the Nunavik Hunter Support Program in contemporary society (Gombay, 2009, 2005a, 2005b; Kishigami, 2001). Although these

earlier studies offer important insights into community freezer initiatives, they do not explicitly speak to the role these strategic initiatives play in helping individuals and communities respond to increasing uncertainty and stress in the local environment. As a result, this thesis uses the case study of a community freezer in one Inuit community to understand pressures on wild food access. It considers environmental and other forms of change and stresses in Inuit communities, and offers considerations for future management of this and other community-based food support initiatives. The remainder of this chapter includes an overview of my research goals and objectives, research methodology, data collection activities, background information specific to this case study, and ethical considerations.

1.2 Project Overview

The global food security conversation is now beyond whether or not access to foods is an issue, but why it is and how to support food security in light of changing pressures on access to food and other resources (Maxwell, 1996). As the Canadian Arctic undergoes major changes to its environment, negative consequences for food security in this region continue to unfold (Beaumier & Ford, 2010; Guyot et al., 2006; Rosol et al., 2011). Inuit communities are responding to this growing issue by discussing ways forward to support food security in their regions (Chan et al., 2006; Furgal & Sequin, 2006). A community freezer, an already existing food support initiative established in the study community and throughout northern Canada, is used in this thesis as a catalyst for exploration of current manifestations of stresses on access to foods for Inuit, and to better understand the role of community-based initiatives in supporting access to foods in this region. Focusing on the Nain community freezer as a case example, this study examines how a community freezer currently does, and in the future how it may, influence access to wild foods for residents in a remote Canadian Inuit community undergoing various forms of stress on household food security. Results from this project are intended to serve as an important resource for Nunatsiavut Government towards improving access to wild foods in their five communities (Figure 1.2: Map of study location). More generally, the findings will inform scholarly, community-based, and policy understandings of the role of food support programs in alleviating stresses on access to wild foods for Inuit, and

offer key considerations for future management that may resonate with other issues of resource access within the region.

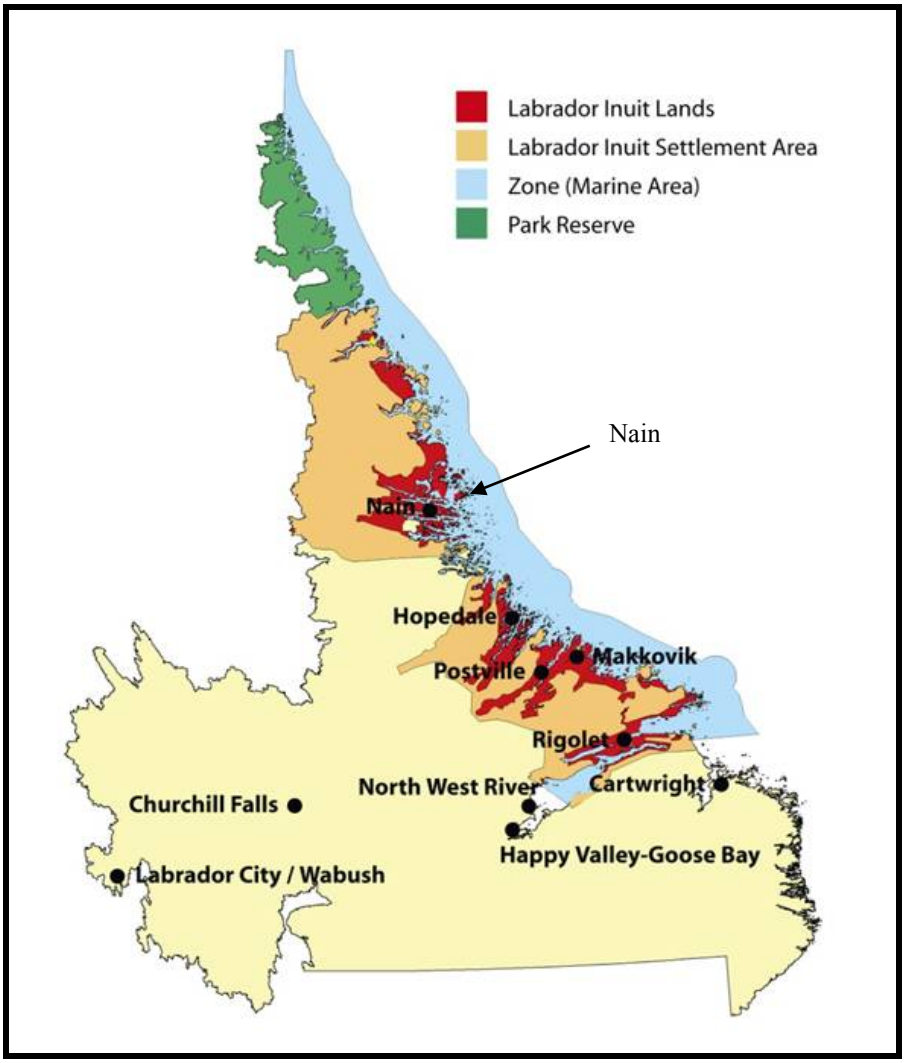

Figure 1.2: Map of the study location (Nunatsiavut Government Canadian Constituency, 2012)

This research aims to answer two central interrelated research questions, each with a number of related sub questions:

Central Question #1: "How does the current Nain community freezer influence access to wild foods for current users?

Sub-questions:

i. What is the role of the current community freezer/how is the current freezer managed?
ii. Who are the current users of the freezer?
iii. Why do the current users access the freezer? When do users access the freezer? How do they access the freezer? *(Characteristics of access)*
iv. What are the current strengths and limitations in the ability for the community freezer to alleviate stresses on access to wild foods?

Central Question #2: What key factors should the community freezer management consider to address current and anticipated future impacts of environmental changes on access to wild foods?

Sub-questions:

i. What are key current and anticipated future environmental stresses on access to wild foods in the region?
ii. What are current initiative management strengths and weaknesses including abilities and strategies (if existing) for addressing this stress?
iii. What should future community freezer management consider, including ability and strategy (if existing), for addressing this stress?

1.3 Case Study Location: Nain, Nunatsiavut

Situated in the Canadian subarctic, Nain is the northernmost community of Nunatsiavut, the Inuit region of Newfoundland and Labrador. Established by Morravian missionaries in 1771, it is also the oldest colonial establishment created for Inuit peoples in Canada. The enactment of the Nunatsiavut Government in 2005 is the result of the Labrador Inuit Land Claims Agreement that came into effect after a 28-year negotiation period between the Labrador Inuit Association, the government of Newfoundland and Labrador, and Canada (Nunatsiavut Government, 2009). The Nunatsiavut Government achieved the right to self-government, with Labrador Inuit Lands and specified material lands within Labrador Inuit Lands under jurisdiction of the Nunatsiavut Government (Proctor and Chaulk, 2012; Nunatsiavut Government, 2009). Five communities can be found within the Labrador Inuit Settlement Area: Nain, Makkovik, Hopedale, Rigolet, and Postville, and each operate their own community government. Nain is where the majority of Nunatsiavut Government offices are housed and thus serves as the primary administrative hub of Nunatsiavut. Today, approximately 1200 people live in Nain (Statistics Canada,

2012). Located approximately 370 kilometres from Happy Valley-Goose Bay, daily airline services and a coastal boat service that operates from July to November from Happy-Valley Goose Bay transports freight and passengers to and from Nain (Nain Inuit Community Government, 2011).

Prior to the establishment of permanent settlements, Inuit in this region lived semi-nomadic lifestyles, and "where a family hunted was a function of where it lived" (Brody, 1977, p. 112). While settlements established between the 1700s and 1900s as a result of colonization efforts by Moravian Missionaries signaled the beginning of a transition from a semi-nomadic to a more sedentary lifestyle, major disruptions in harvesting practices and diet did not occur until the early 1900s during the fur trade period when Inuit were more influenced to move to these settlements for longer periods of the year (Hanrahan, 2012). Shortly after Newfoundland and Labrador joined confederation in 1949, two existing communities (Nutak and Hebron) were divided and relocated to Nain, Makkovik and Hopedale, communities that had already long been inhabited by other Inuit in the region (Markham, 2003; Markham, 2001; Brody, 1977). Similar to other relocations in Canada (Kulchyski, 2005), a drastic and sudden move had immediate impacts on the (in)ability of individuals to continue their preferred lifestyle of living on and with the land (Brice-Bennett, 2000; Brody, 1977; ITK, 2012a; Markham, 2001; Markham, 2003). Moreover, and unlike other Inuit relocations in Canada, this brought about tension between long-standing and new Inuit residents and had impacts on the ability for many to access wild foods (Brice-Bennett, 2000; ITK, 2012a). Language differences and internal discrimination among Inuit presented a barrier for many to learn from others about harvesting foods in the local environment that differed from their original home environments (Brice-Bennett, 2000). Furthermore, as the provincial government failed to supply adequate housing and jobs as promised, and families were arbitrarily separated by distance, many Inuit found themselves in difficult situations where they were unable to financially support harvesting activities and feed their families (Brice-Bennett, 2000; ITK, 2012a).

Today, issues of food security persist for Nain residents and other Nunatsiavut communities. Findings from the Inuit Health Survey conducted in 2007/2008 indicate that approximately 45 percent of Nunatsiavut households are food insecure (Rosol et al., 2011), which is almost six times higher than the national average (Rosol et al., 2011). This high prevalence of food insecurity is partly attributed to low income levels, high costs of market foods, and the number of dependants in a household. The above study did not explicitly include factors of wild food accessibility as a consideration for measurement of food insecurity levels, however Rosol and colleagues suggest that greater support for participation in harvesting activities and wild food consumption could alleviate stresses on food security for this and other regions. A mixed economy has been maintained in Nain where the consumption of both market and wild foods are important to residents. Caribou (Rangifer tarandus-*Tuktuk*), Arctic Char (Selvilinus alpinus-*IKaluk*), Arctic Hare (Lepus arcticus-*Ukalik*), and Seal species (e.g. Phoca vitulina-*Puijik*) are examples of preferred wild foods that are harvested in and around Nain.

For beneficiaries of the Labrador Inuit Land Claims Agreement, there are no harvest limits established for foods that are harvested for personal consumption, except salmon and polar bear. Each household is permitted to harvest seven salmon per year, and a community quota for the number of polar bears allowed for harvest is issued each year by the provincial government (Personal communication, Nunatsiavut Government Director of Renewable Resources, April 7, 2011). The local environment that these foods are harvested from includes a vast geographic area, where many harvesting areas are typically only accessible via snowmobile or boat. Nain is situated among a group of coastal islands that are home to many freshwater bodies; waterways are critical linkages to preferred harvesting areas and traditional homes (Williamson, 1997). The only formal establishment where wild meats can be purchased is at the Nain Fish Plant, which is operated by the Torngat Fish Producers Co-operative during the summer operating season. Char processed at this plant are exported elsewhere and are not available at local grocery stores off-season. Market foods are available at two retail grocery stores, three convenience stores, and one restaurant.

Local observations of ongoing stresses on access to wild foods associated with environmental changes in the region prompted the Nunatsiavut Government to support the use of community freezers in their five communities. As there was little information available about use and management of these community freezers or community freezers in the Canadian Arctic, the Nunatsiavut Government along with the Principal Investigator (C. Furgal) sought a graduate student who would develop a research project that would inform community freezer initiatives of how to better support food security in their region.

Nain Community Freezer

In 2010, Nain was the first community in the region to operate a community freezer, and the only one operating during my study period (2009-2010). In 2005, Ulapitsaijet, a community volunteer group in Nain, chose to purchase a standard 15 cubic square foot chest freezer to function as a community freezer because of observations that a growing number of single mothers and Elders could not access wild foods through existing social or economic means. The Nain community freezer is located in the lunchroom of a local government building. The initial capital investment of the freezer is the only cost incurred by Ulapitsaijet, as the government donates the space and energy costs, and harvesters are not generally financially supported for supplying meats to the freezer. A select number of harvesters were asked by Ulapitsaijet to donate foods to this freezer harvest foods in conjunction with their personal harvesting practices. The foods are then distributed directly to some community Elders and to anyone who can access the freezer during the building hours of 8:30-4:30 Monday to Friday. There is no established criteria to identify who can access this freezer, nor is there a formal monitoring program for supply or demand. As the freezer is managed by members of Ulapitsaijet, and at the time of the study it was located in the same place as the Parks Canada offices (where some managers also work), residents refer to this freezer as the "Ulapitsaijet freezer" or the "Parks Canada freezer". Shortly after the data collection period, Nain piloted a new community freezer program located at the research centre in Nain with the support of the Nunatsiavut government and community groups including Ulapitsaijet. The freezer initiative that this

study focused on was discontinued, however managers are still involved with the new community freezer initiative. This study reports findings from research that focuses on the community freezer initiative that was located at the building during the data collection period, and which will be used to help inform the new community freezer program in Nain.

1.4 Research Approach and Design

1.4.1 Community-Based Approach

This study adopted a community-based approach throughout the study design and implementation phases (Stewart & Draper, 2009; Castleden et al., 2008; Israel et al., 1998). Community-based research aims to include community members throughout the research process to help ensure the research topic, and how it is conducted and presented is respectful and relevant to community members (Stewart & Draper, 2009). In addition to the research development that was already completed in association with the larger project before I became involved, I undertook an initial community visit to Nain (July 5 to July 25, 2010) to meet with community members and government partners from the Nunatsiavut Government Research Advisory Committee and the Department of Lands and Natural Resources. During that visit, we discussed potential project directions and I familiarized myself with the Nain freezer initiative and the community that informs this study. The initial community consultation and subsequent meetings with project partners informed project objectives and research activities to help ensure they were meaningful, relevant, and carried forward in a respectful manner.

Throughout the research process, five community members were available to fulfill the role of community liaisons. Sarah Karpik and Shannon Webb assisted with meeting coordination during the initial community visit; Ron Webb assisted during the primary

data collection phase; and Katie Winters and Donna Dicker assisted during the follow-up visits during internal[3] verification and validation activities.

Ron Webb was particularly involved with assisting me throughout the research process. We met each weekday morning for approximately three weeks to keep each other updated on progress and discuss ways forward for communicating with research participants. He reviewed interview guides and recruitment scripts to help ensure language was respectful and well understood by participants. He also became a contact for residents if they had questions about the project or wanted to participate in the study and assisted with the return-back of transcripts during a subsequent visit.

1.4.2 Research Design

Following single case study research design methodology (Yin, 2009), this qualitative, exploratory study employed multiple research methods that, through triangulation (Farmer et al., 2006), offer an in-depth examination of stresses on access to wild foods for residents, community freezer management and use, and perspectives of current and future community freezer management. Case studies are often employed in exploratory research to effectively offer a place-based perspective and authenticity that other research designs might not be able to achieve (Lincoln & Guba, 1985; Yin, 2009). Lincoln and Guba (1985) suggest the "case study represents an unparalleled means for communicating contextual information that is grounded in the particular setting that was studied" (p.360). Since there is little research to date on community freezer initiatives, following a case study research design was deemed an appropriate and valuable approach to reveal the nuances of an issue. This is particularly important with regards to food security in these regions, as food security literature calls for a place-based perspective and subjectivity, which is currently lacking, to best inform food security policy (Maxwell, 1996).

[3] Internal validity is a tool used to help make sure that the analysis and presentation of results is an accurate representation of the data collected and resonates well with study participants (Bryman & Teevan, 2005)

1.4.3 Data Collection

Relationships developed and data were gathered, verified, validated and presented back to the community participants and key regional and local decision makers for this study during 5 trips to the community (Table 1.1). During the initial visit to Nain in July 2010, I met with community project partners including the Nunatsiavut research advisory committee to discuss project interests including appropriate methods for data collection and the type of information they would like this project to gather that would be of practical value to future community freezer initiatives in the region. I also spent time with other community members one on one to ask about changes on wild food access in Nain and their opinions about project priorities. These meetings were arranged by two community liaisons, Sara Karpik and Shannon Webb, both of whom also attended some of these meetings. Furthermore, Ulapitsaijet invited me to one of their meetings to discuss the current community freezer initiative and their ideas about how this project could be beneficial to current and future community freezer initiatives. This process was important to familiarize myself with the community freezer initiative as well as those individuals who were involved in the initiative; the people I met during this first visit became important contacts for the subsequent visits.

Study priorities that emerged from these initial community meetings included: identifying who is accessing the current community freezer initiative as there was no formal monitoring of use at the time of this study, and recommendations that future community freezer management in the region be as practical as possible. Stakeholders indicated that if this project was not able to offer these outcomes in the final thesis report, they were still to be taken into consideration for community-specific presentation of results. Further relationships developed with community liaisons and project participants over time during the data collection, validation and verification stages. During the data collection process, meetings with Ron Webb, the community liaison, fostered mutual respect and trust in the work being conducted throughout his involvement in the review of data collection and participant recruitment materials to help ensure appropriate use of language. The data verification and validation stages also fostered mutual trust with

project participants, where presenting information back to them offered a space to give and receive feedback and discuss the use of their information.

Table 1.1: Timeline of Community visits to Nain, Nunatsiavut

Community Visit	Date
Initial Community Visit	July 5-25th, 2010
Primary Data Collection	November 10th – December 7th, 2010
Transcript Verification	March 16th – April 22nd, 2011
Internal Validation of Preliminary Results	March 16th-30th, 2012
Final Presentation of Results	June 25th – 28th, 2012

Semi-structured interviews, focus groups, and participant observation (as described in Hay, 2005), as well as document collection and review comprised the data collected to address the identified research questions. Protocols for data collection are detailed in Appendices A and B. Study participants included users of the Nain community freezer (residents who accessed the freezer within the year previous to data collection), active harvesters, and volunteer community freezer managers (Table 1.2). Semi-structured interviews, focus groups and participant observations were completed over a two-month period (November-December 2010), while document collection and review were completed on an ongoing basis (January 2010 to May 2012).

Table 1.2: Summary of research participants

Data Collection Method	Category	Number of participants	Gender (M/F)	Average length of interview/ focus group
Semi-structured interviews (17)	Managers	2	4/2	40min
	Users	13	7/6	45 min
	Elder Harvesters	2	1/1	60min
Focus groups (3)	Managers	6	4/2	90min
	Harvesters (1)	5	5/0	
	Harvesters (2)	4	1/3	90min

i. Semi-structured Interviews: Users of the community freezer

Thirteen semi-structured interviews were conducted with users about stresses on access to wild foods they are experiencing and their use of the freezer initiative. Semi-structured interviews, rather than focus groups were chosen because discussions with users of the community freezer might have included information that is sometimes personal in nature. For example, users might have been sensitive about their use of the community freezer and therefore wanted to keep their use of the freezer confidential. Since there was no formal record of people who used the freezer at the time of the study, current users were recruited based on convenience and criterion sampling strategies[4] (Hay, 2005). Current users were considered for this thesis to be residents who accessed the community freezer approximately one year prior to data collection. Posters (see Appendix C & D) were placed at various community centers and facilities in Nain. An unexpected high response rate for interest in participation subsequently occurred. This might have been attributed to confusion of this study with another pertaining to changing weather that was taking place at the same time as the data collection period of this study, as well as knowledge through word of mouth that my study was offering an honorarium for participation. To manage this unexpected high response rate for interest in participation, the community liaison who is also a manager of the community freezer compared the names of people who showed interest with who he and other managers knew to use the initiative. Because managers did not attend to the community freezer on a regular basis, they asked employees of Parks Canada who worked in the same building as the community freezer and who often respond to user inquiries about community freezer stock to add names of people they knew who were using the community freezer to the list being developed by Ron. This helped to ensure rigour in participant selection (Hay, 2005).

ii. Focus Groups: Knowledgeable environmental observers and active harvesters

Two focus groups involving "knowledgeable environmental observers" and active harvesters took place, one with five and the other with four participants (Table 1.2).

[4] Convenience sampling is when participant recruitment is directed by the availability of a certain study population that is accessible at a particular time; whereas criterion sampling is recruiting only participants that fit specific criteria (Hay, 2005)

Knowledgeable environmental observers were residents who were identified by key community contacts to be experts in particular areas of the environment based on experience, and active harvesters were residents identified to participate in harvesting activities on a regular basis. Following methods by Davis and Wagner (2003) for identifying 'experts,' I recorded the names of those individuals considered to be active harvesters and knowledgeable environmental observers identified by three key community contacts. Two community contacts are Nunatsiavut Government representatives. Ron Webb, the community liaison for this project, was the third community contact who is affiliated with Sikumiut Environmental Management Ltd, an environmental consultation organization based in Nain. Individuals who appeared in more than one individual contact's "list" were contacted first by Ron Webb to invite them to participate in the focus group. This helped to ensure rigour in participant selection and a minimization of bias as influenced by any one individual identifier (Davis & Wagner, 2003). Based on guidance from local research advisors, focus groups seemed appropriate for speaking with active harvesters because the information discussed during the focus groups was not expected to be sensitive in nature. Also, focus groups typically foster a higher level of conversation and exploration among members, and therefore more information about a particular subject may be acquired compared to one-on-one interviews (Hay, 2005).

One female and one male Elder harvester were recommended by more than one contact to participate in the focus groups, however I required a translator to communicate with them. As focus groups that require translation often take a long time to complete, I decided to interview those individuals one-on-one instead. This allowed the opportunity for those people who were recognized as experienced hunters to participate in this study in a comfortable environment. This also ensured that I was able to gain perspectives from an older population that was not as present during the focus groups. The one female Elder had to decline participation in the interview at the last minute, and so I conducted an interview with a different female Elder who was recommended by more than one contact, but who could not attend the focus group and did not require translation.

iii. Focus Group: Managers

One focus group with six managers took place to discuss management and use of the community freezer. For the same reasons indicated above, a focus group setting was deemed appropriate. After I met with managers during the initial community consultation to help inform the research direction, I invited them via email or in person to attend the focus group. The community liaison and another manager also assisted with this in cases where I did not have the contact information for all managers. Follow up interviews took place with two of the focus group participants to clarify information discussed in the management focus groups.

See Appendices E to K for consent forms, Appendices L to P for interview guides and Appendix Q for recruitment scripts.

iv. Participant observation

Observations of harvesting practices in and outside of the community, community freezer activity, and other activities that informed this study such as informal conversations with residents surrounding the weather and harvesting activities were hand recorded on a daily basis while in the community. Participant observation allowed me not only to further contextualize the information communicated through the focus groups and interviews, but also to understand the human and natural environment that shapes my research question (Hay, 2005), thus enhancing the rigour of this research (Baxter & Eyles, 1997). That being said, participant observations are not as visible in the following chapters compared to the other data collected. Participant observations primarily influenced the analysis; this approach to utilizing participant observation in research is identified in other literature (see, for example, Richards, 2005).

v. Document Analysis

Document analysis of food security-related topics specific to the Nunatsiavut Region and of community freezer initiatives in Canada was completed. Region-specific documents were collected and reviewed on an ongoing basis from approximately January 2010 to May 2012 from scholarly journals and government publications. Information pertaining to community freezers was sourced from northern news websites as well as scholarly journals. Information from these available sources assisted with the contextualization of information presented in interviews and shaped both background materials and topics for discussion.

1.4.4 Data Analysis

Interviews and focus groups were audio recorded in the instances where participants gave their permission. When a participant did not want to be audio recorded, the conversation was hand recorded. Of the 17 participants who were interviewed in a one-on-one setting, 16 were audio-recorded. All focus groups were audio-recorded. The original goal was to return transcripts to participants in a timely manner while I was still in the community during the primary data collection phase; all recordings were sent to a transcription service company as interviews were completed and audio-recordings became available. The transcripts were sent back to me within a three-day period. After I reviewed the transcripts, however, there was a considerable amount of editing to be completed before forwarding them to participants for the transcript verification process. I completed the transcription at Dalhousie University, and once complete, I sent transcripts back via email or in person during a subsequent community visit for transcript verification (March 16 to April 22, 2011). All participants were offered the opportunity to review their transcripts and to contact me via phone, email, or to meet with me in person to request any changes to the transcripts. Those participants who spoke Inuttitut but did not read English or Inuttitut and who wanted to review the transcripts with me did so orally through a translator. Six participants wanted to review their transcripts.

After transcript verification, transcripts and participant observations were entered into the qualitative data software program NVivo 9^{TM} to assist with storage and management of

information. Passages from the documents were organized based on a set of descriptive and thematic codes (Richards, 2005; Hay, 2005; Miles & Huberman, 1994). To help ensure external validity[5], inter-coder reliability was completed with a colleague who was familiar with the software package and process of qualitative analysis but not familiar with the research project. Each of us coded the same transcript based on the identified coding structure. Once completed, we compared our results with each other and discussed any differences. Any major differences in the way that we identified passages were discussed and taken into consideration in the updated coding scheme.

Further internal validation and verification activities took place with study participants in Nain (March 2012). The primary purpose of this trip was to help ensure the presentation of preliminary results was respectful and resonated with participants. A two-page summary of the project status and preliminary results was distributed to all study participants, and they were also invited to an oral presentation of these materials. Users who agreed for their quotes to be used at the time of our interview were also offered the opportunity to review the use of their quotes in the manuscripts under preparation. I was also available to meet with individuals in person to review the use of their quotes or the two page summary with them. In total, five participants attended an oral presentation, two participants met with me on an individual basis to discuss preliminary results, and six participants met in person to clarify the use of their quotes. Feedback gained from these meetings resulted in the following: (1) change of language used in the presentation of final results to better reflect the implications of some research; (2) confirmation that the organization of results made sense to individuals; and (3) direction concerning the amendments to my thesis discussions. All feedback was documented and considered for the presentation of final results. In June 2012, a community-wide presentation of results was given in Nain (see Appendix R for invitation to presentation results) and a two-page summary of final results was also prepared for public distribution (see Appendix S).

[5] External validity is a tool used to help ensure that the presentation and analysis of results resonates well with people who are further removed from the research. This is important so that research can be communicated in a way that assists with the comprehension of a topic or issue that individuals might not already be familiar with (Bryman and Teevan, 2005).

1.5 Ethical Considerations

1.5.1 Positionality

I was introduced to the concept of positionality[6] statements in a research methods course during the first semester of my graduate program. Some authors might choose to include a positionality statement at the beginning of a publication so that the reader can better understand who is behind the words. This approach resonated with me and I have included my own statement here, in the introduction to my thesis. Prior to deciding on a particular research path, I grappled with the question of who I am, why I am interested in a particular topic, people, or region, and ultimately how this would mesh with the research being conducted and be respectful of and respected by the people or communities that this work would involve.

For this study in particular, it is important for me to share something of myself. I am not from Nain, Nunatsiavut, the community that I have worked with throughout this thesis, nor am I Inuk. In fact, previous to this thesis project I had never been to Nain. Although the community did not explicitly express reservations about this research being conducted by non-Inuit, it was something that I was sensitive to in my own work. This sensitivity stemmed primarily from field courses and conversations with community members from other northern regions who introduced me to a history of research in Aboriginal communities that can be characterised by a lack of respect for the communities that has fostered a legacy of distrust for research to be conducted in their regions[7].

During my first visit to Nain, one resident asked me the question I was always a bit self-conscious about, "Why is it you and not someone from the community working on this project?" Although this caused some initial personal discomfort, it was a question I

[6] Positionality is self-identified characteristics of individuals that might suggest ways that the research was influenced. It acknowledges subjectivity in the research process, regardless of efforts made to adhere to objectivity (Hay, 2005).
[7] There is a rich body of literature on this subject matter as well, see, for example: Smith, 1999; Battiste & Henderson, 2000; Kovach, 2009).

absolutely respected, yet answering it was difficult. Above all, this conversation emphasized that *who* conducts research matters to individuals. Although I became more confident as the project progressed, I never really stopped questioning 'why me?' Had I stop questioning this, I think I would have felt a sense of failure in producing honest, good research that comes from sensitivity to the socio-cultural distance between the community and myself. Prior to undertaking this thesis research, as an outdoor educator, I learned an important lesson: when we become too comfortable with the work we do, or when we perceive there to be no risk, this is the moment when we need to stop and take a break. Although the context is different, I think this lesson applies to the work researchers do; we must strive to always consider how our actions affect our research. As a result, I have included my positionality statement below:

I am a graduate student from Halifax, Nova Scotia with English and Lebanese roots. I grew up eating well and often, and took this for granted until recent years. Three events come to mind when I began to realize that food might not always be accessible and how this affects the way we live and feel:

1. Before I left for an out-of-province undergraduate program in 2003, my granddad who had our family over for Lebanese food each Sunday, handed me some cash and said "make sure you eat!". This was about to be the first time in 20 years that I would not be attending our weekly family dinners, what I now consider a family tradition, and indeed I missed those foods and the company. I also realized then that the only way I identified with being part Lebanese was through the food, and when my granddad said 'make sure you eat' he really meant 'make sure you eat well'.

2. Most of the food I consumed during the last semester of my undergraduate program came from the university food bank until I had the guts to tell my parents, who then supported me until the completion of my degree (Thank you Mom and Dad). This was also one of those important reminders not to take family for granted, and the real cost of food.

3. During my undergraduate training, I lived in Pangnirtung, Nunavut while taking part in a summer school program, which showed me how connected people were to their food sources, and how disconnected I was from mine. I credit that experience largely to where I find myself today. I do not think I would have held such a keen interest in access to wild or local foods if I was not familiar with the value of these foods to the Inuit I met that summer.

1.5.2 Procedural Ethics

A guiding principle that I adhered to throughout the research project is the '4Rs' of Aboriginal research': respect, relevance, reciprocity, and responsibility (Kirkness & Barnhardt, 2001). The following are examples of how I applied each of the 4 Rs of Aboriginal research throughout my research:

1. *Respect:* I took the time to understand community protocols and interests prior to and during the initial community visit and throughout the study.
2. *Relevance:* I took the time through community consultations to understand how this project can best meet the interests and needs of the community, and to structure the research design so that it reflected those expressed interests while meeting the overall project goals.
3. *Reciprocity:* Ongoing communications with community partners influenced research objectives to reflect community interests in this project. Information gathered from this study has produced practical results for community purposes, while the same information is also contributing to the larger conversation of food security in the scholarly literature. Community involvement in this study also contributed towards the rigour of this research that brings forward more credibility of the work produced and that reflects Inuit values and priorities, and in a language that also resonates well with community members and perhaps with other Inuit communities. I also volunteered some of my time while in the community to help with elements of the new community freezer initiative such as

a successful grant application for a youth program, evaluation development, and daily organization and preparation of foods in the freezer.

4. *Responsibility:* Throughout the research process, I strived to conduct research that accurately reflects the values and perspectives of community members.

In addition to the 4 Rs of Aboriginal research, I also referred to the Inuit Tapiriit Kanatami guidelines for responsible research in Inuit communities (ITK, 2007). Inuit Tapiriit Kanatami is the national Inuit organization of Canada, advocating for the interests and concerns of Inuit in Canada. Ethical research practices is one of the areas this organization strongly promotes, and they have developed resources for both the Inuit communities and for incoming non-Inuit researchers regarding guidelines for negotiating meaningful research relationships with Inuit communities (ITK, 2007). The Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans was also consulted (2010). Finally, the project underwent review and approval by the Nunatsiavut Government Research Advisory Committee and the Dalhousie University Social Sciences and Humanities Research Ethics Board (See appendices T to V for ethics approval letters).

1.5.3 Ethical Challenges

The process for participant recruitment to engage community freezer users, posters and radio announcements inviting users to participate in this study, was originally chosen based on the premise that accessing the community freezer may have some form of social stigma associated with it and therefore individuals may not want to participate in an interview identifying them as a freezer client. Thus, directly contacting and inviting individuals who were identified as regularly accessing the freezer was an approach I decided to avoid. Furthermore, since management did not have a formal list of freezer clients, I did not want to recruit participants only based on those who they knew to use the freezer program, potentially excluding others. Posters that were distributed and posted throughout the community (Appendix C and D) and the airing of radio announcements inviting individuals to participant were the chosen way forward for

participant recruitment. Once in the field and after talking with community partners, I learned that use of the community freezer was not necessarily a stigmatized behaviour and there was lack of confidence from advisors that posters would attract enough interview participants. As a result I made amendments to the recruitment process to include an identification process involving managers. Managers were asked to inform users about the study as they contacted or visited the freezer office and refer them to me. Posters were still placed in community centres to reach other users who might have been overlooked (see Appendices C and D).

In response to an unexpectedly high response to the posters and advertisements inviting people who accessed the community freezer to participate in my study, managers were asked to list the names of everyone they knew to use the freezer. Because Parks Canada was located in the same building as the community freezer, employees of Parks Canada often received inquiries from users about community freezer stock and they saw people access the community freezer. Thus, managers also asked Parks Canada employees to provide them with names of people they knew were accessing the community freezer. Ron, the community Liaison (who was also a manager), compared the list of names of those who showed interest in participating to the study to confirm that those interested in participating were in fact users, as some people also mistook this study for a different community-wide survey about changing weather conditions that was taking place simultaneously in the community and could have contributed to the high response.

The Nunatsiavut Government outlined in their letter of approval for this research that they wanted all raw and processed data pertaining to Traditional Knowledge to be shared with them (see Appendix U). Currently, outlined in the The Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans, if data are being shared, participants need to understand details about the storage and use of this information with that party. Despite this stipulation, the Nunatsiavut Government does not have an archive system for data. Furthermore, there was concern that some participants might not be willing to share as much information if they understood the Nunatsiavut Government would have access to their data. It was also undefined what Nunatsiavut Government considers to be

Traditional Knowledge[8]. As the Nunatsiavut Government is currently in the process of developing an archive system for research, they agreed that I could go ahead as planned since their systems/safeguards/protections are not yet in place (see Appendix V).

1.6 Organization of Thesis

This thesis is organized as a manuscript format thesis, with four chapters. Chapter One has introduced readers to the study impetus, research approach, and the case study. Chapters Two and Three are independent manuscripts that reflect results and discussion associated with the two central research questions. Chapter Two examines stresses on access to wild foods for current users of the Nain community freezer, while Chapter Three evaluates how the community freezer alleviates certain stresses and creates unanticipated barriers on access to wild foods. As Chapters Two and Three are prepared for submission to scholarly journals, each include their own introduction, background, methods, results, discussion, conclusions and references. Chapter Four concludes the thesis by restating the thesis objectives and provides a presentation of the findings synthesized, as well as a discussion of the limitations and implications of the overall study in terms of recommendations for future research and policy.

1.7 References

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[8] Traditional Knowledge is generally understood to be local knowledge or traditions derived from historic and continuous interactions with the socio-ecological environments, but it is a contested term and culturally specific.

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CHAPTER 2: SOCIO-ECOLOGICAL CHANGE AND IMPLICATIONS FOR WILD FOOD ACCESSIBILITY FOR RESIDENTS OF NAIN, NUNATSIAVUT

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2.1 Statement of Student Contribution

J. Organ was responsible for the primary data collection, analysis, and writing of all sections of this manuscript. C. Furgal and H. Castleden supervised the development and implementation of data collection and analysis, offering feedback and instruction on these processes. C. Furgal actively contributed to the writing, while H. Castleden offered final feedback and editorial revisions.

2.2 Abstract

Political, economic, and environmental changes at the global scale are challenging the quality, availability, and accessibility of food at the local scale. These changes are challenging household food security in Canadian Inuit communities. Participation in the wage economy, costs associated with hunting, and changes in environmental factors have, for example, posed particular challenges for some Inuit in terms of accessing wild foods. In response to stresses on this critically important resource, communities, scholars and governments are discussing options to help support wild food access. Community freezers, one wild food support mechanism that has existed in northern Canada since the 1970s, is gaining popularity as a potential wild food support initiative, however a gap exists among scholars and decision makers about who these initiatives support and their efficacy. This case study identifies stresses on access to wild foods that current users of a community freezer initiative in Nain, Nunatsiavut experience. Results indicate factors of the socio-cultural, economic, and natural environment that challenge access to wilds for Nain community freezer users and collectively influence a diverse user group. Recent

changes in the natural environment affect most participants, as social and economic stresses on wild food accessibility is exacerbated in light of these changes. Findings are important for informing future wild food support initiatives in Nunatsiavut and other regions of factors for use that might otherwise be excluded in management decisions. Furthermore, as few food security studies exist that isolate Inuit wild food accessibility, this is an important contribution to knowledge about contemporary issues of Inuit wild food accessibility in the context of multiple stressors.

2.3 Introduction

Changes in the socio-ecological environment are placing pressures on resource accessibility for global populations. Access to a sufficient amount of food in particular has become a widespread international concern (Rosegrant & Cline, 2003; FAO, 2011a). Food security, defined as the state "when all people at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 2009, p.8), is becoming increasingly difficult for many households in many societies to maintain. When individuals do not have access to a sufficient amount of food, various mental and physical health issues are more likely to occur (Tarasuk, 2001; Vozoris & Tarasuk, 2003; Hamelin et al., 1999). Depression, diabetes, among other broader social health implications have been associated to cases where people do not have access to enough nutritious foods (Hamelin et al., 1999; Tarasuk, 2001; Vozorois & Tarasuk, 2003). In short, food security, including access to and distribution of foods, is an important determinant of health (WHO, 2011).

Accessibility, availability, and use are now recognized as the three central dimensions of food security (WHO, 2012). Accessibility is generally concerned with the ability for individuals to acquire enough foods and the foods they prefer or desire; availability involves characteristics of food supply, including the ability for individuals or a society to produce enough food for its members; and use with the nutritional, chemical, and biological value and safety of food (WHO, 2012; FAO, 2011b). Stability, the ability for food systems to continue to offer foods at all times during emergencies or seasonal

shortages, is also recognized as a fourth pillar of food security (FAO, 2011b). Conceptualizations of food security have evolved over the years (see Smith et al., 1992), with the inclusion of accessibility as a critical determinant of food security emerging last (in the 1980s). We now know that food supply, including availability and quality, is not sufficient to determine if an individual or household will be food secure. Rather, food security is largely dependent on the capacity of individuals to access available and preferred or desired foods through existing social, economic, and physical means, and in ways that are culturally appropriate (Maxwell & Smith, 1992; Maxwell, 1996; Power, 2008).

In Canada, food security has begun to gain recognition as a public health concern; in 2007, almost ten percent of households were identified as food insecure (Health Canada, 2011a). Food insecurity for Canadians has been associated with manifestations of the socio-cultural and economic environment that force people to compromise the quantity and quality of foods they consume (McIntyre, 2003; Riches, 1999). This, despite Canada making international commitments to fulfill the right to food that date back to 1948 (UN, 2012; Foreign Affairs and International Trade Canada, 2009), and more recently the 1998 '*Canada's Action Plan for Food Security'* (AAFC, 1998). Even with these international and domestic commitments, food insecurity is a growing issue that has predominantly been approached at the community-level (Tarasuk, 2001). In 2012, Canada was the first wealthy nation to be visited by the UN Special Rapporteur on the Right for Food to assess policies and supply chains that affect the right to food for many Canadians (OHCHR, 2012). This assessment highlighted Canada's failure to support food security for some of its population, and urged the federal government to give further attention to this issue that will be essential for the health of all Canadians (Payton, 2012; Schmidt, 2012).

The Canadian Aboriginal population, comprised of First Nations, Inuit, and Métis and representing approximately five percent of the Canadian population (Statistics Canada, 2009), experience rates of food insecurity that are almost three times higher compared to non-Aboriginal Canadians (Health Canada, 2011a). Low food security status among

Aboriginal households has been attributed to their social and economic positioning, which is less favorable compared to other Canadians in terms of securing food and other resources that are critical to health (Loppie & Wein, 2009).

Among the Aboriginal population, Inuit have been identified as experiencing the highest rates of food insecurity in Canada (Boult, 2004; Rosol et al., 2011). The Inuit regions of Canada experience food insecurity rates that are on average five to six times higher than the national average (Rosol et al., 2011). This high prevalence of food insecurity is partially attributed to low-income levels, high costs of market foods, and the number of dependants in a household (Rosol et al., 2011). Similar to other Aboriginal Canadians, food security for Inuit amounts to access to both market and wild foods. Wild foods, also referred to as traditional or country foods, are those foods sourced and harvested from the local environment. The acquisition, distribution, and consumption of these foods support many health facets of Inuit that often surpass that of available and easily accessible market foods (Collings et al., 1998; Condon et al., 1995; Lambden et al., 2007; Kuhnlein & Receveur, 2007). In 2006, 68 percent of Inuit adults living in Inuit regions harvested wild foods, and 65 percent of Inuit "lived in homes where at least half of the meat and fish consumed was country food" (Statistics Canada, 2008, p.3). Interestingly, and clearly problematic, is that national food security assessments to date do not consider stresses on wild food accessibility when determining Inuit food security status (Health Canada 2011b**;** Rosol et al., 2011). These and other studies, however, do point to the potential contribution of wild food consumption towards achieving food security. One food security study in Igloolik, Nunavut, for example, indicated that food insecurity was less prevalent among individuals whose diets were comprised of more than half of wild foods (Ford & Berrang Ford, 2009), and another concluded that *"*food security cannot be achieved in the Canadian Arctic without traditional food" (Lambden et al., p.318, 2007). The extensive health attributes of wild foods (e.g. cultural (Searles, 2002) and physical (Kuhnlein & Receveur, 2007) are why there is a need to consider access to these foods in Inuit food security studies and policy (Lambden et al., 2007; Power, 2008).

To date, the body of Inuit food security literature remains relatively small. Recent studies that include or are pertinent to issues of wild food accessibility largely stem from interest in changes in the physical and natural environments that have visible and sometimes immediate implications on daily activities for Inuit, including food availability and accessibility (Ford, 2009; Furgal & Sequin, 2006; Laidler et al., 2009; Wesche & Chan, 2010). Such studies recognize linkages between the changing natural environment and access to wild foods, and some indirectly address social, economic, and political stresses on access to this resource that are exacerbated or compounded by changes in the natural environment (see, for example, Ford, 2009; Laidler et al., 2009). Studies have emerged that seek to understand how the Inuit food system is affected by changes in the broader environment (Beaumier & Ford, 2010; Chan et al., 2006; Ford & Beaumier, 2011), but there remains only a limited number of studies (see, for example, Laidler et al., 2009; Wesche & Chan, 2010) that isolate wild food accessibility and seek to understand the multiple stresses on access to this critically important resource for Inuit health.

This paper reports on a study that sought to understand key stresses on access to wild foods among Inuit of Nain, Nunatsiavut (see Figure 2.1: Map of Study Location). Through this focus, our aim is to contribute to a scholarly understanding of pressures on access as a critical component of Inuit household food security. Access, in fact, is identified as an important determinant for Inuit and other Aboriginal populations' health (Loppie & Wein, 2009) Specifically, our research examines stresses among individuals who are already seeking support for access to wild foods through a common community freezer initiative, one of several coping mechanisms established in response to changing community environments.

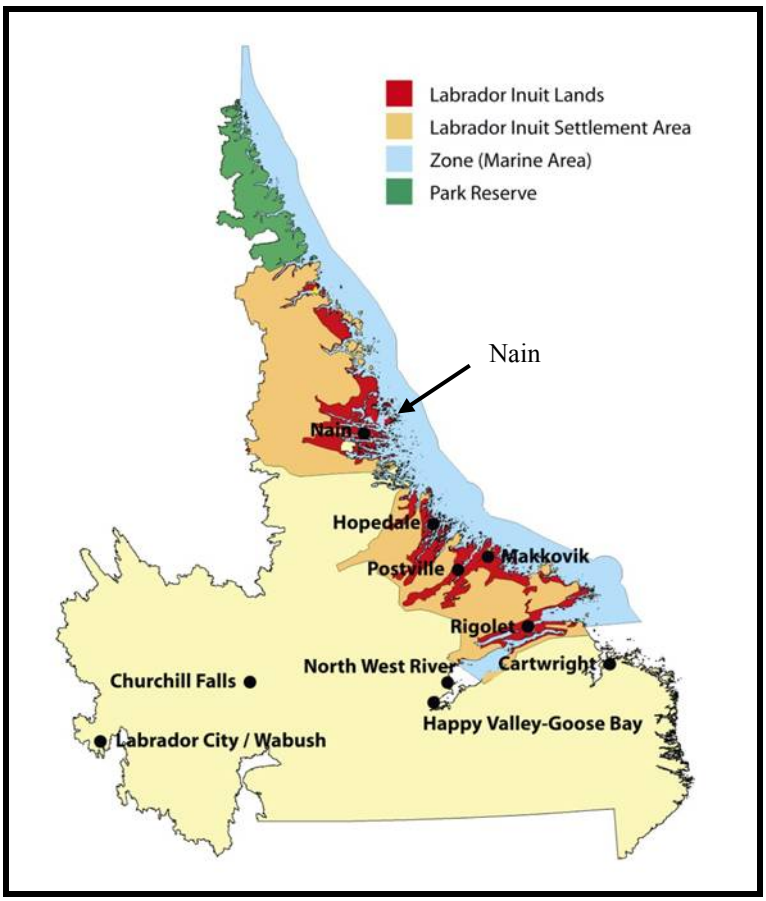

Figure 2.1: Map of Study Location (Nunatsiavut Government Canadian Constituency, 2012)

2.4 Wild Food Accessibility for Inuit

The four Inuit regions of Canada, Inuvaluit, Nunatsiavut, Inuvik, and Nunvaut, represent one third of Canada's landmass known as Inuit Nunangat[9], meaning 'homeland' (ITK, 2008). Approximately 40,000 of the 51,000 Inuit who live in Canada reside in the 53 communities in Inuit Nunangat (ITK, 2008). Inuit have inhabited this Arctic landmass for thousands of years, where land use patterns were primarily determined by the availability of food and other resources that were pertinent for survival (Fossett, 2001). Social networks played a critical role in wild food consumption and distribution, where food sharing took place when resources allowed (Fossett, 2001). The relationships that

[9] In 2009, ITK adopted a new terminology to describe their homelands. What was once referred to as Inuit Nunaat is now Inuit Nunangat.

developed over time between the human and natural environment contributed toward a high level of socio-ecological resilience within these regions (Berkes & Jolly, 2001; Freeman, 1996; Fossett, 2001). This lifestyle, however, was not void of stresses in terms of their ability to access wild foods (Bennett & Rowley, 2004; Fossett, 2001; Harrington, 1999). Food shortages caused by less desirable (or extreme) weather conditions for harvesting, meant that families would limit their food consumption over a period of time to make food supplies last, and families would sometimes disperse themselves in a geographic area to increase the likelihood of acquiring enough foods for everyone (Harrington, 1999; Fossett, 2001; Freeman, 1996). In short, severe hunger is certainly known to have occurred as recently as the 1960s (Brice-Bennett, 2000), and "while Inuit were the last people in Canada to experience starvation, they continue to experience hunger more often and more severely than the vast majority of Canadians" (Boult, 2004, p. 11).

European whaling, fur trade practices and sovereignty in the 19th century and, later during and after World War II, marked the beginning of a major transition from one way of life to another for Inuit (Kulchyski, 2005; Tester & Kulchyski, 1994). Most notably during the 1950s when much of the Arctic was subject to forced relocations through the government settlement program in 1953, also known as the High Arctic Relocation (Tester & Kulchyski, 1994). The physical proximity of permanent settlements to traditional harvesting areas, coupled with an increasing participation in the wage economy, for example, began to negatively influence the level of participation in harvesting activities. In short, people started to become less integrated in local environments that were once their sole source of wealth/livelihood (Freeman, 1996; Tester & Kulchyski, 1994). Today, a mixed economy has been maintained, where a combination of wild foods and market foods characterize the contemporary Inuit diet, despite the continued stresses on access to wild foods that are associated with living an increasingly sedentary lifestyle (Chabot, 2003; Kulchyski, 2005). However, accessing wild food for Inuit continues to be an intimate experience with the socio-ecological environment that facilitates food acquisition and distribution in these regions (Berkes &

Jolly, 2001; Chan et al., 2006; Collings, 1998; Condon et al., 2005; Gombay, 2010; Kishigami, 2004).

2.5 Case Context: Nain, Nunatsiavut

Established in 1771 by Moravian Missionaries (Hiller, 1977), the town of Nain is the oldest Inuit community in Canada with a population of 1188 in 2011 (Statistics Canada, 2012). Table 2.1 offers a socio-economic profile of Nain (Table 2.1: Socio-economic characteristics of Nain, Nunatsiavut). It is located within the Labrador Inuit Settlement Area of Newfoundland and Labrador under the jurisdiction of the Nunatsiavut Government (Fig. 1). The birth of the Nunatsiavut Government is the result of the Labrador Inuit Land Claims Agreement that was established in 2005, and has jurisdiction over Labrador Inuit Lands and specified material lands within the Labrador Inuit Lands. (Nunatsiavut Government, 2009; Proctor & Chaulk, 2012). Five Inuit communities are located in the Labrador Inuit Settlement Area: Nain, Makkovik, Hopedale, Rigolet, and Postville, and each operate their own Inuit community government. Nain is the largest of the five coastal communities, where the majority of Nunatsiavut Government administrative offices are housed (Nunatsiavut Government, 2009). Nain is approximately 370 kilometers by air from Happy Valley-Goose Bay. Daily airline services to Nain depart from Happy-Valley Goose Bay and a coastal boat service that transports freight and passengers to and from Nain operates from July to November (Nain Inuit Community Government, 2011).

TABLE 2.1 Socio-economic characteristics of Nain, Nunatsiavut*****

Community Characteristics: Nain, Nunatsiavut	**Total**
Total Population (2011)	1,188
Below 20 (%)	44.2%
20-59 (%)	58%
60 and over (%)	8.8%
Median Age	28.4
Employment Rate (%) (2006)	41.3

Community Characteristics: Nain, Nunatsiavut	Total
Unemployment Rate (%) (of total population 15 years and over)	27.9
Median Income (before tax) ($) (15 and over) (2006)	19,392
Marital Status (15 and over) (2011)	
Married or Common Law	465
Not married and not living with a common law partner	435

**Data from 2006 and 2011 Canadian Census, Nain Community Profile (Statistics Canada, 2007; 2012)*

The establishment of mission stations between the late 1700s and early 1800s along the coast led to a more sedentary lifestyle for Labrador Inuit (Brice-Bennett, 1977). This also marked the transition towards a mixed economy where engagement in the wage economy during the period of the fur trade and cod fishery, for example, influenced the ability of people to harvest foods solely for personal consumption (Brice-Bennett, 1977). Shortly after Newfoundland and Labrador joined confederation in 1949, the provincial government relocated the residents of two Inuit communities (Nutak and Hebron) to Nain, Makkovik and Hopedale (Brody, 1977). Unprecedented social, political, and economic changes that were born out of these relocations further challenged the ability of some residents to access wild foods. New and unfamiliar harvesting areas, different dialects between Inuit regions created language barriers, and lack of employment opportunities made it difficult for Inuit to satisfy their food needs and food-insecure homes resulted in some cases (Brice-Bennett, 2000; Brody, 1977; Hart, 1973; ITK, 2012; Markham, 2001; Markham, 2003).

The consumption of both market and wild foods remain important to residents of Nain. For example, caribou (Rangifer tarandus-*Tuktuk*), Arctic Char (Selvilinus alpinus-*IKaluk*), Arctic Hare (Lepus arcticus-*Ukalik*), and Seal species (e.g. Phoca vitulina-*Puijik*) are commonly identified as preferred wild foods, which are harvested around Nain. Despite socio-economic changes over the past three decades, harvesting continues to be a central activity for residents (Felt et al., 2012; Natcher et al., 2009), with more than half of the meat consumed by 79 percent of households in 2006 being locally

harvested wild meats (Statistics Canada, 2008). The local environment that wild foods are harvested from includes a vast geographic area; many harvesting areas are typically accessible only via snowmobile or boat. Where Nain is situated among a group of coastal islands that are home to many freshwater bodies, waterways are critical linkages, both in the summer and winter months, to traditional harvesting areas and homes.

For beneficiaries of the Labrador Inuit Land Claims Agreement, there are no harvest limits established for foods that are harvested for personal consumption - except with respect to salmon and polar bear. Each household is permitted to harvest seven salmon per year, and a community quota for the allowable number of polar bears harvested is issued each year by the provincial government (Personal communication, Nunatsiavut Government Director of Renewable Resources, April 2011). The provincial government also establishes annual hunting seasons for some species (Government of Newfoundland and Labrador, 2012). The Torngat Secretariat, an organization born out of the Labrador Land Claims Agreement, can establish allowable harvest levels for some species within the Labrador Inuit Land Claims Agreement and offer recommendations to the Minister on allowable harvest levels and other conservation measures (Nunatsiavut Government, 2009; Torngat Secretariat, 2010).

The only formal establishment where wild meats can be purchased is at the Nain Fish Plant, which is operated by the Torngat Fish Producers Co-operative during the summer operating season. Char and scallops processed at this plant are exported elsewhere and are not actually available at local grocery stores anytime. Market foods are available at two grocery stores, three convenience stores, and one restaurant. In 2009, the price of a weekly standard healthy food basket for a family of four (under the previously operated food mail program) costs approximately $337.00 in Nain as compared to $224.00 in Ottawa (AANDC, 2009).

Observations of challenges associated with accessing wild foods for Nain residents prompted the Nunatsiavut Government to request academic research that would focus on how one food support initiative in the region, community freezers, could help alleviate

stresses on access to wild foods for residents (Personal communications, Nunatsiavut Government Director of Lands and Natural Resources, December 2009). Community freezers are one food support initiative that communities across northern Canada formally adopted during the 1970s to support the flow of wild foods into and within communities. The management and physical infrastructure of these initiatives differs from community to community, however, in their most general form they serve as a place where harvesters (often voluntarily without being asked by Ulapitsaijet) supply wild meats for residents to access within the community. Our study is premised on the notion that it is important to understand stresses on access to wild foods and reasons why individuals may be utilizing such initiatives. This information will help to better interpret trends in access to wild foods in Inuit communities and to make well informed recommendations for future management of such food support mechanisms in light of ongoing socio-ecological change. There are no recent food security studies to date in this region that identify (or isolate) stresses on access to wild foods for residents. This paper will thus hold relevance to the region towards helping to alleviate existing and potential future stresses on access to foods for residents.

2.6 Study Design, Approach and Methods

Nain, Nunatsiavut was the chosen location for this case study for four key reasons. First, the Nunatsiavut Government Department of Lands and Natural Resources called for research on this topic (community freezers) as a means to address increasing concerns related to food security in the region, which suggested that the research would be of practical value to regional decision makers. Second, to date scant published research on food security in Nain presented an opportunity to contribute towards a geographic gap in work on this topic in the circumpolar North and Canada. Third, an ongoing research partnership between the regional government and one of the authors (CF) offered a context and relationship for the work in Nain that supported mentorship through the research process, as well as trust from the community partners involved (an issue emphasized by Castleden et al., 2008). Finally, Nain was the only community in the region to operate a community freezer in Nunatsiavut at the time of this study. The Nunatsiavut Government was considering a new freezer initiative design and operation

and the realization of the opportunity to learn from how the current intiative was operating was identified. Overall, community interest in this project and the suitability of Nain as a representative Inuit community currently operating a community freezer and experiencing and reporting stresses on food access (Furgal & Seguin, 2006) made this an appropriate study location, where information gained would support community interests, fill a research gap in this region, and contribute to our scholarly understanding of context-specific food (in)security.

This study took a single instrument case study approach (Yin, 2003). As case studies can be used as a point of reference (Flyvberg, 2006), and this study seeks to be a resource for other community freezers and food support initiatives in northern Canada, this supported the importance in employing a case study approach for this study. Academic and community motivations for this project were best fulfilled through a community-based approach (Castleden et al., 2008; Israel et al., 1998; Stewart & Draper, 2009). Community based participatory research places an emphasis on the "active participation of community members in all phases of research" (Stewart & Draper, 2009). Engaging community members in this type of research process is important to help ensure the relevance and credibility of the work produced (Hay, 2005). For this study, community members and representatives were involved in the planning, data collection, verification, and validation stages of this project as outlined below.

Primary Data Collection and Analysis:

A research consultation and planning meeting was held in Nain, July 2010, with community partners, key informants of the Nain community freezer, and other community members. Informal meetings with these individuals influenced project objectives and data collection activities to better reflect community interests and information needs. Primary data collection was conducted in Nain during November/December 2010. During this time, 17 semi-structured interviews and three focus groups were held, and participant observation was conducted. Prior to the conduct of any research activities, ethics approval was received through Dalhousie University

Social Sciences and Humanities Research Ethics Board and the Nunatsiavut Government Research Advisory Committee.

Semi-structured interviews with current users of the community freezer were conducted to identify current stresses on access to wild foods for these residents' and their interactions with the community freezer initiative. As there was no formal monitoring program established for the use of the community freezer, criterion and convenience sampling (Hay, 2005) directed participant recruitment for this study population. Information sheets were posted at community facilities inviting current users to participate in the study, and managers of the freezer were asked to inform current users of the opportunity to participate in this study. To help manage high interest for participation and to ensure interested individuals met the criteria for participation, I asked managers to communicate to the community liaison (who is also a manager of the freezer) names of residents who they knew to use the freezer[10]. The community liaison then compared the list of current users identified by managers with the names of residents who volunteered to participate in the study. Those who appeared in both lists were invited by the primary researcher to participate in this study. Individuals known to be users were not directly recruited to participate in this study to control for any perceptions of stigmatization among current users of the initiative and their identification in the research recruitment process to others.

Focus groups with active harvesters discussed current and anticipated stresses on access to wild foods, and how future community freezer management might be able to address some of these stresses for others. For this study active harvesters were defined as residents who frequently participated in harvesting activities and/or hold a significant and recognized amount of knowledge about the local environment. Identifying active harvesters to invite to the focus groups was completed through the development of a rank-ordered list, following methods identified by Davis and Wagner (2003) used to identify environmental "experts" in a community. Three key community contacts listed

[10] Another study was also being conducted at the same time and may have led to confusion about which one residents wanted to participate in

residents who they knew to be active harvesters. Names that appeared on all three lists were first invited to participate in the focus groups, and then those appearing on two of the three lists were invited. This recruitment strategy helped to ensure rigor in participant selection and minimize bias that the primary researcher, or one community contact may have introduced in the selection process (Davis & Wagner, 2003). Two active Elder harvesters were also invited to participate in separate one-on-one interviews to discuss changes in access over time. I required a translator to conduct an interview with one participant, and another individual was recommended by all key community contacts but was not available to participate in the focus group and so their interest for participation in this study was accommodated through one-on-one interviews.

Managers of the Nain community freezer participated in a focus group to discuss community freezer operations, successes and challenges of management, and thoughts on recommendations for future management. Follow up interviews with two managers filled information gaps regarding community freezer operations that was not discussed in the focus group and did not require group discussion.

Participant observations (Richards, 2005; Hay, 2005) of community freezer management, activities surrounding the community freezer, and harvesting practices (both inside and out of the community) allowed the primary researcher (lead author) to further conceptualize and understand the information communicated through the focus groups and interviews, and to better understand the human and environmental issues that shaped participant responses in relation to the research questions. Finally, food security documents specific to Nunatsiavut as well as documents associated with community freezer initiatives in northern Canada were collected, and information deemed relevant was used in the analysis and background content of the research when appropriate.

All data gathered in interviews and focus groups were audio recorded and transcribed with the permission of participants (in one instance the participant preferred note-taking over audio recording). All participants were provided the opportunity to participate in a transcript verification process, where they reviewed transcripts to ensure the information

presented in the transcripts was an accurate representation of the conversations held. Participants who requested changes to their transcripts did so through email, phone, or in person during a community visit by the primary researcher in March, 2011. All transcripts, including participant observations, were entered into the qualitative software program, NVivo 9 where data were organized through descriptive and thematic codes (Hay, 2005; Miles & Huberman, 1994; Richards, 2005) and transcripts were assigned an anonymous alphanumeric code. Inter-coder reliability (Bryman & Teevan, 2005) was completed with a colleague not familiar with the project but trained in coding and NVivo analysis. This individual and the lead researcher coded the same transcript based on the proposed coding scheme and compared and discussed any differences in our interpretation of the information. Changes based on feedback to the coding scheme took place when appropriate. This helped ensure external validity (Bryman & Teevan, 2005) of data analysis.

Internal validation or member checking (Bryman & Teevan, 2005) of the presentation of preliminary results was completed with participants in Nain in March 2012. A written summary of results to date was distributed to all study participants who were also invited to attend an oral presentation and discussion of these results. Furthermore, participants who agreed for the use of their quotes at the time of their interview were given the opportunity to review and confirm the use of their quotes in the manuscripts under preparation. A list of quotes in the presented context, including the rationale for the use of each quote, was included to help participants understand how their quotes might be used on other project communications of final results. Participant feedback was taken into consideration in the presentation of final results.

2.7 Results

A total of 33 residents participated in interviews or focus groups, and approximately 50 days of participant observations were recorded (see Table 2.2: Summary of research activities and 2.3: Summary of research participants). The number of documents reviewed was not tabulated as this took place on an ongoing informal basis as the limited

information available. Results presented in this paper are drawn from interviews with users of the community freezer who offered first hand knowledge of the stresses they are facing on access to wild foods. Conversations during focus groups with managers and harvesters, and participant observations offered further contextual information and are drawn upon in the interpretation and presentation of results in the Discussion section as is the case for information gleaned from documents gathered for this project. Results are organized into three themes of stresses on access to wild foods that emerged from the data: socio-cultural context, economic conditions and the natural environment. First, wild food values for residents are illustrated.

TABLE 2.2 Summary of research activities.

Method	Focus	Number
Semi-Structured Interviews (17)	Managers of the Nain Community Freezer Users of the Nain Community Freezer Elder Harvesters	2 13 2
Focus Groups (3)	Active Harvesters (2) Managers of the Nain Community Freezer (1)	5, 4 6
Participant Observation	Community Freezer Activity Harvesting Practices	~ 50 days
Document Reviews	Community Freezers Region Specific (food security related)	Not tabulated

TABLE 2.3 Summary of research participants

Data Collection Method	Category	Number of participants	Gender (M/F)	Average duration of interview/focus group
Semi-directed interviews	Managers	2	4/2	40min
	Users	13	7/6	45 min
	Elder Harvesters	2	1/1	60min
Focus groups	Managers	6	4/2	90min
	Harvesters (2)	9	6/3	90min

2.7.1 Value of Wild Foods to Nain Residents

To understand implications of stresses on access to wild foods for Nain residents, it is important to share what participants said about how they value wild food. Discussions about stresses on access to wild foods for residents were almost always accompanied by expressions of the value of wild foods that are far reaching and for many, immeasurable[11]. *"When we don't have wild foods for a long time, it affects our body because it affects our health" (Toby Kojak, male user).* Limited access to wild foods was said to leave individuals feeling hungry and craving these foods regardless of the amount of market foods available, "*you're starving even though there's all kind of foods you've got in the freezer, and if it's not wild food, it's not food at all" (Maria Dicker, Elder harvester).* What is missing in market foods for many are the nutritional benefits of wild food, but more importantly the ability for wild foods to satisfy an emotional/psychological well being that stems from tradition and a sense of place and identity that only the acquisition and consumption of wild foods can fulfill. *"[Wild food is] in your blood"* (*Norman Anderson, male user)*; it is *"our soul food" (Frances Murphy, female user).* For participants, the value of wild foods was not just about the consumption of those foods but also the health benefits of the activities involved in gathering them as well.

2.7.2 Current Stresses on Wild Food Access

Current users of the community freezer were men and women, ranging in age from 20 to 68, employed and unemployed, and who participated in varying levels of harvesting. That is to say some users were also harvesters (when they could), where the type and frequency of harvesting differed. These individuals reported experiencing stress on access to wild foods that stem from shifts in what were grouped in the analysis of data as the socio-cultural context, economic conditions and/or natural environment (see Table 2.4: Current stresses on Access to wild foods for residents). These categories of stresses arose from the thematic analysis and guided the organization and presentation of results

[11] 18 of 33 participants agreed to have quotes attributed to them. The remainder have simply been labeled as user, harvester or manager

here. The degree that each of these stresses influences residents' abilities to access wild food varies between users. In this study, 'socio-cultural' context refers to those human relationships and behaviours and broader societal characteristics; 'economic conditions' refers to time and financial capacity; and 'natural environment' refers to changes in the local and regional natural environment that place pressures on individuals' wild food accessibility.

TABLE 2.4. Current stresses on Access to wild foods for residents[12]

	Stresses on Access to Wild Foods for Current Users
Socio-cultural context	• Lack of a social network to receive foods or to go harvesting • Wild food consumption behaviours becoming more individualized • High concentration of harvesting activities closer to Nain placing pressures on local resources • Wild food theft (youth stealing food from households)
Economic conditions	• High costs associated with the initial investment and ongoing maintenance of harvesting equipment • Low cost benefit ratio of harvesting activities discourage participants to participate in harvesting activities that now require further distances to travel • Changes in commercial wild food production in Nain limit opportunities to purchase wild meats • Work/other financial commitments (participation in the formal or informal economy) restrict the amount of time available to harvest.
Natural environment	• Shifts in wildlife populations and migration patterns • Unsuitable weather conditions for participation in harvesting activities including travel to traditional harvesting areas. • Unpredictable weather

2.7.2.1 SOCIO-CULTURAL CONTEXT

Sharing networks amongst users exist outside of immediate or nuclear households, however, the ability for current users of the freezer initiative to access wild foods was

[12] TABLE 2.4. includes study data that are not discussed in detail in this paper.

limited if members of their immediate household did not participate in harvesting activities. Four of the five users who lived without a frequent harvester only participated in fishing activities. This is because many of these users were able to fish on their own either close to or within community boundaries, and thus did not depend as much on others for their access to these foods. Users who lived with one or more harvesters in their household (or who self identified as a harvester) participated in more harvesting practices, ranging in frequency from less than once a month each season to upwards of four or more days per week depending on the season. The majority of these users who harvested food independently such as hare, partridge, and porcupine, did so at places that could be accessed by foot or a short snowmobile ride from town. Furthermore, most harvesters in these households did not own their own harvesting equipment, and so they only harvested foods further away from Nain when they were invited by family members or friends to go harvesting with them.

Despite the physical and economic ability for some users to harvest their own foods, there were some foods that they were not comfortable harvesting because of their perception of traditional gender roles, and the increased likelihood of risk to personal safety or capital loss if harvesting foods alone. Thus, not living with a harvester or having access to an extended harvesting network who is able to harvest some preferred foods had an impact on participants' overall diet:

"We don't have a huge family. My mom is from here but she was an only child and married my dad who is originally from the [South]… so we don't have that extended family [...] the number one food I think for people is safe to say is caribou […] and the people who hunt that is men, is mainly men" (Frances Murphy, female user). This user participated in both hunting and fishing activities independently, however, she explained that she is unable to and/or does not feel comfortable to harvest some food (e.g. seal and caribou) on her own. The inability or preference not to harvest larger game independently was described by managers and harvesters as a common characteristics for females who lived without a male harvester, and thus despite their ability to harvest foods or access equipment, they often found it difficult to acquire these foods. Caribou is a wild food

preference shared among all study participants. Managers, users, and harvesters alike explained that beyond its taste, caribou offers a large amount of meat that can be stored longer compared to other wild meats (e.g. seal) that are not palatable after having been frozen for extended periods of time. Because of the amount of labour and higher cost associated with harvesting caribou though, access to a social network seemed more important to users compared to other species more easily harvested like fish, partridge and berries.

Beyond their immediate familial networks, users reported occasionally receiving foods from non-kin, namely neighbors or when residents returned from a hunting trip and shared food with the community at large. Intercommunity trade is also popular among users, where they reported receiving foods from family members in other communities that were not available or frequently harvested in Nain. During times of emotional stress, residents directly requested foods from others through the local radio station and other social media tools: "*Not too long ago I had a really bad craving for rock cod pitsik (dried rock cod meat), and I put it on Facebook [laughter]. I didn't want to do it, but I just said I am looking for it, I had a really bad craving for it and one person gave me two!" (Frances Murphy, female user).* Users, community freezer managers, and active harvesters alike, however, characterized harvesting practices in Nain becoming more individualized: *"A lot of people do it more for their personal needs now and they find because everything's got more expensive – gas is more expensive and food is more expensive and it's harder to get certain animals – they say, "I can't spare any because I need some for my family. So it's like mostly for personal use rather than to give to the community" (Toby Kojak, male user).* Another user described: *"Whenever there's word going round there's wild meat, we try to go get some but they're all gone or they're saved for somebody else" (female user).* Recognition of stresses on access to wild foods that residents are facing encouraged two users to financially support or engage in other types of economic exchange with their extended family members who harvested foods to increase the likelihood that they would be able to receive foods from them: *"…years ago they [my uncle and partner's brother] used to just, even without asking us, just come over and just give us caribou right and not expect nothing for it. But where everything is so*

expensive now you can't just expect people to pay for their own stuff." (female user). One active harvester in the community described her challenges with sharing foods beyond her extended network: *"I've been really lucky to have a family who continued to go up [north (Hebron)] and get wild food and every time we do get it, we are hardly keeping up with people that come and [ask for] some wild food and it's been really getting harder for us because it costs gas and money to get some" (Maria Dicker, Elder harvester)*

Many participants agreed that there is more wild food the further away from Nain you go. Particularly, users referred to areas north of Nain that were difficult to access, but where food was plentiful. Depending on the weather, active harvesters explained that it might take a full day to get to the area on snowmobile or by motorboat. Harvesters and users explained that people who accessed these or other places further from Nain were generally those who had family members with cabins in the area and bring their families with them. Closer to home, users acknowledged that a high concentration of harvesting is placing pressure on local resources and influences access to wild foods in terms of becoming more opportunistic and time/sensitive: "*Our community is so big, it's hard to get foods, our foods, because there are so many people going out to the same places, because if you know animals you know where they eat, you know the good places and you end up having to go further and further, and I can't go way far [because of lack of family to go harvesting with*]" *(Frances Murphy, female user).*

One manager agreed and suggested that although some foods could be more plentiful further north:*"around [Nain], everybody's hunting, whereas up there now it's a lot harder to get to" (Joey Angnatok).* Harvester focus group participants and informal conversations with other residents during field visits suggested that following human tracks to harvesting sites, word of mouth, and social media (e.g facebook), as well as access to an online resource available through the Quebec government that monitors caribou populations (the Caribou Migration Monitoring Satellite telemetry) potentially further concentrate some harvesting areas within a shorter time frame. Harvesters from one focus group accessed the Caribou Migration Monitoring Satellite telemetry, and suggested that it has become a norm for residents to use. They also suggested that

because of this service, people would more or less go to the same area. Harvesters reported that in 2010, radio collar information for the George River Caribou herd was restricted because of concerns about overharvesting these foods. Despite the convenience of locating caribou through the telemetry service, active harvesters were not concerned about this restricted online access because people did not solely depend on this resource for harvesting success.

2.7.2.2 Economic conditions

The cost difference between owning and operating snowmobiles and boats has visible implications on harvesting activity levels in Nain; snowmobile tracks paint the landscape for as long as a sufficient amount of snow and ice is present, but boat activity is low during the summer months. Residents explained that snowmobiles are generally more accessible for residents as the initial capital investment and ongoing upkeep of snowmobiles is more affordable compared to boats. Snowmobiles cost less than $15,000 whereas boats can cost upwards to $30,000 - more than the average annual income of community freezer initiative users. Of the thirteen users interviewed, only one owned both a boat and a snowmobile, and another owned a snowmobile. Some users who didn't own either mode of transportation and who harvested on occasion borrowed harvesting equipment through friends and family, or they travelled with friends and family during hunting trips. Reasons for not owning their own transportation included the high costs associated with the initial investment and upkeep of the equipment and loss or retirement of old equipment. The lack of transportation equipment as a barrier to wild food consumption represented a burden felt most by those who identified as recent active harvesters and who reported preferring to harvest their own foods. Access to a snowmobile, however, seemed to be desirable by virtually all participants as these machines also serve as a practical mode of transportation within and outside community boundaries during the winter and spring.

Participants explained that harvesting now requires more time and money to harvest in conditions that are becoming more unpredictable and that might result in little return and

potential harm to one's health as compared to previous economic and weather conditions. For this reason, some perceived that the cost-benefit ratio of harvesting was low. Potential capital losses and/or safety concerns that might be incurred while participating in harvest activities was reported as a major influence for two users who decided not to re-invest in this mode of transportation. One user explained: "*Right now I can't afford [a snowmobile], and besides I am not sure if I should have one now or not, but I would like to have one if travelling conditions are safe" (male user).* Another user was hesitant to re-invest in a snowmobile while still making loan payments for one he lost through the ice while travelling in 2006. Especially because of increasing numbers of people who experience equipment loss due to poor ice conditions, and the amount of time and financial resources it now takes to harvest some foods. This individual chose to spend his time wooding (harvesting and selling wood from the local environment for home heating) instead. As Nain is situated in the subarctic just below the tree line, residents have the benefit of harvesting wood for home heating to offset high-energy costs. This user and other residents explained that wooding can be fairly affordable, as it may only require a short ski-doo ride or hike to a preferred site. The benefits of wooding for this user were two fold: it provided heat for his home and selling wood to others provided a small income to help support his livelihood.

A shift in commercial wild food production in Nain presented further concerns for access to wild foods for users. Char can be acquired through purchase at the Nain Fish Plant, the only formal establishment from which to purchase wild meats in Nain. But products from this plant are exported elsewhere and not made available for sale in Nain after the operating season. The Nain Fish Plant recently reduced the length of its summer operating season from two months to one, a change that two users expressed disappointment in. One user, an employee at the fish plant since the 1970s, indicated that "*it's been hard to get char because the fish plant is only opened one month in summer now" (Mikkie Semigak, female user, translated).* Char purchased at the fish plant has become a norm in this individual's diet, as she was able to have the cost of a certain amount of char taken off her pay cheque. One user described getting free fish heads at the plant that are not processed for sale. Many share a disappointment in the limited

opportunities to purchase meats in their own community: *"People always say, "they shouldn't ship [the fish products] out, you should have them for here, people [would] buy them" (Maria Dicker, Elder harvester).*

2.7.2.3 Natural Environment

The winter previous to the year interviews were conducted (2009), Nain experienced only three weeks of ice cover during the winter and spring compared to approximately four to five months that is typical for this region. This weather anomaly of 2009-10 emphasized the role of the natural environment in determining wild food accessibility for all participants. *"The season is changing now. I hardly travelled last winter and the spring. From the first of winter to the late winter, maybe I only had four times to travel for hunting and fishing. Lot less than any other times [...] I missed out on a lot last winter because of climate change" (male user).*

Another user described *"Last year nobody could do nothing much. Maybe a few people would go off and take a chance (female user)."* This weather event significantly extended the typical harvesting transition period of when areas cannot be accessed by snowmobile or boat. For many participants, limited access to the wider environment was not only an issue of access to foods, but also access to a preferred lifestyle: "*We don't got no choice, we've got to go off all the time or we'll crack" (John Flowers, male harvester).* Experience travelling in unusual weather conditions and exposure to risk communications on the safety of this transition period led some to discontinue their harvesting practices that year. Some reported that they were now more wary about harvesting foods independently, and/or investing in harvesting equipment due to safety concerns. Foods that were typically easier to harvest because of their close proximity to Nain, such as fish and partridge species, also became difficult to access. Furthermore, poor ice conditions also led to a concentration of those harvesting areas close to Nain: "*It's hard work when there's no ice too because everybody's hunting in the same area, and when you can't get to the usual place where you want to hunt, so everybody's going to the same area and it's harder to get stuff" (Joe Webb, male harvester).*

The availability and distribution of some preferred animal species further challenged the ability for people to harvest their own foods (see Table 2.4: Current Stresses on access to wild foods for residents). Most notably, participants referred to not being able to access a sufficient amount of caribou. Many recalled approximately five years prior when caribou used to migrate through Nain compared to the study year that took harvesters up to three days to find and harvest caribou. Concerns about access to caribou were brought to light at the onset of primary data collection during a regional caribou consultation process held by the Torngat Wildlife, Plants and Fisheries Secretariat and the Newfoundland and Labrador Department of Environment and Conservation in Nain. At the consultation, the provincial government announced a massive decline in the George River Caribou River population from 800,000 in 2001 to 74,000 in 2010. Each year this herd migrates from Nunavik to Northern Labrador and serves as an important wild food source for Nunatsiavut residents. The amount of preferred caribou expressed by users ranged between one or two caribou per year for a single person household to four or five for a couple who also share this food with their extended networks. The attendance and interest shown during the community consultation compared to other consultations held in Nain highlighted the value of caribou for the community at large, where conversations about potential steps forward for conservation of caribou prompted questions that highlighted the economic value of wild foods for Inuit: *"If I require 100 lbs of caribou per year for sustenance, and I'm cut back to 20 lbs, I'm going to have to find an alternate food source; whether its partridge, char, or store bought food. Will there be a subsidy for store bought food?"* In response to concerns of potential limits placed on caribou discussed at the consultation, one user expressed: *"We can't do without caribou because it's like you got to have it" (female user).*

2.7.2.4 Interactions Between Stresses

Isolating stresses is helpful to recognize the distinct characteristics of each environment in playing an important role in wild food accessibility, however, to exclude mention of the interactions between stresses would be to dismiss an important point of discussion for

this study. For example, one participant's statement helps illuminate the complex relationship between stressors: "*Right now I can't afford [a snowmobile], and besides I am not sure if I should have one now or not, but I would like to have one if travelling conditions are safe" (male user).* Although this was categorized earlier in the findings with changing economic conditions, it also holds close ties with the changing natural environment. Financial constraints created an obvious barrier in this individual participating in harvesting activities, however there are other psychological stresses and actual physical risks associated with changing sea ice conditions that could hold more long term implications on wild food access for this individual. Thus, isolating economic conditions when understanding stresses on access to wild foods is to exclude other conditions that could be just as important when considering wild food accessibility.

2.8 Discussion

The organization of changing pressures on wild food accessibility as three categories of stresses in this study: socio-cultural context, economic conditions, and the natural environment, is novel in comparison to what currently exists in the literature. This organization recognizes a diversity of stresses on access to wild foods that are manifestations of more immediate changes in the natural environment and of other less obvious changes in socio-cultural and economic conditions. The overlap between characteristics of stresses indicates they can also be manifestations of each other. Our discussion addresses each category, how they compare to other Inuit regions, and the relationship of these findings to the larger food security literature. Following this is a discussion of the relationship and interactions between each stress to help illustrate the complexity of individual circumstances in accessing wild foods.

It is clear that characteristics of social networks play an important role in the amount and types of food accessed. Generally, those who are not included in a harvesting network were less able to access preferred wild foods. Social networks continue to be important for wild food access in other regions as well (Chan et al., 2006; Gombay, 2010; 2005), however individualized wild food harvesting and distribution practices communicated in

this study are also an emerging trend in other communities (Berkes & Jolly, 2001; Ford & Beaumier, 2011; Ford, 2009; Gombay, 2005). High costs associated with harvesting, for example, that challenge the ability for Inuit to distribute their resources widely are also echoed in other studies (Chan, 2006). Human population density is similarly recognized as a contributing factor of wild food access in other regions, yet is not a new phenomenon for Inuit. Before the majority of Inuit relocated to permanent settlements, families would disperse themselves or move with the availability of foods to cope with limited food and human population density (Fossett, 2001; Freeman, 1996). Today, concerns remain about wild food shortages associated with population density and growth, while new and evolving relationships that exist as communities grow also pose new challenges for resource access (Ford & Beaumier, 2011; Freeman, 1996; Gombay, 2005). Generally, as communities grow there is a lower sense of obligation to share resources as people become less connected to one another and "sharing becomes less automatic" (Gombay, 2005, p. 423). This compares to the pre-settlement era when small encampments were more conducive to resource sharing and "people's survival depended on the assistance of others; and thus, they shared food." (Gombay, 2010, p. 241). Today, similar to our findings, other Inuit have increased their engagement in intercommunity trade to access those foods that may not be available within their surrounding environments or social networks (Berkes & Jolly, 2001; Ford & Beaumier, 2011). Other forms of monetary economic exchange such as purchasing wild food from harvesters have also become more common (Chan et al., 2006; Berkes & Jolly, 2001), although there seems to be tensions surrounding the acceptability and implications of long-term wild food access when a monetary value is placed on foods (Ford & Beaumier, 2011). Furthermore, monetary exchange might only be a viable option for those who have extended family members and the economic or financial capacity to engage in these types of interactions with others to secure food.

High costs associated with harvesting and concerns of loss of personal safety, especially in lieu of environmental changes, has also discouraged Inuit in other regions from harvesting their own foods (Ford & Beaumier, 2011; Wesche & Chan, 2010). The decision or inability for Inuit to re-invest in hunting equipment after capital loss brings

forward concerns about long-term food security for the individual and community (Beaumier & Ford, 2010; Laidler et al., 2009). This concern exists in the larger food security literature as well; how people respond to stresses on access to foods to sustain a livelihood might hold negative implications on their ability to bounce back to a desired state of food security once conditions that originally triggered this stress become better (Maxwell & Smith, 1992). Individuals who are in a temporary state of food insecurity might return to a food secure situation, or they might become chronically food insecure (Maxwell & Smith, 1992). Not as present in other studies is the lack of choice for Inuit to purchase foods in their own communities as an identified stress on access to wild foods. Although there seems to be a willingness to purchase wild meats among study participants in Nain, this was expressed by participants who were employed and who would have the financial ability to purchase wild foods if given the option. Indeed, other studies suggest that although there might be an option to purchase wild foods, this option does not generally support long-term food security, as those most in need of wild foods are often low-income and find it difficult to afford any food (Chan et al., 2006). What is at the root of frustration over the limited availability of purchasing meats is the lack of choice or control over access to wild foods (food sovereignty).

Changing sea ice and unusual weather conditions have been at the forefront of identified stresses on access to wild foods in recent Inuit food security studies (Furgal & Sequin, 2006; Ford, 2009; Laidler et al., 2009; Wesche & Chan, 2010). Although environmental changes have obvious implications on wild food access, the degree that environmental changes impact access depends on individual circumstances; those who continuously engage in harvesting practices and their surroundings are better able to cope due to familiarity, whereas those who are not as integrated with their natural environment might not be as prepared to harvest in certain unfamiliar conditions (Laidler et al., 2009). Regardless of individual circumstance, however, extreme weather events have been cited to impact Inuit at large as even the most experienced harvesters are unable to access wild foods (Ford & Beaumier, 2011). Concerns about caribou populations and access to them in light of environmental changes are also echoed in other northern regions (Guyot et al., 2006; Ford, 2009; Nickels et al., 2005; Wesche & Chan, 2010). Caribou have long been

valued in Inuit society because of the large amount of meat that one caribou offers, the number of ways it can be prepared for consumption (Fossett, 2001), and for its spiritual value (Bennett & Rowley 2004; Wenzel, 1991). Historically, smaller mammals only added to the diversity of the diet, some of which "were also seen as a starvation food" (Bennett & Rowley, 2004, p. 68). Although Inuit do not solely rely on wild foods in contemporary society, the value of larger mammals remain important for the utilitarian and cultural dimensions of food security they support (Guyot et al., 2006). In reality, harvesting more of other species to offset lower caribou numbers is taking place in communities (Guyot et al., 2006; Nickels et al., 2005), however, appropriate substitute species are subject to personal and cultural preferences, seasonal availability of these foods, and comparative nutritional value (Guyot et al., 2006).

Not all participants experienced the same stresses on access to wild foods, at the same time, nor to the same degree. Furthermore, each stress is interdependent with another and is not always easy to isolate which one, if removed, would place individuals in a more food secure situation. Pressures on wild food access for individuals who did not have the ability or interest to harvest wild foods, but who were included in a harvesting network stemmed primarily from stresses that their social networks were experiencing. These individuals are at a disadvantage compared to their harvesting networks who, although were also finding it hard to access foods, might have been able to meet some wild food needs of their immediate household. Those participants who seem to be most disadvantaged are those who did not harvest foods independently and were not included in a sharing network. Even if these individuals had the economic capacity to purchase harvesting equipment, they might not be capable or interested in harvesting foods independently, or have access to the social networks to financially support their access to wild foods. This situation represents the majority of participants in this study. Personal food security circumstances become more complicated when recent shifts in the natural environment exacerbate those social and economic stresses on access to wild foods. These changes in the natural environment might only represent a temporary stress on wild food access for individuals and the larger community. However, when psychological stress associated with harvesting foods is accompanied with these changes, the

willingness to harvest foods when conditions do become better might decrease and long term food insecurity and health issues may ensue[13]. Additionally, subsequent weather anomalies could continue to disrupt Inuit interactions with the natural environment that are important for continued interest and knowledge transmission of harvesting skills and thus wild food consumption.

2.9 Limitations and Implications

Two potential limitations present in this study are worth mention here. The weather anomaly that occurred the year this study was undertaken might have emphasized stresses on access to wild foods due to the extreme weather changes that might not otherwise have arisen. Similarly, conversations about caribou could have been emphasized because of the community consultation that took place about caribou immediately before the onset of data collection. This may have sparked greater discussion about caribou in the interviews. These factors were not biased in the analysis, however, that also indicated the prominence of other factors influencing wild food accessibility during a time when caribou and the weather anomaly was a common societal topic. This prevalence of diverse stresses contributes to the credibility of the study results that present more obvious and less obvious factors of contribution for wild food access for residents and perhaps Inuit at large.

This study informs current and future community freezer management considerations about a diverse range of residents who access this initiative, and if desired, to better meet these needs in their community. For example, diversifying foods supplied to the community freezer through partnerships with local operators and harvesters who travel to areas difficult to access by most residents could help meet wild food preferences that are overlooked, while also supplying more of another type of food in light of certain food shortages (particularly caribou). Future community freezer programming could also be tailored to meet different types of wild food needs. Because users expressed different

[13] A. Willox. (2012). Lament for the Land: Impacts of Climate Change on Mental and Emotional Health and well-being in Rigolet, Nunatsiavut, Canada. (Doctoral dissertaion, Guelph University).

types of challenges with respect to accessing wild foods over different periods of time, it may be beneficial for the community freezer to serve as more than just an access point for wild foods, it could also become a resource for users to help them gain capacity for harvesting their own foods. This is an approach adopted by other food support programs in southern Canada such as "The Stop Community Food Centre" in Toronto, which operates a food bank while simultaneously facilitating cooking workshops and a sustainable food production and education centre (The Stop Community Food Center, 2012). The diversity of support offered through this program reflects a belief that food insecurity is widespread and that the traditional food bank model alone is not enough to support a food secure future.

Findings will also be an important contribution to food security literature that isolates wild food accessibility and that does not privilege any one stress on access to foods in the analysis. Recognition of a multitude of factors that influence wild food accessibility and that affect many people is important so that the complex interactions between environments and how they influence wild food accessibility are revealed. Similarly, these results will better inform policy about the socioeconomic profile of individuals that may be overlooked when considering who may require support from these initiatives. As results provide insight into stresses on access to wild foods that are important determinants of Inuit food security (and that differ from other more industrialized regions that they are sometimes compared with), future food security assessments can use these results to help direct the inclusion of these foods in their evaluation tools. Inclusion of wild foods in Inuit food security assessments will respect the continued value for wild foods and these foods as being important to Inuit health and well-being. Lastly, the results from this case can be used to help shape future studies that focus on community freezers, or other food support programs relevant to the circumpolar North. Further investigation of trends on stresses on access to wild foods for Inuit that are encouraging them to seek support will help identify ways in which food support initiatives can better meet these diverse needs.

2.10 Conclusion

This research offers a categorical characterization of the stresses on access to wild foods among residents who are known to be experiencing stresses on access to wild foods in Nain, Nunatsiavut. It demonstrates how multiple pressures of economic, environmental and socio-cultural environments challenge wild food access for these residents, the complexity of stresses interacting with one another, and the implications of identified stresses with respect to individual circumstances. Specifically, findings highlight recent unusual changes in the natural environment are most visible and directly or indirectly felt by most participants as social and/or economic stresses on access to foods became exacerbated in light of these changes. This study is the first in the region that identifies these clear categories of different stresses on access to wild foods for residents. As such, our findings will be an important contribution towards understanding how current and future food support programs or initiatives can support wild food access for residents in this and other regions. Ongoing conversations or the inclusion of issues of wild food access from the perspective of residents will ensure policy and future research speak to current lived realities of residents and thus will hold greater value when addressing food security issues in the North.

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CHAPTER 3: CONTEMPORARY PROGRAMS IN SUPPORT OF TRADITIONAL WAYS: INUIT PERSPECTIVES ON COMMUNITY FREEZERS AS A MECHANISM TO ALLEVIATE PRESSURES OF WILD FOOD ACCESS IN NAIN, NUNATSIAVUT

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3.1 Statement of Student Contribution

J. Organ was responsible for the primary data collection, analysis, and writing of all sections of this manuscript. C. Furgal and H. Castleden supervised the development and implementation of data collection and analysis, offering feedback and instruction on these processes. H. Castleden actively contributed to the writing, while C. Furgal offered final feedback and suggestions for revisions.

3.2 Abstract

Rapid socio-cultural, economic, and environmental changes are challenging wild food access and thus food security for Canadian Inuit. In response to the continued value of wild foods, communities and governments are establishing community freezers – one type of wild food support initiative in the region. This study evaluates how one community freezer initiative in Nain, Nunatsiavut supports wild food access for current users. Data were collected through semi-structured interviews and focus groups with users and managers of the Nain community freezer, and active harvesters as well as participant observations, and document collection and review. Results indicate that the freezer supports socio-cultural, economic and environmental access to wild foods. However, there are issues associated with supply, dependency on the freezer initiative, social exclusion, and tension between the feasibility of operations and maintenance of

traditional values that represent barriers to meeting current and potentially long term food security. Communities, governments, and policymakers will need to consider place-based contextual factors that exist within each community when investing in and monitoring the success of such initiatives.

3.3 Introduction

Food insecurity is not a new problem and people have coped with food shortages at different times and places throughout history. However, people are becoming increasingly aware of the role that socio-cultural, environmental and economic factors play in food access and availability (Tarasuk, 2001; Maxwell, 1996; Riches, 1999). In fact, access to food, recognized as a fundamental human right (UN, 2012), is an escalating concern at the local, regional, national, and international scale (FAO, 2011; Rosegrant & Cline, 2003; WHO, 2011). This is particularly the case in Canada's arctic region where rapid anthropogenic impacts on the environment have affected both the availability and accessibility of market and wild[14] foods that characterize the contemporary Inuit diet (Beaumier & Ford, 2010; Guyot et al., 2006; Ford, 2009; Ford & Berrang-Ford, 2009; Wesche et al., 2010). Wild food is fundamental to the Inuit diet not only for physical health, but also for its direct links to Inuit social, mental, and spiritual health, the maintenance of kinship relationships, and identity (Bennett & Rowley, 2004; Collings et al., 1998; Searles, 2002). While these changes have had both immediate and long-term implications for wild food accessibility and health for Inuit (Furgal & Sequin, 2006; Laidler et al., 2009), Inuit have maintained a high level of social-ecological resilience that has fostered long-term sustainable resource acquisition strategies that are characterized by ongoing and evolving coping mechanisms (Bates, 2007; Berkes & Jolly, 2001; Wenzel, 2009). Several initiatives at the community level have been established in response to growing stresses on access to wild foods, and some have been identified as potential tools to help alleviate these stresses (Chan et al., 2006; Furgal & Seguin, 2006).

[14] For the purpose of this paper, "wild foods" are defined as those foods harvested from the Arctic environment for human consumption such as char, seal, caribou, as well as plant species (ITK, 2008).

One such initiative is the concept of a "community freezer" (Chan et al., 2006; Furgal & Seguin, 2006).

Community freezers are typically initiatives or programs established through local, regional, or federal governance structures to support wild food consumption by providing an access point to wild foods for residents who cannot access them through other means. Resident harvesters supply wild foods to the freezer so that others in the community are able to access these foods through various distribution practices (Boult, 2004; HSP, 2009). There is growing popularity in the use of such freezers (George, 2011; Government of Nunavut, 2011; Windeyer, 2011), however, food security studies that evaluate how effective these programs are at assisting households and communities to meet wild food needs remain absent from the peer-reviewed literature. In response to this void, we conducteda qualitative case study to examine the value of a community freezer initiative from multiple perspectives in one Inuit community. The fundamental goal of this research was to explore how a community freezer in one Inuit community in northern Canada influenced wild food access for residents with respect to changing socio-cultural, economic and ecological changes.

What follows is a brief discussion of Inuit social-ecological resilience and adaptive capacity to environmental change in the north, northern specific issues of food security, and how community freezers have been considered elsewhere in terms of contributing to a food-secure environment. This resilience and adaptive capacity is further contextualized in the historical-socio-cultural context of the study community. From there, a description of the research methods and case-specific findings are provided. The paper concludes with a discussion of how findings can contribute to our understanding of community freezers as mechanisms for contributing to food security, alleviating social-ecological pressures on access to wild foods and the implications for further research and policy.

3.4 Socio-ecological Resilience, Adaptive Capacity, and Food Security in the North

The level of resilience[15] a community has is largely dependent on their adaptive capacity[16]; one way to maintain resilience is through the adoption of coping mechanisms and/or adaptive strategies[17] (Berkes & Jolly, 2001). Kulchyski (2005) highlights how Inuit culture values repetition, but also innovation and flexibility. Inuit have been adapting to changing environmental conditions for thousands of years by employing a flexible approach to securing resources (Bates, 2007). Skills and knowledge gained through ongoing interaction with the socio-ecological environments, and that allows for flexibility, contributes to the high level of socio-ecological resilience that enables Inuit to effectively respond to current environmental conditions while securing resources (Berkes & Jolly 2001; Bates, 2007). Particularly relevant to this discussion is the Inuit worldview that the future cannot be predicted or planned out (e.g. strategic long-term planning is not a core value) (Bates, 2007). However, by continuously interacting with and engaging in the present, Inuit have historically been able to prepare for the future, although *planning* for the future is not typically practiced in Inuit society per se (Bates, 2007).

Food security, widely understood to be "when all people at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 2009, p.8), also includes the confidence of knowing that foods will be there when needed, and that they can be acquired in ways that are socially and culturally appropriate (Maxwell & Smith, 1992; Maxwell, 1996; Powers, 2008). In the case of Inuit in Canada, a major nutrition transition came about after the majority of Inuit were subject to colonial-driven forced settlement into permanent communities (Damman et al., 2008; Kuhnlein, 2004), particularly during the 1950s (Kulcyski, 2005). The impacts of Inuit colonization can generally be characterized as a process of acculturation or erosion of engagement in a hunter-gatherer

[15] Resilience is often defines as the likelihood for people or societies to 'bounce back' in response to system disturbances and to move forward as desired (Resilience Alliance, 2010).
[16] Adaptive capacity is generally understood as the ability for people to predict and respond to changes in their environment (Resilience Alliance, 2010).
[17] Coping mechanisms are short-term solutions in response to changing systems that are not perceived to hold long-term consequences, while adaptive strategies are long term measures established in response to changes that are anticipated to hold long term consequences. Both measures may co-exist, and a coping mechanism may evolve over time to become an adaptive strategy (Berkes & Jolly, 2001; Maxwell & Smith, 1992)

lifestyle to a more sedentary lifestyle reflecting that of industrialized (white) society (Kulcyski, 2005). Myers (2002) suggests that while the government of the day held a "tacit… expectation that the people would cease their hunting-dominated lifestyles, and take up employment in a more modern economy" (p. 1), Inuit have maintained a mixed economy (Usher et al., 2003).

As stresses on access to wild foods continue to evolve within new social-cultural, environmental and economic conditions, the way that Inuit respond to these changes in their efforts to secure these resources also evolves. The continued value of wild foods has influenced individuals, households, and institutions to establish various coping mechanisms to help maintain the flow of wild foods in their communities (Boult, 2004). For example, harvesters are often able to quickly respond to changing ecological conditions (Laidler et al., 2009), family members separated by distance send each other wild foods via airmail (Berkes & Jolly, 2001; Ford & Beaumier, 2011)**,** and some communities have agreements with each other to exchange wild foods that are otherwise not available locally through inter-community trade (Berkes & Jolly, 2001). In short, Inuit interaction with their social-ecological environment continues to support wild food distribution and the re-production of sharing networks (Berkes & Jolly, 2001; Collings, 1998).

It is well-established that Inuit food storage mechanisms have played a central role in maintaining long-term wild food accessibility for generations (Bennett & Rowley, 2004). Before permanent settlements were instituted, Inuit relied on food caches to support wild food consumption of foods year round (Bennett & Rowley, 2004). These long-term storage mechanisms were carried forward in the transition to permanent settlements (Damman et al., 2008), where such things as underground freezers have served as communal storage areas for wild foods in some regions. Some of these storage units have, in fact, evolved to become community freezers. Research to date has focused on the role and acceptability of the community freezer in contemporary society (see, for example, Gombay, 2009, 2005a, 2005b; Kishigami, 2001). While maintenance issues have been cited as a rationale for discontinuing some freezer initiatives (Chan et al.,

2006), generally they are perceived as a viable option to support access to wild foods for individuals who do not always have the capacity to procure their own foods, especially in the context of a rapidly changing environment (Furgal & Sequin, 2006). This study fills a gap in the food security literature that isolates issues of wild food access and the role of food support initiatives in supporting wild food accessibility for Inuit.

3.5 Contextual Overview

The focus of this study is in the region of Nunatsiavut, the Inuit land claim region of Newfoundland and Labrador, situated in the Canadian Subarctic (see Figure 3.1: Map of Study Location). Inuit in this region primarily lived nomadic lifestyles and "where a family hunted was a function of where it lived" (Brice-Bennett, 1977, p. 112) until the late 1700s when Moravian missionaries influenced Inuit settlement close to or within mission stations, and then during the late 1950s when forced closure of two mission stations by the provincial government resulted in a re-distribution of Inuit to three of the five coastal communities: Nain, Makkovik, and Hopedale (Brody, 1977). These movements represented a major transition towards a mixed economy. Social, political, and economic changes that were born out of these relocations challenged the ability for some residents to access wild foods from the time of resettlement (Brice-Bennett, 1977; Brody, 1977; Hart, 1973; Markham, 2001; Markham, 2003). While these changes were disruptive, they did not destroy "the vital relationship between the people and their age-old resource base upon which, ultimately, their system of life was built" (Brody, 1977, p.323). In 2000, 76 percent of the adult population in Nunatsiavut harvested wild foods, and more than half of the amount of meat consumed by 31 percent of households in Nunatsiavut was wild meat (ITK, 2008). However, stresses on access to wild foods are present; exclusion from sharing networks, the lack of financial capacity to harvest foods, and changing conditions in the natural environment have collectively restricted the ability for some to access wild foods (Organ et al., in preparation).

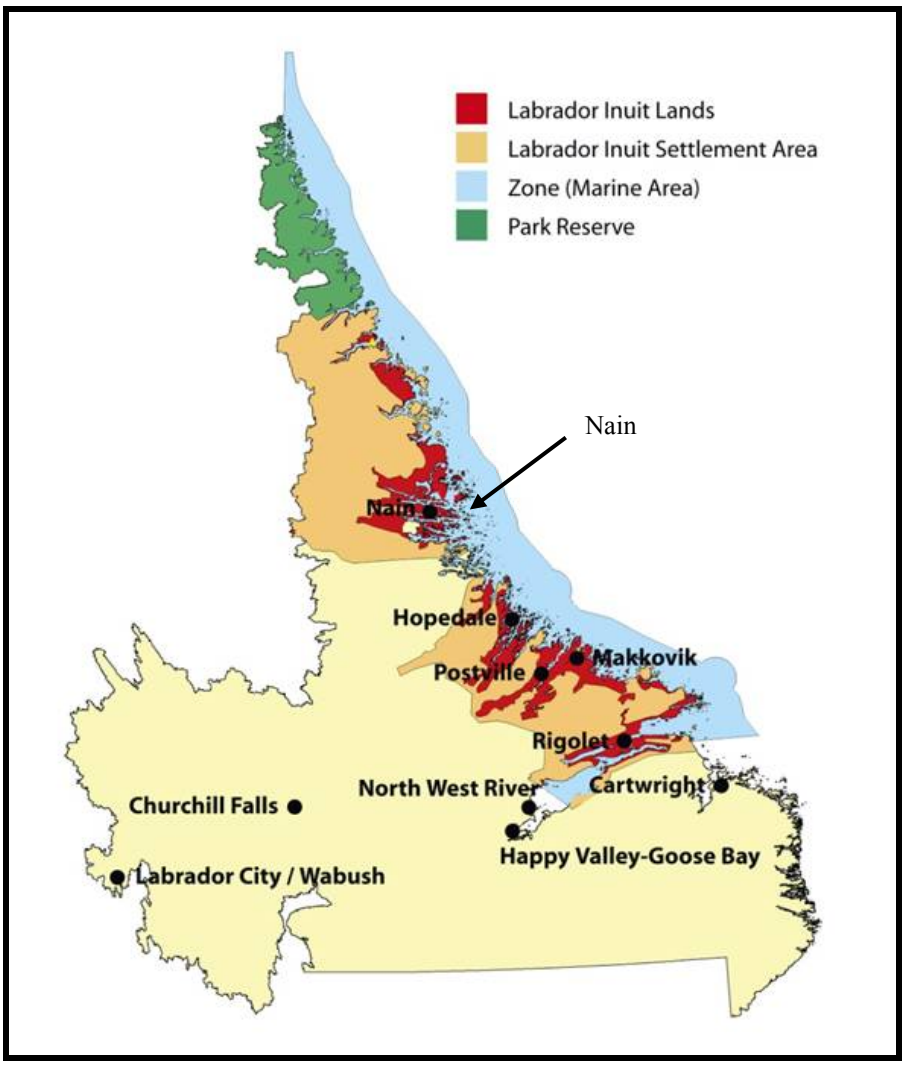

FIGURE 3.1: Map of study location (Nunatsiavut Government Canadian Constituency, 2012)

Of the five coastal Inuit communities, Nain became the study location for this project for four key reasons: the Nunatsiavut Government's Department of Lands and Natural Resources (based in Nain) sought a partner to conduct research on community freezer programs to help inform its own planning in this area; Nain was the only community at the time operating a community freezer; and there were reports of stresses on access to wild foods for residents in the community. Further, a long standing relationship between the third author (CF) and the Nunatsiavut Government and community of Nain facilitated the establishment of a research agreement and partnership which provided the foundation for this case study.

Nain is the northernmost and largest of the five Nunatsiavut communities and houses the majority of the regional government's administrative offices. Established in 1771 by Moravian Missionaries, Nain is the oldest Inuit community in Canada, with a population of approximately 1200 in 2011 (Statistics Canada, 2012). Access to the community involves weather-dependent daily airline service and coastal boat service between July and November to transport freight and passengers (Nain Inuit Community Government, 2011). Overall, community interest in this project and the suitability of Nain as a host example community freezer initiative made this an appropriate study location, where information gained would support community interests while filling an important gap in the sch0larly food security literature.

A small number of community initiatives in Nain support wild food access. Specifically, the Nunatsiavut Government's Department of Health and Social Development holds lunches once a week for Elders in the community**,** and the menu includes wild foods if resources are available. Additionally, the children's daycare accepts wild foods from parents in exchange for daycare fees that apply to daycare meals. Community feasts also include wild foods that are available for all residents. There are no other formal institutional initiatives in place to support access to wild foods save the community freezer, which is run by Ulapitsaijet, a community volunteer group in Nain and was supplied with wild meat by three local hunters at the time of this study. Ulapitsaijet purchased the freezer in 2006 in response to observations that a growing number of single mothers and Elders were in need of wild foods. The freezer is the size of a household deep freezer, located in a government agency building. The agency donates the space and energy costs of the freezer. Residents can access the freezer on weekdays during the building's office hours. Members of Ulapitsaijet and/or the resident harvesters also deliver wild meats to Elders' homes for those individuals with limited physical mobility. When supplies are limited, Elders are generally the first to receive these foods, however, no formal monitoring program is in place to supervise the use and supply of the freezer, and there are no restrictions on use. In reality, there are periods of time throughout the year when the freezer is empty. Observations of ongoing challenges for residents to

access wild foods prompted the Nunatsiavut Government to establish this community-university research partnership to investigate whether their community freezer could better meet wild food needs for residents and maintain the flow of wild foods entering their communities.

3.6 Research Approach

A community-based participatory case study approach (Castleden et al., 2008; Israel et al., 1998) was undertaken to capture a place specific perspective from those who are the most familiar with their food shed, are the subject of much inquiry, and yet have not been included in many of the recent conversations (i.e. post 1950s) and decisions regarding food that ultimately affect their livelihoods (Battiste & Henderson, 2000; Wenzel, 1991). Research planning conversations took place in Nain (July 2010) with community partners, key informants of the Nain community freezer, and other community members to help develop the research objectives in a way that reflected community interests. The first author's University Research Ethics Board and the Nunatsiavut Government Research Advisory Committee reviewed the research protocol prior to data collection.

The first author collected data in Nain (November-December 2010) through semi-structured interviews, focus groups, and participant observations (see Table 3.1: Summary of data collection activities). Interviews were conducted with current users of the community freezer to understand their perspectives of recent stresses on access to wild foods and their interactions with the community freezer. Interviews and a focus group (Hay, 2005) with Ulapitsaijet volunteer managers[18] shed light on community freezer operations, successes and challenges of management, and ideas for future management. Two focus groups with active harvesters as well as two individual interviews with Elders who still hunted were conducted to ascertain current and anticipated stresses on access to wild foods in response to the changing environment, and how future community freezer management might be able to address some of these

[18] For the purpose of this paper, managers are inclusive of suppliers and those who oversee the Nain community freezer initiative. Harvesters are those participants who are not officially involved with the freezer management.

stresses on access to wild foods. Participant observation (Hay, 2005) of community freezer management, activities surrounding the community freezer, and harvesting practices (both inside and out of the community) were recorded in field notes and allowed for further contextualization of the information communicated through the focus groups and interviews, and familiarity with the human and ecological environment that shapes the research question. A document review of region-specific information and community freezers provided further insight into food security and community freezer literature, which helped shape the analysis.

Table 3.1: Summary of data collection activities

Method	Focus	Number
Semi-Structured Interviews (17)	• Key informants of Nain community freezer management • Users of the Nain Community Freezer • Elder Harvesters	2 13 2
Focus Groups (3)	• Active Harvesters (2) • Managers of the Nain Community Freezer (1)	9 6
Participant Observation	• Community Freezer activity • Harvesting Practices	~ 50 days

All data were audio recorded and transcribed with the permission of participants[19]. All participants were invited to complete a transcript verification process; those who requested changes to their transcripts did so through email, phone, or in person with the lead author during a community visit in March, 2011.

All transcripts, including field notes, were entered into the qualitative software program, NVivo 9™, where data were organized through topical and thematic codes (Richards, 2005; Hay, 2005, Miles & Huberman, 1994). Through thematic content analysis, key

[19] One participant preferred note-taking rather than audio-recording

stresses on access to wild foods and recommendations for future community freezer management were identified.

3.7 Findings

The analysis resulted in the identification of three key themes that both facilitate *and* create barriers with respect to the Nain community freezer in terms of access to wild foods for residents: socio-cultural factors, economic factors, and environmental factors. For this study, socio-cultural stresses on access to foods refer to human behaviours and attitudes; economic stresses refer to time and financial constraints; and environmental stresses refer to shifts in the natural environment. Each of these themes is explored in detail below with respect to the current regime and future considerations.

3.7.1 Community Freezers as Economic Facilitators

All participants agreed that access to wild foods through the community freezer requires no financial commitment for users, offering a risk-free situation compared to the costs associated with harvesting foods in new and sometimes unfamiliar environments and climatic conditions. As a result, users referred to the freezer as a place of convenience to access wild foods compared to harvesting their own foods. One user who attributed his low participation in harvesting activities to financial stresses: "*I find that comes in real hand because the community freezer is like a handy hunting ground! … it's just a good place to get meat when you can't afford it or when you can't go hunting" (Elias Obed)*[20]*, male user).* For example, access to certain marine species requires a long liner boat and only a few community members own this type of vessel. Thus, when seal and mattak[21] is available, a broad range of (new) users might access the community freezer: "*Joey brought that, a lot of mattak in, and when the word got out on that, boy, get out of the way" (Manager).* In this particular case, a supplier harvested approximately two thousand pounds of meat and mattak that only lasted a few days in the freezer.

[20] 18 of 33 participants agreed to have quotes attributed to them. The remainder have simply been labeled as user, harvester or manager

[21] Mattak is the skin or blubber (fat) of whale.

3.7.2 Community Freezers as Economic Barriers

While the freezer offered an economic bridge for users, there was concern among all participants about people becoming dependant on it. One user who was able to harvest some of his own foods and only accessed the freezer a few times during the previous year urged others to avoid "*becom[ing] dependant on the program" (Norman Anderson, male user).* Other users were also concerned that their current or continued use might make them 'stuck' to the system and sidetrack them from harvesting foods themselves in the future. But the reality is that most users did not own a boat (for summer harvesting) or skidoo (for winter/spring harvesting), which can cost thousands of dollars, and they spoke to the financial stresses of owning either piece of equipment: *"Right now I can't afford [a skidoo]" (User 4)* was a sentiment echoed by several users participating in this study during interviews and participant observations. The cost of and amount of gas required to accommodate longer travel routes - a result of changing environmental conditions - has discouraged some users from harvesting their own foods (for example, at the time of writing, the cost of gas in Nain was $1.89/litre in contrast to $1.17/litre in Toronto).

3.7.3 Future Management (Economic)

Participants considered the economic implications of maintaining the community freezer; concerns did not only focus on user dependency, ways in which the community would be able secure wild foods also posed a philosophical issue from an economic standpoint. On the one hand, managers, harvesters, and users alike suggested that financially supporting and/or employing harvesters through the community freezer initiative would be an option available to help people get back to the land, while at the same time promoting wild food consumption and helping to maintain a flow of wild foods in their community. On the other hand, managers struggled with the concept of financially supporting harvesters fearing that financial support might not represent traditional sharing practices in Nain: *"It has nothing to with the value of the work that [a hunter is] going to do, it has to do with traditionally Inuit shared food with their family and community and others, and we're trying to enhance that particular aspect" (Isabella Pain, manager).* Managers also

expressed concerns about how offering financial incentives to harvesters might compromise sustainable and ethical harvesting activities: *"I think we might be taking a lot more animals or wild food, or, you know, than we are right now [if suppliers are financially supported], and I don't think that's a problem as long as its sustainable" (Isabella Pain, manager).* At the same time, managers appreciated the increasing cost of harvesting practices, especially under changing environmental conditions, which has had an impact on how much harvesters are able to supply to the freezer. Indeed, financially supporting friends or family has already become a sharing practice among users in light of rising costs associated with harvesting.

3.7.4 Socio-Cultural Facilitators

The way users typically became aware of the community freezer and continue to learn about the availability of foods in the freezer is through word of mouth from friends and family: "*It's like going through the grapevine" (User 1).* Other individuals learn about the availability of foods through the local radio station, observations of local harvesting conditions and activities that might imply there is food in the freezer, by calling and asking if there are foods available, and/or by physically going to the freezer to see if there are foods available. From a management perspective, the community freezer is intended to include residents in a "community of sharing" that they do not typically have access to:*"There's a group in Nain [who] don't have that extended family to be able to call upon and that's the ones that we usually see first" (Manager).* What is interesting to note is that individual users who receive food from the freezer also share it with their family members or friends, supporting access to wild foods beyond the individual user to the broader community: "*When they have wild foods in there, I'm more able to have food for us…I usually get enough for three of us to last for a few days or so, for a few meals so it helps a lot" (Toby Kojak, male user).* From all three participant groups, there was a general sense that the freezer contributed to traditional Inuit food sharing values and was a welcomed feature of the community.

3.7.5 Socio-Cultural Barriers

The ways in which users themselves described their networks confirmed managers' observations. One user describes "*Me and [my partner] go probably seven times a month …because we don't hardly get any [wild foods and nobody…tell[s] us where to get some wild meat [on the land for ourselves]" (female user).* However, because the initiative is not heavily advertised - partially because managers assume people will hear about foods available through word of mouth before a formal announcement is made - access to foods for many depends on how soon they can then access the initiative once they learn that there are foods available. *"There are some people that are usually first… first to the freezer…and so it's the ones that are able to move fast and, you know, get there first" (Manager).* Just as access to wild foods near local harvesting areas has become opportunistic, so too is access to wild foods at the freezer. What is particularly interesting is the fact that some community members remain unaware of the freezer and suggest that: *"a community freezer would be a dream come true" (Harvester).* The reality though is that some of those who do use the freezer expressed some discomfort about the lack of communication about who the freezer is intended for: *"A lot of people didn't know [seal meat] was there… I wanted it though because I didn't have any for a long time so I took it, but I felt a little bit guilty" (Frances Murphy, female user).* Herself and other users felt judged for using the freezer because they did not fit the assumed criteria for access: Elders and single mothers. Some harvesters expressed frustration that some users, particularly male youth, had the ability to harvest their own foods and, therefore, should not access the freezer, leaving it for those whose needs were greater.

3.7.6 Future Management (Socio-Cultural)

All three participant groups suggested that the establishment of criteria could be beneficial in terms of reducing feelings of social exclusion, "*If you are going to offer to the community, then it should meet the needs of the community, otherwise say, "it is very limited, the priorities are Elders"… but I don't think it's fair to not make it known" (Frances Murphy, female user)*. However, while Elders remain a priority by virtue of a community-wide sense of respect for this group, participants also expressed concern that formalized criteria would not be representative of traditional sharing values and think it is

important to maintain an open door policy. As one Manager suggested: *"it would be kind of sad to lose that sharing that we've had for so long and I guess this [freezer] is one way that we can keep it going" (Ron Webb).* Managers recognize challenges of being inclusive within the current structure and struggle with how to determine the appropriate level of advertising considering the limited ability to supply wild foods: *"how you would communicate when you have food, unless you're always going to have food, which I don't know how you could ever guarantee…you don't want to target a certain group of people because the whole idea was that this is for anybody who needs it" (Isabella Pain).* Despite this challenge, they agreed that a better management plan is needed. They also recognized that future considerations would require a greater time commitment on the part of managers and harvesters for long-term sustainability.

3.7.7 Environmental Facilitators

Travel conditions and wildlife populations are common conversations taking place in the community, where residents feel both the benefits and the brunt of changes to these environments to different degrees and at different times. The importance of harvesting wild foods and being on the land was widely recognized as an important aspect of Inuit identity, health, and wellbeing. Traveling out on the land to engage in harvesting activities was described as *"good for the soul, just as good as the food you eat" (Maria Dicker, Elder harvester)*. For users, the freezer temporarily connects them to their land-based traditional lifestyle by bringing the outside in and providing a safe space to access foods from. At the same time, residents described feeling 'stuck' in town when they are unable to leave the community, and some users indicated that they didn't want to get 'stuck' to the community freezer as it might restrict them from harvesting their own foods in the long term.

3.7.8 Environmental Barriers

Lived experiences of travelling on unfamiliar ice conditions created anxiety and unsafe travel conditions regardless of the financial costs incurred, which led some users to opt out of harvesting activities: *I am not sure if I should have [a snowmobile] now or not, but*

I would like to have one if travelling conditions are safe" (User 4). Interestingly, freezer stock has a strong correlation to characteristics of the natural environment. Participants noted that when people in the community talked about the contents of their own household freezers, they were also talking about the weather. For example, the weather report during the study period has been described locally as a year with a significantly reduced ice freeze-up and low availability of caribou. As a result, caribou meat was in short supply to the community freezer, and many other household freezers also experienced below average quantities of caribou meat. Managers and harvesters alike recall when caribou used to migrate close to town and when there was a consistent supply of caribou in the community freezer for as long as two months *"I think the longest I remember any food being in there was like for a two month period where we had caribou consistently over two months" (Isabella Pain, manager).* This steady supply of caribou to the community freezer was partially attributed to the ability for many residents to access caribou themselves, reducing their dependency on the community freezer. In recent years, suppliers have found it difficult to harvest an adequate amount of caribou for their own families, and so their ability to offer foods to the freezer initiative was also limited: *"it's just scarce and farther away and that means the freezer suffers"* (Manager). Caribou is one of the most preferred wild foods but it is also one of the most difficult foods for residents to access. *"The thing that we hear from people is… 'do you have caribou?'… people want caribou, need caribou" (Isabella Pain).* At the same time, users recognized the limitations of accessing wild foods under certain environmental conditions.

3.7.9 Future Management (Environmental)

Changing ecological conditions have brought forward concerns about the capacity of the current freezer initiative to keep up with changing ecological conditions and the demand (desire) for wild foods among Nain residents. Diversification of foods to supplement a decrease in the availability of other foods would help satisfy some wild food preferences that are not currently being met and are otherwise being overlooked: "*When the partridge population is up, and they were the last couple of years, we could have easily put in a good number and that's one of the things we need to look at… in the future" (Ron Webb).*

Diversifying freezer supply, however, also comes with concerns of how harvesting more of one species will affect those populations and others that might depend on them: "*My question is always about sustainability of the resource" (Isabella Pain).* Questions regarding the willingness of harvesters who contribute wild foods to this initiative is also a concern as changes in the natural environment make it difficult for harvesters to supply foods for their own networks and beyond to the freezer. For example, one supplier donates approximately 20 percent of what is harvested to the freezer and the remaining 80 percent is kept for personal consumption and distribution purposes. However, if certain species (e.g. caribou) continue to be difficult to access due to environmental conditions and the need to travel further distances, the amount of foods a harvester shares with the freezer will likely decrease as a result of increases in the cost of fuel, bullets, wear and tear on equipment and the amount of effort involved in harvesting food.

3.8 Discussion

In thinking about socio-ecological resilience, adaptive capacity, and food security in the North, our findings reveal four factors worthy of consideration for community freezer management. These four factors include issues of supply, dependency, social exclusion, and tensions between the feasibility of operations and its impact on or threat to traditional values. Each of these factors is discussed below in relation to how they resonate with issues of food security and the potential implications of these characteristics of use or management. We conclude this section by identifying potential implications - and limitations - of this research for the scholarly community, the Nain community freezer initiative, and other food support programs in the region especially in light of recent federal reductions that had traditionally offset the high costs of store-bought foods in the North (CBC, 2011; Rogers, 2012).

Unlike other food support programs such as food banks where supply is heavily influenced by external factors (Riches, 2002), the community freezer is a community-based system; resident harvesters are harvesting foods from the local environment for community members. Clearly environmental conditions are the first and primary factor

among management and users with respect to providing access or accessing wild foods, regardless of one's social or economic positioning as it is influencing harvesters ability to gather and bring in food from the land. Extreme weather events have challenged skilled harvesters in other Inuit regions as well in terms of their ability to access and share foods past their immediate networks (see, for example, Chan et al., 2006; Ford, 2009). Despite the high level of socio-ecological resilience reported among Inuit, unusual weather events have historically influenced food shortages and hunger sometimes resulted (Fossett, 2001; Bennett & Rowley, 2004). Thus, wild food shortages due to environmental variation is a reality carried forward to contemporary Inuit society, however, access to market foods in current times has the potential to serve as a buffer against hunger[22]. Limited supply is not a point of frustration for users as they are cognizant of the sensitivities of the community freezer to current environmental conditions. However, if unusual environmental conditions continue to discourage residents from harvesting wild foods, the reliance on sharing networks including both traditional informal and more formal manifestations such as the community freezer will likely increase during times when the freezer is least able to meet wild food needs.

Referring to the community freezer as a 'handy hunting ground' suggests that this initiative has the potential to serve as a contemporary integration of traditional sharing practices. It also signals a transition away from participation in harvesting activities, as changing environmental factors have discouraged people from harvesting their own foods as frequently as they would like to. Indeed, this is a concern amongst participants; residents may become too dependent on this initiative, particularly those who are willing to harvest their own foods but do not have the social or economic resources to do so. Other studies have reported similar findings (see, for example, Gombay, 2009; Kishigami, 2001; Kishigami, 2004). While it is also argued that since foods are only occasionally available people are "obliged to go out and go hunting for themselves" (Gombay, 2009, p. 124). However, in recognition of those users who do not harvest their own foods, Kishigami (2001) urges wild food initiative and program planners to integrate

[22] At the same time, market foods are substantially higher in fat and sugars, and significantly lower in nutritional value not to mention cultural value (Kuhnlein et al., 2004, Kuhnlein & Receveur, 2007).

male youth who are integral to the social re-production of sharing networks in program operations as harvesters. Potentially problematic is continued stresses on access to wild foods that could increase the need for the community freezer even by skilled harvesters. Indeed, some coping mechanisms initially adopted by a few individuals might become a community-wide norm, but this is not conducive to supporting long-term food security (Hamelin et al., 1999; Maxwell & Smith, 1992; Tarasuk & Beaton, 1999; Riches, 2002; McIntyre, 2003; Ford & Beaumier, 2011).

What is not as evident with other community freezer initiatives but did emerge here is the issue of exclusion. Social distance between some community members makes informal communications ineffective and more conducive for stereotypes to be formulated based on the lack of awareness of individual circumstances. Because of this, participants in this study expressed exclusion as a major factor to overcome in future initiatives and programming. The reality is that this initiative, like others (e.g., Tarasuk, 2001), is operating in a context where supply is often limited and because of high demand, social exclusion may be an ongoing challenge. Feelings associated with the use of other food support programs has also been flagged because of mental health implications that might ensue when people feel excluded from such programs and that might, over time, overflow into larger societal issues (Tarasuk, 2001; Hamelin et al., 1999).

Successful Inuit coping mechanisms are often predicated on traditional values and customs (Bates, 2007). Similarly, conversations about ways forward for the Nain community freezer are largely centered on how foods can be harvested and distributed in ways that are respectful of traditional Inuit principles and values. This is so that management practices are socially and culturally acceptable and more likely to be sustainable for the long term. Moving forward is complicated when there are diverse opinions about what is socially acceptable, and there are multiple lived realities that inform different traditions. Indeed, diversity within each community exists and as communities continue to grow and evolve, what is deemed to be socially acceptable will also grow and evolve (Gombay, 2010; Tarasuk, 2001; Hamelin et al., 1999). These differences in opinions or actions present a tension between the feasibility of operations

in meeting wild food needs while also representing traditional values. Debates predicated on these tensions are present in other Inuit regions as well as communities continue to adapt and respond to changing environments. Most notably, debates about whether to financially support harvesters is echoed by Inuit residents in other regions who are concerned about how wild food programs that financially support harvesters have the potential to influence sharing practices, yet they also acknowledge the necessity for financial support to access and distribute wild foods (Gombay, 2009). Case study research, such as this and other studies cited here, will continue to help emphasize/identify initiative priorities, and will ultimately influence the social acceptability and the ability for the initiative to successfully meet wild food demands based on initiative expectations.

3.9 Implications

This research offers important perspectives on the value and importance of food support initiatives in changing socio-cultural, economic and environmental conditions such as that of a contemporary Inuit community. Further, it provides perspectives on future community freezer management and use that may otherwise be overlooked in the implementation of these programs not considering their place along the timeline of community change and modernization. One of the more important contributions of this research is the emphasis for programs to critically consider how best to move forward in ways that are culturally and socially acceptable. However, "determining which behaviors lie outside social norms and are 'socially unacceptable' is clearly a matter of judgment, depending in part on one's social location" (Tarasuk, 2001, p. 11). It will be important for decision makers to recognize diversities that exist within communities and engage in substantial community engagement and planning activities when contemplating the implementation of such initiatives at that scale. Research can further assist with this by capturing more place-based perspectives about community freezers, or food security issues in general, as they inform regional governments and policies. It is also important to consider food security as a managed process (Maxwell & Smith, 1992; Maxwell, 1996), and thus one formula is not likely to fit multiple contexts or communities, to do so may

not guarantee long term success. It will take a series of adjustments in response to changing socio-cultural, economic and environmental dimensions, informed by conversations that are in tune with the lived realities. Indeed, ongoing adjustments in response to current conditions is what has contributed to the high level of socio-ecological resilience among Inuit to date, and is how this community freezer initiative was established in the first place.

Further research identifying of the need to support wild food access through community freezers will help to inform these and other such programs of obvious and less obvious food insecure experiences, making an important contribution to community-based, scholarly, and policy-oriented discussions about the feasibility of management decisions such as whether or not to establish criteria for use. If criteria are established, careful consideration of how this might impact long term well-being of individuals who may be excluded should be explored. Monitoring use and supply can also help the community freezer manage for periods of high demand for this initiative. Although users were not frustrated by food shortages due to poor harvesting conditions, managing for expected periods of demand may be worthwhile if the inability of the freezer to supply foods during this period is perceived by community members to hold major implications on short term or long term food security. Furthermore, feelings of social exclusion could be alleviated by establishing formal community freezer communication. Although managers in this study indicated that word of mouth will often reach people before any formal communication is made, and actively advertising widely might not make sense when supply is limited, investing more energy into formal communication could help alleviate feelings of social exclusion if it is more widely known by the general public who this initiative is for. This could also help foster awareness about who is in need of support for access to wild foods, alleviating the stigma that is often associated with the use of such initiatives.

More comparative case studies of community freezer initiatives will contribute to the development of recommendations for best practice associated with these initiatives. Doing so will also identify similarities and differences of community freezer use and

management that exist between regions, and thus can be used as an appropriate reference for communities who are establishing these initiatives. Policy initiatives that are established in support of food security for northern Canada can also be better informed by these results, which capture perspectives that exist beyond just one community.

3.10 Limitations

The Nain community freezer initiative does not hold written records of those who use the initiative, thus it was difficult to recruit participants who represented all user groups. In addition, this study did not include the perspectives of those who might need the community freezer but do not currently access it. The exclusion of these participants was decided based on the difficulty of identifying these individuals and ultimately fell outside the scope of this case study. But this is also a compelling area to pursue further research before finalizing community plans for freezer management. Comparative data about other community freezers is also lacking in the literature; as such this study contributes to an emerging literature in this area and reinforces the need for further inquiry.

3.11 Conclusion

This research contributes to a gap in northern and Inuit food security research pertaining to support initiatives such as community freezers during a time when they are becoming a popular option among communities and regional governments to help alleviate stresses on access to wild foods. Although the Nain community freezer helps bridge access to wild foods, there are some barriers in meeting wild foods needs that have the potential to hold negative long-term implications on individual and community food security. Specifically, this study demonstrated that although there are obvious barriers in meeting important physical aspects of food security, especially during times of environmental changes, there are also perhaps less obvious influences or considerations for future management and use that have the potential to create an unintended level of dependency on this initiative and potential feelings of social exclusion. Further research is recommended to capture more place-based perspectives to better represent diversities that

exist within communities that can positively contribute to this and other food support initiatives in any one region. It will be important, as communities continue to change and stresses on access to wild foods continue to persist, for ongoing conversations to identify new and emerging gaps in food support program management as reliance on them for wild food needs may reach critical mass in this rapidly changing climate.

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CHAPTER FOUR: CONCLUSION

4.1 Introduction

Worldwide, individuals are feeling the pressures of socio-cultural, economic and environmental changes on food access (FAO, 2009; FAO 2011), and the health implications that often ensue when access to certain foods cannot be met (Hamelin, 2002; Vozoris & Tarasuk, 2003). Health implications can include short-term hunger, anxiety about not having enough food, and malnutrition (Hamelin et al., 1999; Tarasuk, 2001; Vozoris & Tarasuk, 2003). Access to an adequate food supply in ways that are socially and culturally appropriate is gaining recognition as a critical dimension of food security (Maxwell & Smith, 1992; Maxwell, 2006; Power, 2008). Most recently, a visit to Canada by the UN Special Rapporteur on the Right to Food in 2012 sparked international recognition of food accessibility as a major concern that should be addressed by the federal govern ment (OHCHR, 2012). Food security studies are seeking to understand stresses on access to food as well as ways that people are coping with these stresses. More recently, scholars and governments are discussing long-term strategies to overcome food shortages to support the health and wellbeing of individuals and communities.

This study explored a growing concern in the Canadian food security context: challenges to accessing foods among Canada's northern Aboriginal populations, in this case Inuit living along the northern Labrador coast. Various factors led to Inuit experiencing the highest rates of food insecurity in Canada and the highest rates among any Indigenous group outside of the developing world (Egeland, 2011; Rosol et al., 2011). Scholars, governments and residents are increasingly voicing concerns about access to both market and wild foods (CBC North, 2012; George, 2012). Yet concerns about access to foods for Inuit have been met with some debate about ways to address high rates of food insecurity (Furgal & Sequin, 2006; Chan et al., 2006; Nunatsiaq News, 2012).

Wild food access is an issue previously and currently underrepresented in northern food security research, yet recognized by community members and scholars to be one of the pillars of food security, which is critically important for the physical, mental, and cultural

health of individuals and communities (Kuhnlein & Receveur, 2007; Lambden et al., 2007). In response to challenges to access a number of food support mechanisms or strategies have been implemented in communities in the North and elsewhere. Specifically, this study focused on one such program, a community freezer initiative, designed to support wild food access in one community in northern Canada, which is gaining popularity as a potential coping mechanism in other regions (George, 2011; Furgal & Sequin, 2006). This study explored two aspects of the issue:

1. How does the current Nain community freezer influence access to wild foods for current users?

2. What key factors should the community freezer management consider to address current and anticipated future impacts of environmental changes on access to wild foods?

Using a single instrumental exploratory case study (Yin, 2003) in the community of Nain, Nunatsiavut, this project employed document review, semi-structured interviews, focus groups and participant observation to gather data over a one year period. Further, a community-based approach was followed (Castleden at al., 2008; Stewart & Draper, 2009; Israel et al., 1998) in which community members were involved in the planning and implementation stages to help ensure the project met both community and academic interests in ways that were culturally appropriate.

4.2 Key Findings and Links to the Literature

This study as a whole offers five key findings:

i. Community freezer users experience diverse stresses on access to wild foods;
ii. The Nain community freezer is not able to meet all wild food needs;
iii. Community freezer supply and demand are particularly sensitive to variability in the natural environment;

iv. The community freezer has the potential to both support and hinder long term food security; and
v. It is important for current and future community freezer initiatives to be culturally appropriate.

Each of these findings is discussed below and linked to the relevant scholarly literature.

i. Community Freezer Users Experience Diverse Stresses on Access to Wild Foods.

Three categories of stresses on access to wild foods for users emerged in this study: Socio-cultural, economic, and environmental stresses on access to wild foods. Not all residents who accessed the community freezer experienced the same stresses on access to wild foods, at the same time, or to the same degree. All stresses were feedback from one another, however changes in the physical and natural environments were an overarching stress that exacerbated existing socio-cultural and economic stresses on access to wild foods for most participants. Extreme weather conditions presented a major stress within a shorter period of time, holding more immediate consequences on access to foods which has been echoed in other studies (Beaumier & Ford, 2010; Laidler et al., 2009). It is no coincidence that accessing wild foods is, and has been for generations, sensitive to local weather conditions given the geographic situation of wild foods and relationship between residents and the environment (Fossett, 2001). Similar to other distal determinants of health that have compromised food security for Canadian Aboriginal peoples (Loppie & Wein, 2009), changing economic and social environments might hold less obvious, but equally if not more important, implications on wild food accessibility for residents. Thus, ongoing monitoring through research of changing socio-cultural, economic environments and how they affect wild food accessibility will also be important to help mitigate potential consequences associated with those less obvious stresses on long term wild food accessibility.

The diversity of individuals' circumstances and how they affected abilities to access wild foods helped assess how the current freezer initiative supported access to foods for

residents with a variety of pressures in a specific place and during a specific period of time. Findings identified a broader range of residents who accessed the freezer than those for whom the freezer was initially established. Similarly, food banks are beginning to see a broader cross-section of populations access their programs in other parts of the country including members of two parent employed households who were previous thought to be impervious to the threat of food insecurity (Food Banks Canada, 2012). This expansion of food support program use is a strong indication that food accessibility is a growing concern for many households, challenging the status quo of who experiences food insecurity in Canada. Fostering awareness and, over time, social acceptance of the fact that there are growing segments of populations experiencing food insecurity is critical to help ensure people are not deterred from using food support initiatives that are potentially critical to their health because of social stigma associated with use that is founded on myth or expired realities. Indeed, some food support initiatives aim to open this dialogue to help alleviate issues of stigma among users and maintain feelings of dignity while still accessing such programs (The Stop Community Food Centre, 2012). This is because stigmatization associated with some food support programs has been known to, as in this study, create feelings of exclusion and other forms of psychological stress (Tarasuk, 2001; Hamelin et al., 1999). Social exclusion is worthy of attention as it known to hold short and long-term health implications (Shaw et al., 1999). These findings demonstrate that although access is now widely accepted as a primary determinant of food security, the details of food accessibility should continue to be explored in greater detail. As the global food security situation continues to be a growing concern (FAO, 2011), it will be crucial to maintain critical awareness of personal food security circumstances and assess the relevancy of food support initiatives, and to continue to implement and adapt initiatives to better respond to the current food security climate, and ultimately prevent food insecurity.

ii. The Nain Community Freezer is Not Able to Meet All Wild Food Needs.

The Nain community freezer was not always able to support the wild food needs of users. Reasons for this include the limited human resources available, seasonal availability of

foods, and the sensitivities of the Nain initiative to the changes in the natural environment. Frequency of use indicates different levels of dependency on the freezer initiative, which is reflective of different stresses on access to wild foods that users were experiencing. Some users would access most of the wild foods they consumed through the community freezer if the option was available, whereas others accessed the freezer only for certain foods. Different levels of dependence meant that limited availability of foods at the freezer might have held different implications on wild food access and food security for some users. Thus, the freezer had fluctuating levels of importance and specific roles from user to user in regards to providing access to wild foods.

Limited community freezer supply was not a source of frustration among users interviewed in this study as there was generally a common understanding of the fact that the ability for the freezer to supply certain foods was dependent on characteristics of the surrounding environment (i.e. if there are no caribou in the area for harvesters to access the freezer is unable to provide for them too). This presents an obvious limitation in achieving secure and stable access to wild foods through the community freezer. Access to wild foods, however, is only one piece of the larger food security picture for Inuit that is comprised of both access to wild and market foods. Not being able to get wild foods through the community freezer all the time or when seasonal foods are typically available might not be detrimental to overall food security depending on other options available to users. Indeed, residents' understanding of the freezer not being able to supply foods at all times represents a reality that there is no expectation for wild foods to be available all the time, through the community freezer or elsewhere in the context of seasonal availability. Despite other food options, knowing the place that wild foods fill in the spectrum of food preferences or total diet for each individual should be recognized when assessing the implications of or importance of the community freezer in supporting individual food security during typical seasons. The emphasis here is access to culturally appropriate foods, not just access to enough food. Not having access to culturally appropriate or 'good' food manifests as a characteristic of food insecurity (Power, 2008; Hamelin et al., 1999).

iii. Community Freezer Supply and Demand are Particularly Sensitive to Variability in the Natural Environment.

Suppliers were generally able to access wild foods that users found difficult to access. The year that this study was conducted, however, uncharacteristic changes in the natural environment had negative implications on wild food access for suppliers (who are experienced harvesters), as well as users. Users, many of whom identified as recent harvesters, expressed the need for increased social or financial support to access wild foods because of changes in the natural environment that they perceived to hold risks to their financial and personal well-being deterring them from harvesting their own foods. Suppliers also felt the brunt of changes in the natural environment on wild food access and could not supply the usual amount of foods to the community freezer. This increased demand (requests for food from more individuals facing challenges to access) for the community freezer during a time when it was least able to support wild food access for individuals. Changes in the natural environment challenged the ability of the freezer initiative to distribute foods the most, where these extreme weather events presented a common denominator in wild food access for all. Compared to other food support initiatives where supply is more directly sensitive to economic conditions and external factors (Riches, 2002), the community freezer primarily operates at a local scale where community members are supplying local foods for residents. The intimate nature of this initiative is particularly problematic when a disruption to the seasonal availability of foods is far reaching.

Changing climatic and environmental conditions will continue to challenge food security for global populations into the future (FAO, 2011). Northern Canada is no exception, with changing natural and other environments prompting communities and other interest groups to discuss ways to help prevent anticipated consequences on food availability and access (Chan et al., 2006; Furgal & Seguin, 2006). Changes in the natural environment are particularly worth consideration for community freezer initiatives, especially because these initiatives have been identified as a potential option to help alleviate stresses on individuals' access to wild foods in the context of climate change and variability as well

(Furgal & Sequin, 2006). With respect to other community-based food support initiatives, recognizing typical stresses on food accessibility in the community versus those that stem from more unusual environmental changes regardless of ones social or economic positioning could be valuable. Doing so will help define the role of community-based initiatives in supporting wild food access for the residents once the feasibility of responding to certain situations is assessed.

iv. The Community Freezer Has the Potential to Both Support and Hinder Long Term Food Security.

The community freezer obviously supports short-term wild food access, as some amount of wild food needs can be met through this initiative. There is less indication of how the community freezer supports long-term food access since this study focused primarily on current use. Characteristics of current use and management, however, hint at ways that the freezer might actually hinder long-term wild food access for individuals and the community. Data indicates that there is an expectation by some for the community freezer to sustain long-term food security that extends beyond having enough food available. Examples include potential social implications of establishing criteria for use and caution for supply efforts not to compromise the health of the ecological environment. These findings introduce an important conversation about community freezer initiatives that has not yet been discussed in the food security literature. This is because community freezers have primarily been identified as a potential tool to support food access in response to changing environments, without further assessment of the current role of these initiatives in access to wild foods for Inuit (see for example Furgal & Seguin, 2006; Chan et al., 2006). Some concerns are echoed in the food security literature that also discusses how coping mechanisms might hinder long-term food security (Hamelin et al., 1999; Maxwell & Smith, 1992). It is difficult to predict what the future holds and, based on this assessment, what current management means for future food security or how to manage such an initiative to minimize the risks involved. There are bound to be gaps in community freezer management that emerge along the way as environments continue to change. Similarly, food security has been characterized as a

'managed process', and "not as a state or end point but as a dynamic process of continual evolution and change in response to multiple drivers, feedbacks and interactions over time and space" (Ford & Beaumier, 2011, p.55). Inuit have demonstrated for thousands of years successful coping mechanisms or personal management strategies in response to ongoing changes through their ingenuity. Just as the community freezer was established by community members in response to current conditions at one point in time, continuing to adapt the approach and being actively engaged with the community as a whole will lead to better preparation for future change.

v. It is Important for Current and Future Community Freezer Initiatives to Be Culturally Appropriate.

Regardless of how much food is available, what might be more important are the ethics and cultural principles surrounding distribution and acquisition of these foods. Factors for consideration include how to supply enough food to the freezer to address short-term and potentially long term need. More prominent in this study were those factors for consideration of wild food distribution and the emotions that surround use to support long-term sustainability of this initiative. That is, for the initiative to focus beyond just issues of supply or quantitative dimensions of food security to those social dimensions that might have more bearing on long term community health and well-being. Factors for consideration that extend beyond characteristics of community freezer supply include: concerns of dependence on the community freezer and stigma/social exclusion associated with community freezer use. The challenge is balancing supply and demand with the long-term success of this initiative. This challenge stems from tensions that exist between the feasibility of operations meeting wild food needs while also respecting and reflecting traditional values. Important to achieving food security is providing access to foods in ways that are culturally appropriate and in ways that do not compromise human dignity (Tarasuk, 2001). It will be important to understand societal norms in this regard to inform acceptable resource acquisition in any single community.

4.3 Study Challenges and Limitations

Reflecting on this research, I was faced with some challenges that although might be anticipated by others, are worth mentioning here as reflexivity in qualitative inquiry adds value (Hay, 2005). Throughout the research process, I held insecurities about conducting research in a region that I was geographically and socially distant from. As mentioned in the introduction, I always had this hesitation of not being able to accurately represent community values and perspectives from places that I have never lived. Not being Inuit or from Nain presented some challenges along the way and that might not have existed if someone from the community had conducted this research. For example, situating myself within some of the context discussed with community members took longer than if I were from the community of Nain and having lived the same or a similar experience. This required further meetings with community liaisons to confirm my interpretations and understandings of individuals' perspectives on the topic, correct such things as place names and efforts to learning as much as I could about the local food and environmental context in order to have informed discussions with individuals and interact with my data from some informed perspective.

Approximately one year after the start of this research project, a new community freezer initiative to replace the community freezer I was exploring was piloted. Meetings that I participated in while in the community about the new community freezer initiative brought out similar opinions about community freezer operation and management that existed in my data. I was, at times, discouraged that the value of my research project to the community would be lost if no new data were presented to the community beyond the scope of their discussions at that time. It also became difficult, when participating to such meetings, to separate my research data from the common topics of discussion while I was developing my interpretation and discussions of my data. Not being immersed in the community throughout the majority of the writing and analysis period then made it easier to complete the research in a way that was less influenced by current operations and community dialogue. Shared perspectives among study participants and non-study participants about old and new community freezer operations, respectively, also became

an indication that my research was an accurate representation of Nain community perspectives about community freezers in general. Furthermore, I intuit that some of my research and conversations with community partners and research participants along the way influenced some of those discussions, revealing some of the hidden benefits of my work along the way.

The primary data collection took place between November/December of 2010. This timing was chosen because it is typically a period of lower harvesting activity and so recruitment of harvesters to participate in focus groups and interviews would be easier. Since the weather during this time period was not supportive of harvesting activities, community freezer activity was also low. Although this illuminated the reality that the community freezer was sensitive to seasonal local weather conditions, personal observations about community freezer activity were limited at this time in comparison to if I were to conduct data collection during a more active harvesting season. However, I participated in other freezer activities, including those involving the new freezer initiative, on subsequent trips to the community.

The year that was the subject of participants' discussions and recall (2009/2010) was a year of uncharacteristically poor harvesting conditions due to a major weather anomaly that significantly reduced the length of the harvesting period. Just as households struggled to access wild foods during this period, so too did the community freezer. In addition to this, a government consultation that revealed low caribou populations was also announced to the community at the onset of data collection. These weather events potentially exacerbated perceptions those barriers had for the community freezer to meet wild food demands. As such, we have a lack of knowledge of how this initiative potentially functions in a typical year (if there is such thing as a 'typical' year in a rapidly changing environment).

4.4 Recommendations

The following recommendations are based on findings from the study and are organized based on whether they are recommendations for action in the community of Nain or recommendations for research on this topic in Nain or elsewhere. Recommendations for action speak directly to how the Nain community freezer can better support wild food access for residents. These recommendations are derived from interview data that spoke directly to how future management can overcome current barriers to supporting wild food access through the community freezer initiative, as well as personal reflections of informal conversations and personal observations while in the community. Where possible, examples from other food security initiatives that support these ideas are included. These recommendations can also be considered by other regions depending on the relevance to their region and/or current community freezer management context. Recommendations for future research are based on my interpretation of how this research fits into the existing food security literature and questions it raises that merit further inquiry.

4.4.1 Recommendations for Action

i. Diversification of Wild Foods

Managers participating in this study acknowledged that diversifying wild foods acquired and provided by the freezer would buffer against some stresses on supply that arise on occasion. This is particularly important if stresses on caribou populations and access to these populations continue in the coming years. Diversifying foods would also address wild food needs that are currently overlooked by suppliers. Suppliers and residents cautioned, however, that diversification of foods should come while still respecting the long-term sustainability of these resources. Recommendations for diversifying foods included:

- *Suppliers harvest foods that they do not currently harvest:* Suppliers currently harvest foods for the community freezer in conjunction with personal harvesting practices. This means that foods supplied to the community freezer are limited to foods that suppliers harvest for personal consumption. Harvesting more of other foods would meet some wild food preferences of users that are currently overlooked.

- *Partnerships with local businesses and communities:* Partnering with local boat operators who already travel to particular areas where foods can be harvested but are difficult to access close to Nain could increase the supply of foods that most users found difficult to access, supporting a broad user group. This could also increase the supply of those foods that only some users find difficult to access even if they are available close to town. One supplier who is also a local operator and travels north of Nain where some foods are easier to access was interested in this option if financial support for harvesting these foods was arranged to support his own business/livelihood. Management also suggested addressing access to wild food as an 'arctic issue' and to connect with other communities and/or community freezer initiatives to discuss possible ways to supply more foods such as trading foods with one another that is hard for each region to access. Indeed, this is a coping mechanism that already exists on a smaller scale between users and their extended families who live in different communities. The Government of Nunavut is also exploring ways for their communities to engage with each other through a "Country Food Distribution Network" where community freezers could be a potential avenue to help distribute foods between communities (Personal communication, Natan Obed, Director of Cultural Development for Nunavut Tunngavik Incorporated, March 29th, 2010).

- *License for community freezer:* Obtaining a community freezer license for foods that currently have harvesting limits or community quotas imposed on them. Currently a polar bear harvest quota is assigned each year to Nunatsiavut communities, and the distribution of this meat depends on who hunts the polar

bear. A polar bear quota assigned to the community freezer could help distribute these foods to the broader community. It should be noted, however, that polar bear meat was donated to the new community freezer program in Nain during one of my field visits. Residents could also transfer personal limits to the community freezer initiative if people do not currently harvest or consume those foods that have limits on them. For example, some residents mentioned that not everyone harvests salmon, and therefore it might be convincing for others to transfer their quotas to the community freezer.

ii. Monitor Use and Supply

As management of the Nain community freezer at the time of the study was informal and use and supply was not formally tracked, it was not possible to clearly gage what foods were supplied and during what times. This information would help to identify specific considerations for what foods to supply more of if possible, and during what time of year. Identifying trends overtime can help forecast when the freezer should place different levels of energy and time into supplying foods to the freezer and the feasibility of the freezer initiative being able to supply foods during these time periods. Results from this study indicate that during the year of study, due to changes in the physical natural environment, the freezer was most in demand during time when the freezer least able to supply foods to the freezer. This is not necessarily uncharacteristic of a typical year however, where gaps exist in demand and supply. Although there are benefits in the intimate nature of this initiative and it being community-based, the reality that the freezer is naturally responsive to seasonal availability and accessibility of foods resents obvious limitations in offsetting food shortages of users. While community freezer users understood and respected this, it might be worthwhile to think about managing for specific periods of demand and timing distribution with these periods of demand.

iii. Tailor Programming for Different Types of Need

Some users accessed the freezer only when foods that are difficult for most residents to access are available, whereas others accessed the freezer on an ongoing basis to access any foods that were available. Different frequencies for use of the freezer initiative ultimately reflected different reasons and levels of need for accessing the community freezer. As one manager reiterated during the data validation visit, this initiative is not just for welfare cases – everyone in their community needs support to access wild foods. Recognizing different types of need could support both short term and long-term food access for individuals and the community, transforming this initiative to be solely just an access point for wild foods to being a resource to support individuals to access their own foods (or a coping strategy to also be an adaptive strategy). Unless circumstances change, this is particularly important for those users who are potentially in a transition towards a more food insecure future. This is an approach that other food support initiatives in Canada have begun to adopt to help support long-term food security in their communities. For example, "The Stop Community Food Center" in Toronto operates a drop-in Food Bank, cooking workshops, and operates a sustainable food production and education centre along with other services (The Stop Community Food Center, 2012). This organization and scholars alike recognize that food distribution centres are not solving long-term food security issues for their communities, and other support services are needed to support diverse needs. Similarly, the community freezer can play a variety of roles in supporting wild food access for residents. Partnerships may also exist with local food security organizations such as the Newfoundland Food Security Network to assist with programming or to help connect users of the freezer with initiatives they support.

iv. More Inclusive Community Freezer Communications

Many barriers in supporting wild food access for residents stemmed from a lack of knowledge of when foods were available at the freezer and not necessarily knowing who the community freezer was for. This resulted in stigma associated with use and some frustration about not being able to access foods in time when they did become available at the freezer. Management holds doubt that advertising this initiative widely would

change accessibility because of the opportunistic nature of accessing limited food supplies. There are also questions about how much to advertise for an initiative when they know the current freezer initiative cannot meet the perceived need of foods in their community. However, if time and resources allowed, advertising what foods are available through the community freezer and who it is for could hold more benefits in the long term. Knowing that foods are available for anyone would make the community freezer a more approachable site, and participants who did not use it as much as they would like to because of feelings of guilt associated with use would access this initiative more. Also, being more transparent about who this initiative is for might help to limit assumptions that only a specific group of people need support for access to such initiatives. This could also foster more dialogue within the community about a shared experience of limited access to wild foods that many are facing.

v. Identification of Initiative Priorities/Vision

The applicability of key factors for consideration to the community freezer initiative depends on the goals and objectives of the current freezer initiative. Factors for consideration or recommendations for action that are directed by community perspectives can help shape this mission or vision. Developing a vision for the community freezer can direct conversations about current management will allow the initiative goals to remain relevant. If, for example, management does not have interests in actively supporting long-term food security and they see themselves more fit for supporting immediate food needs, this interest will change community freezer objectives. It is important to remember that the community freezer initiative is one piece to a larger food security picture, and for one initiative to address a diversity of needs might not be feasible. Regardless, information about use and management can help direct other initiatives about how they can support wild food access and overall food security in their communities. Furthermore, awareness of long-term implications of addressing short term needs will be important to help mitigate future need for such programs and potentially other types of support.

4.4.2 Recommendations for Research

i. Further Identification of Needs for Community Freezers and/or Similar Initiatives:

This study introduces community freezer management and other stakeholders in this and other regions to a diverse group of users who might otherwise be overlooked in future community freezer management decisions. But this study only offers a glimpse of community freezer use, as such further investigation of how prominent some individuals needs are versus others would be beneficial to understand current trends in wild food access and to better inform how initiatives might be able to support those needs. This might also help to alleviate stigma associated with use once characteristics of individuals who currently do or would access these types of initiatives are further revealed. Indeed, this and other studies indicate that it is not just one type of user or demographic that experiences food shortages, but a multitude of factors that contribute to stresses on access to wild foods. Understanding trends on stresses of access to wild foods that encourage residents to seek support external to their immediate or extended networks would also help to determine the feasibility of developing specific criteria for use of such programs. If criteria are established, careful consideration of who does or would use this initiative and the long-term implications of inadvertently excluding specific individuals from this initiative should be considered. This might also help to inform diverse or "rolling" criteria to accommodate different needs or periods of stress. The Hunter Support Program in Nunavik, for example, has established an "order of distribution plan" that is in effect depending on the availability of some foods throughout the year (Kishigami, 2001). On a broader scale, identification of diverse stresses can help inform the development of initiatives that complement one another and meet multiple needs.

ii. Comparative Case Studies of Community Freezer Initiatives in Other Regions

Limited information about other community freezers or similar initiatives in northern Canada presented a limitation for this study to offer recommendations for practice. Indeed, this was also one of the motivations for this study. Now that an introduction to management and use of one program has been established, this study offers baseline data for future projects to refer to for project direction that could further explore barriers and bridges in supporting wild food access through these or similar programs. Ultimately, to better understand trends in community freezer use and barriers and bridges to wild food access would better inform policy and communities about how to support community freezer initiatives in their communities. Understanding trends would help identify the differences and similarities of these initiatives that exist between communities and regions. On a national scale, this would help to identify priority areas for support. This information would also help to identify partnership opportunities between regions in supporting wild food access for Inuit.

iii. Inclusion of Wild Food Access in Food Security Assessments:

There is a need for access to wild foods to be included in food security assessments when comparing food security status of Inuit with non-Inuit. To not include access to wild foods in these assessments is to potentially provide an unfair comparison of food security status or assessments of Inuit versus other regions. Inclusion of wild foods in food security assessments would also help to understand the role of wild foods in the broader food security picture regardless of whether they are compared with other societies. Although this is not directly related to the overall goal of this study, results from this study highlight that stresses on access to wild foods remains a concern to residents and a preference in their diet for cultural and dietary reasons. Moreover, community responses to wild food support initiatives strongly indicate desire to continue to incorporate wild foods and access to these foods in the daily lives of Inuit. Currently, food security assessments offer a glimpse of those stresses on access to wild foods that might support future policy in supporting access to market foods. Results from this study can help to direct the robust development of future food security assessments that include facilitators and barriers to wild food access.

4.5 Concluding Comments

This study introduces perspectives on stresses and barriers/facilitators community freezer management and use during a time when these initiatives are becoming a popular option amongst communities, scholars and governments as a mechanism to help alleviate stresses on access to wild foods among Inuit. As one of only a few studies looking at this issue, this study will be instrumental in directing future research and policy that focus on how these types of initiatives can support food security in northern Canada. Although barriers and challenges exist within current freezer management and use, these also present opportunities for better meeting wild food needs of residents in ways that are culturally appropriate and hold positive long term implications for the future health and wellbeing of Inuit. It will be important to continue the conversation about how these and other types of initiatives can better support short-term and long-term wild food access for residents so that coping mechanism or strategies remain relevant and timely as societal and environmental changes continue to evolve and influence Inuit lived experience.

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APPENDIX A: RELATIONSHIP BETWEEN DATA SOURCES/METHODS AND RESEARCH QUESTIONS

	Data methods and sources:				
Elements of research questions:	*Interviews*	*Participant observation*	*Document Review (community freezers/food security lit)*	*Document revie)*	*Focus groups*
1. How does the Nain community freezer influence access to wild foods for current users?"					
What is the role of the current community freezer/how is the current freezer managed?	+++ (managers, users, other key informants)			+	
Who are the current users?	+++ (current users, managers)			+	
Why do users access the freezer, how often, what foods etc?	+++ (users, managers)		+ (if /when defining access from FS lit)	+	
What are the current influences of the community freezer on access to wild foods?	+++ (users, managers)	++	+	+	
2. "what key factors should the community freezer management plan consider to address current and anticipated future impacts of environmental changes on access to wild foods for residents of that community?"					
i. What are key current and anticipated future stresses on access to wild foods in the region?	+++ (Users)	(+)?		+ /++	+++ (harvesters, knowledgeable enviro experts) +++ (managers, suppliers)
ii. What is the **current** program management strengths and weaknesses (including ability and strategy (if existing) for addressing this stress?	+++ (users)	+	+	+	+++ (managers, suppliers)
iii. What should future program management consider	+++ (users)	+			+++ (Harvesters, knowledgable enviro experts)

+ = It is not clear whether or not this information is available through this source, but will be used as a secondary source if available.

++ = The indicated method will serve as a secondary source of information +++ = It is expected that there is information available to answer the
sub-question through the indicated method, and this will be the primary source of information.

APPENDIX B: DATA COLLECTION PROCEDURES

1.Focus Groups

Managers and suppliers of Nain Community Freezer

When: Late November, 2010 (pending on completion of preliminary analysis), or January, 2011.

Participant Criteria: Members of Ulapitsaijet who manage the community freezer and suppliers of the Nain community freezer

Participant Selection: During the initial visit to Nain in July, 2010 I met with members of Ulapitsaijet who are involved with management of the community freezer program. Suppliers of the community freezer who are not members of Ulapitsaijet were identified during this meeting as well. Participant selection for this study group will therefore be primarily directed by the introductions made at the Ulapitsaijet meeting.

Recruitment: The organization of the meeting with Ulapitsaijet during the initial meeting was primarily successful due to Judy Rowell who contacted fellow members of Ulapitsaijet to coordinate a time to meet that best worked for them. The same approach will take place for the focus group with managers and suppliers of the Nain community freezer.

The following steps will take place:

1. I will contact Judy and update her on the project development since the last visit, and explain why she would like to hold a focus group with managers and suppliers of the freezer.
2. Ask Judy if she would mind forwarding an email to the members of Ulapitsaijet describing the project and the focus group, and to contact me if they would like to participate or have any further questions.

Alternatively:

I can contact those members of Ulapitsaijet who I currently have contact information for, and receive the contacts for the other members from Judy. Once people have confirmed participation, the meeting time and date will be discussed amongst the group.

1. Introduce myself and anyone else who may be assisting me with the facilitation of the focus group to the participants. Thank all participants for taking the time to participate in this focus group.

2. Ask the participants to introduce themselves and their association with the community freezer to the primary researcher by going around the table

3. Introduce the project and the community freezer program to the participants, and explain why I wanted to speak to them. (to help inform how future community freezer management can further meet user needs – save details for information sheet)

4. Provide all participants with a consent form and offer them the opportunity to read the consent form independently. After everyone has read the consent form, discuss the consent form with the entire group and answer any questions or concerns people may have. Ask people to sign their consent form if they understand agree to what has been discussed.

5. Explain the focus group process, the types of questions that will be asked, and communicate any 'ground rules' that will help make the focus group run smoothly and to foster a comfortable environment. Answer any questions people may have.

6. Show the audio-recorder to the group, and explain that it will be turned on when we begin the focus group.

7. Ask if there anymore questions, and then proceed with the focus group and turn on the recorder.

Harvesters and other knowledgeable environmental observers (X2)

Number of desired participants in each focus group:

6-10 participants will be recruited for each focus group. Hay (2005) suggests that limiting focus groups between four and ten participants ensures that the utility of a focus group is maximized. Having too many participants may not leave enough room for each individual to speak, and too few may not foster enough in depth conversation.

Participant Criteria:

Harvesters: those harvesters who supply meats to the community freezer and other residents who are recognized as frequent harvesters of wild foods in all seasons.

Note: As suppliers of the community freezer may be asked to participate in a separate focus group, it might be best to restrict the inclusion of these individuals in these focus groups.

Other knowledgeable Environmental Observers: This may include individuals from local environmental organization or companies, or those residents who are recognized to hold a wealth of knowledge about the local environment.

Participant selection and recruitment

The harvesters and knowledgeable environmental experts who will be asked to participate in the focus group will be primarily based on recommendations from key community contacts and representatives from organizations in Nain.

Steps:

1. Identify 5 community contacts/key informants
2. Ask each key informant to record who they think are strong representatives of the indicated study population, creating a separate contact list for male and female participants.
3. Record those male and female residents who appear on more than one contact list
4. Invite participants by phone, email, or in person to participate in the focus group, guided by a recruitment script.

This will ensure rigour in participant selection and a minimization of bias as influenced by any one individual identifier.

Identification of 3-5 key community contacts:

I will speak to both female and male residents of Nain who are affiliated with different organizations, and who represent different governments (community and regional government) to provide recommendations for who to invite to the focus groups. Before approaching these individuals, approval will be sought from Chris Furgal and Tom Sheldon.

Communications procedure with community contacts:

1. Introduce myself and the project
2. explain the population group who we are seeking to participate in the focus group and why
3. Ask them if they have any questions, and if they would like to provide names of residents who they think repreent the described study population.

Instructions for Focus Group facilitation:

8. Introduce myself and anyone else who may be assisting me with the facilitation of the focus group to the participants. Thank all participants for taking the time to participate in this focus group.

9. Introduce the project and the community freezer program to the participants, and explain why I wanted to speak to them to help inform how future community freezer management can further meet user needs.

10. Provide all participants with a consent form and offer them the opportunity to read the consent form independently. After everyone has read the consent form, discuss the consent form with the entire group and answer any questions or

concerns people may have. Ask people to sign their consent form if they understand agree to what has been discussed.

11. Explain the focus group process, the types of questions that will be asked, and communicate any 'ground rules' that will help make the focus group run smoothly and to foster a comfortable environment. Answer any questions people may have.

12. Show the audio-recorder to the group, and explain that it will be turned on when we begin the focus group.

13. Ask if there anymore questions, and then proceed with the Focus group

2. Semi-structured interviews

Current Users of Community freezer

Number of participants:

12-14 participants is the desired number of users I would like to participate in semi-structured interviews.

Participant criteria:

Current users are those residents of Nain who have physically accessed the freezer in the twelve-month period previous to data collection. Criteria for current users may expand if there are not a sufficient number of users from the identified time period, or if it is known that users of the freezer do not necessarily physically access the freezer, but receive foods from those who do.

Participant selection:

Users of the community freezer are not publicly known and they may not want their names released to the research project by those who are aware of their use. Respecting these potential sensitivities, the researcher will not seek names of users from informed managers without permission from the users themselves.

Participant recruitment:

Participant recruitment will take place through research materials informing the community of the research project and requesting current users of the freezer to participate in the study. This may take place through:

1. Recruitment poster at the site of the community freezer (in the Parks Canada lunch room where the freezer is located, as well as at the entrance of the Labrador Inuit Development Corporation that is attached to the Parks Canada building).

2. Radio announcement through the Okalakatiget (OK) Society

3. Posters at other community facilities

4. Request Judy Rowell or another Parks Canada representative to inform community freezer users who call into the Parks Canada office to inquire about the freezer stock about the project, and to provide my contact information to the individual if they are interested to speak with me about participating in an in person interview.

Instructions for interview facilitation:

1. Introduce myself and thank the individual for taking the time to participate in this interview. Explain the project and why I am interested in speaking with the users of the community freezer (only briefly, as this will also be discussed in the information form). Highlight that the information discussed during this interview is expected to help with future community freezer management and to further meet users needs.

3. Introduce the consent form to the participant and offer them the chance read it over by themselves.

3. Discuss the consent form with the participant and answer any questions that they may have to ensure the participant understands what is being asked of them from participating in this study.

4. Remind the participant that participation in this project is voluntary and that they do not need to answer all questions if they do not want to. Also remind the participant that they may withdraw from the interview/study at any time (highlighting this from the consent form).

5. Show the participant the recorder and explain that it will be turned on once I begin to ask them questions (only if participant agrees to be audio-recorded). Ask participants if they have any questions or would like to discuss anything before the recorder is turned on.

6. Proceed to ask questions after all questions and/or concerns have been addressed.

Managers and key informants of the Community Freezer

Number of participants recruited: 2-3

Participant Criteria: Those who are involved with community freezer management for follow-up interviews to clarify or cover information that was not able to be completed during the focus group.

Participant selection:

Managers of the Nain community freezer were identified during the initial visit to Nain in July, 2010. Members of Ulapitsaijet, a community volunteer group, established the community freezer program in 2005 and they collectively manage the community freezer program. The researcher was introduced to members of Ulapitsaijet during an informal meeting in Nain, and understands the manager who primarily oversees the community freezer operations to be Judy Rowell of Parks Canada. Julie has an office next to the room where the freezer is located and she often receives phone calls from residents asking about t availability of foods in the freezer**,** providing 'on-site' awareness of daily use. Others who were present at the meeting and may be asked to participate in an interview.

Participant Recruitment:

As the primary researcher has already been introduced to these individuals, the primary researcher will contact a select number of managers independently either by phone or email to remind them of the project and ask if they would like to participate in a semi-structured interview.

APPENDIX C: RECRUITMENT POSTER FOR COMMUNITY FREEZER USERS

Invitation for residents who use the community freezer to participate in research project

Project name: *Community Freezers Supporting Access to Wild Foods: perspectives from residents of Nain, Nunatsiavut.*

Purpose of this study: To learn about the community freezer located at the Labrador Inuit Development Corporation, and how it provides access to wild foods for residents in Nain.

Who is conducting this research? I, Jennifer Organ, am the primary researcher for this project. I am a student working with Chris Furgal from Trent University, and in cooperation with the Department of Lands and Natural Resources of the Nunatsiavut Government. Jennifer will be available to speak with residents who use the community freezer until early December, 2010.

Why do I want to speak with users of the community freezer? I would like to speak to residents who have used the community freezer in the past year during an one-on-one interview. These discussions will help me to understand the community freezer and how residents use this freezer. Information gained from these interviews will be used to understand how future community freezer programs can better support access to wild foods for residents of Nain.

If you are interested in learning more about the project or participating, please contact:

Jennifer Organ
Email: jforgan@dal.ca
Phone: 922-2555

APPENDIX D: RECRUITMENT POSTER FOR COMMUNITY FREEZER USERS (INUTTITUT)

KaikKujiuset nunalinnut atuKattajunut nunalet Kuatsevinganik ilauKataugiamut Kaujisanniujummi

SuliaKausiup taigusinga: *Nunalinni Kuatsevigijaujuit Ikajutsisot Pitâgiamik NiKituKannik: isumagijaujuit nunalinnit Nain, Nunatsiavut.*

Pidjutinga tâtsuma Kaujisanniup: IlisautiKagiamut nunalet Kuatsevinganik iniKajumik Labradorimi Inuit Pivalliatitsijingita kuaparesângani, Kanullu ikajutsigunnamangât niKituKattânitsanginnik nunalet Nain-imi.

kina tamatsuminga Kaujisattisivâ? Uvanga, Jennifer Organ, Kaujisattiulangavunga tamatsuminga. IlinniaKattavunga suliaKaKataulunga Chris Furgal ilinniajumit Trent University, amma uKâlaKataulluta SuliaKapvinganut Nunaligijet Piviannatunginillu Nunatsiavut kavamangani. Jennifer atuinnaulâttuk uKâlaKataugiamik nunalinnut atuKattajunut nunalet Kuatsevinganik pigianninganut Decembera, 2010.

Sumat uKâlaKataugumavinga atuKattajunut nunalet Kuatsevinganek? UKâlaKataugumavunga nunalinnut atuKattasimajunut nunalet Kuatsevinganik jâriukKaujumi atautsikâllugit apitsuKattalugit. Tamakkua uKâlaKataunnet uvamnik ikajuniattut tukisiumigiamik nunalet Kuatsevinganik amma Kanuk nunalet atuKattamangâta Kuatsevimmik. Kaujititsiutet tâkkunangat apitsotiujunnit tukisititsiutiuniattut Kanuk sivunitsatinni nunalet Kuatsevingit piunitsamik ikajugunnamangâta niKituKattagiamut nunalet Nain-imi.

KanuttogutiKaguvit ilisautiKagiamik tamatsumina sulianguniattumik upvalu ilauKataugumaguvit Kaujititsigit:

Jennifer Organ
Email: jforgan@dal.ca
Phone: 922-2555

APPENDIX E: MANAGER FOCUS GROUP CONSENT FORM

CONSENT FORM (Management Focus Group)

DALHOUSIE UNIVERSITY
Inspiring Minds

Project Title: *Community freezers as a catalyst towards food security: Perspectives from Inuit residents of Nain, Nunatsiavut.*

Principal Investigator: *Jennifer Organ*
MES Candidate, Dalhousie University
Email: jforgan@dal.ca, phone: (902) 719-2506

Supervisor: *Dr. Chris Furgal, Trent University*
Email: chrisfurgal@trentu.ca
*Phone: (*705) 748-1011

Introduction: We invite you to take part in a research study being conducted by Jennifer Organ who is a graduate student at Dalhousie University, as part of her Masters of Environmental Studies degree. It is being conducted in cooperation and with the support of the Nunatsiavut Government, Environment Division. Your participation in this study is voluntary and you may withdraw from the study at any time. The study is described below. This description tells you about the benefits, risks, inconvenience, or discomfort which you might experience. You should discuss any questions you have about this study with Jennifer Organ.

Purpose: Nain currently operates a community freezer, and the Environment Division of Lands and Natural Resources for Nunatsiavut is supporting research to explore the management of the community freezer and its role in providing access to wild foods in support of traditional food security in Nain. Information gained from this study will influence the management of the Nain community freezer so that it further supports access to wild foods for residents of Nain.

Study Design: Information will be gained through in-person interviews conducted by the principal investigator, Jennifer Organ, with: current users of the Nain community freezer, individuals who are involved with the management of the community freezer, and other key informants. In addition to interviews, Jennifer Organ will also hold a focus group with harvesters and other local knowledgeable environmental experts and with managers of the community freezer. These focus groups will help to further identify what key factors a community freezer management plan should consider to address current and anticipated future impacts of environmental change on access to wild foods.

Who can Participate in the Study: Users of the Nain community freezer, managers of the Nain community freezer, and other key informants of the community freezer operations will be invited to participate in the in-person interviews. Managers, harvesters and other local knowledgeable environmental experts will be invited to participate in focus groups.

Who will be Conducting the Research: Jennifer Organ, the principal investigator of this project who is a Master's student at Dalhousie University, Halifax, Nova Scotia will be conducting the research. A translator from Nain will be present during the interviews and the focus group if translation is requested from the participant.

Your Participation: You will be asked to participate in a group discussion that will be guided by questions asked by the primary researcher, Jennifer Organ. This activity will require approximately two hours of your time. During this focus group Jennifer Organ will ask participants about the operations of the Nain

community freezer, your thoughts on stresses on access to wild foods that residents may experience, and what key factors you think the Nain community freezer should consider to address impacts of environmental changes on access to wild foods for residents of Nain.

How this research will be used: Information gained from this research will be used to understand how the Nain community freezer can better support access to wild foods for residents of Nain.

Possible Benefits: There are no direct individual benefits from participating in this study. However, participation in this study will help influence best management strategies for future community freezer operation, so that it further represents residents of Nain's interests in the management of the community freezer.

Results: Results will be presented to all participants through a condensed final project report and a form of community presentation to be determined, will take place.

Risks: There is minimal risk in participating in this study. But people are sometimes uncomfortable about being interviewed. Your comfort is my priority. I will strike comments that you have made from the transcripts if you are uncomfortable with them, and I will omit anything you have shared at your discretion.

Withdrawal from the study: You may refuse to participate or to later withdraw from the study at any time, including before, during, and after the focus group, without penalty by simply telling me. You also have the right to leave unanswered any questions you prefer not to answer.

Confidentiality: Because this research is being conducted in a small community and you will be discussing information with other participants, it may not be possible to keep your participation completely confidential. All information communicated outside of the focus group by the primary researcher will be kept confidential, and your identity will not be revealed unless you give your written permission. All audio-recordings of the focus group will remain with me in a secure location and will be destroyed after five years after the study is completed. The digital recording will only be available to me and my research supervisors.

Compensation/Reimbursement: Compensation of $50.00 will be provided to each study participant.

Questions: If you have any questions about this research study, please feel free to contact myself, Jennifer Organ, through email: jforgan@dal.ca, or by phone at (902) 719-2506.

Concerns: If you have any complaints or concerns about this research that you feel you cannot discuss with me, you can contact the Nunatsiavut Research Advisor, John Lampe, at john_lampe@nunatsiavut.com, or Patricia Lindley, Director of Dalhousie University's Office of Human Research Ethics Administration, for assistance at (902) 494-1462, patricia.lindley@dal.ca. This study has been reviewed by the Dalhousie University Social Sciences Ethics Board and approved by the Nunatsiavut Government

Project Title: *Community freezers as a catalyst towards food security: Perspectives from Inuit residents of Nain, Nunatsiavut.*

SIGNATURE PAGE:

"I, _____(participant), have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I understand that due to the nature of the study, confidentiality of my participation may not be achieved. I hereby consent to take part in this study. However I realize that my participation is voluntary and that I am free to withdraw from the study at any time."

Do you agree to be audio-taped? (please circle one). YES NO

Do you agree for your quotations to be used in research publications (please circle one). YES NO

Do you agree to have any quotes used to be attributed to you and have your name appear in the project report (please circle one) YES NO

If YES, quotes will only be used after you have had a chance to review them in their final presentation format and context and you have given your approval for their appearance and / or their attribution to you specifically.

Would you like a copy of the focus group transcript (please circle one). YES NO

Would you like a copy of the final report (please circle one) YES NO

_____
Signature (Participant)

_____
Printed Name

_____
Date

_____
Signature (Principle Investigator)

_____
Printed Name

_____
Date

Thank you for your participation.

APPENDIX F: MANAGER INTERVIEW CONSENT FORM

(Managers and Key Informants)

DALHOUSIE UNIVERSITY
Inspiring Minds

Project Title: *Community freezers as a catalyst towards food security: Perspectives from Inuit residents of Nain, Nunatsiavut.*

Principal Investigator: *Jennifer Organ*
MES Candidate, Dalhousie University
Email: jforgan@dal.ca, phone: (902) 719-2506

Supervisor: *Dr. Chris Furgal, Trent University*
*Email: chrisfurgal@trentu.ca, Phone: (*705) 748-1011

Co-Supervisor*: Dr. Heather Castleden, Dalhousie University*
Email: heather.castleden@dal.ca, Phone: (902) 494-2966

Introduction: We invite you to take part in a research study being conducted by Jennifer Organ who is a graduate student at Dalhousie University, as part of her Masters of Environmental Studies degree. It is being conducted in cooperation and with the support of the Nunatsiavut Government, Environment Division. Your participation in this study is voluntary and you may withdraw from the study at any time. The study is described below. This description tells you about the benefits, risks, inconvenience, or discomfort which you might experience. You should discuss any questions you have about this study with Jennifer Organ.

Purpose: Nain currently operates a community freezer, and the Environment Division of Lands and Natural Resources for Nunatsiavut is supporting research to explore the management of the community freezer and its role in providing access to wild foods in support of traditional food security in Nain. Information gained from this study will influence the management of the Nain community freezer so that it further supports access to wild foods for residents of Nain.

Study Design: Information will be gained through in-person interviews conducted by the principal investigator, Jennifer Organ, with: current users of the Nain community freezer, individuals who are involved with the management of the community freezer, and other key informants. In addition to interviews, Jennifer Organ will also hold a focus group with harvesters and other local knowledgeable environmental experts and with managers of the community freezer. These focus groups will help to further identify what key factors a community freezer management plan should consider to address current and anticipated future impacts of environmental change on access to wild foods.

Who can Participate in the Study: Users of the Nain community freezer, managers of the Nain community freezer, and other key informants of the community freezer operations will be invited to participate in the in-person interviews. Managers, harvesters and other local knowledgeable environmental experts will be invited to participate in focus groups.

Who will be Conducting the Research: Jennifer Organ, the principal investigator of this project who is a Master's student at Dalhousie University, Halifax, Nova Scotia will be conducting the research. A translator from Nain will be present during the interviews and the focus group if translation is requested from the participant.

Your Participation: You will be asked to be interviewed in a one-on-one situation for approximately one and a half hours at a time of mutual convenience. During this interview Jennifer Organ will ask you

questions about the Nain community freezer operations and stresses on access to wild foods for residents and current users of the Nain community freezer.

How this research will be used: Information gained from this research will be used to understand how the Nain community freezer can better support access to wild foods for residents of Nain.

Possible Benefits: There are no direct individual benefits from participating in this study. However, participation in this study will help influence best management strategies for future community freezer operation, so that it further represents residents of Nain's interests.

Results: Results will be presented to all participants through a condensed final project report and a form of community presentation to be determined, will take place.

Risks: There is minimal risk in participating in this study. But people are sometimes uncomfortable about being interviewed. Your comfort is my priority. I will strike comments that you have made from the transcripts if you are uncomfortable with them, and I will omit anything you have shared at your discretion.

Withdrawal from the study: You may refuse to participate or to later withdraw from the study at any time, including before, during, and after the interview, without penalty by simply telling me. You also have the right to leave unanswered any questions you prefer not to answer.

Confidentiality: Every effort will be made to ensure your participation is confidential. At the same time, I recognize that Nain is a small community and some comments may be easily attributable to you by others. As such, I will give you an opportunity to review your transcript and remove anything you do not wish used. I will further notify you if I use a quote from your interview to contextualize my writing on the topic, and give you an opportunity to accept/reject the use of that quote in the context of my writing. Your identity will not be revealed unless you give your written permission. Only members of the research team will have access to your interview transcript and recordings. All audio-recordings and transcripts of the interviews will remain with me in a secure location and will be destroyed after five years after the study is completed.

Compensation/Reimbursement: Compensation of $50.00 will be provided to each study participant. If the interview takes longer than one and a half hours, each participant will be given $60.00.

Questions: If you have any questions about this research study, please feel free to contact myself, Jennifer Organ, through email: jforgan@dal.ca, or by phone at (902) 719-2506.

Concerns: If you have any complaints or concerns about this research that you feel you cannot discuss with me, you can contact the Nunatsiavut Research Advisor, John Lampe, at john_lampe@nunatsiavut.com, or Patricia Lindley, Director of Dalhousie University's Office of Human Research Ethics Administration, for assistance at (902) 494-1462, patricia.lindley@dal.ca. This study has been reviewed by the Dalhousie University Social Sciences Ethics Board and approved by the Nunatsiavut Government

Project Title: *Community freezers as a catalyst towards food security: Perspectives from Inuit residents of Nain, Nunatsiavut.*

SIGNATURE PAGE:

"I, _____(participant), have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I understand that due to the nature of the study, confidentiality of my participation may not be achieved. I hereby consent to take part in this study. However I realize that my participation is voluntary and that I am free to withdraw from the study at any time."

Do you agree to be audio-taped? (please circle one). YES NO

Do you agree for your quotations to be used in research publications (please circle one)? YES NO

Do you agree for these quotes, if used, to be attributed to you and your name presented in the project report (please circle one)? YES NO

If Yes to either of the above, this will only be done after presenting to you the final text of the quote and its presentation in the final format and context, for your approval.

Would you like your name to be listed in the Acknowledgements section in this thesis and any other research reports and publications (this may include community presentations, conference presentations, and media releases)? (Please circle one) YES NO

If there any circumstances that you do not want your name to be listed in the acknowledgement section, please identify: _____

Would you like a copy of your transcript (please circle one)? YES NO

Would you like a copy of the final project report (please circle one)? YES NO

_____
Signature (Participant)

_____
Printed Name

_____
Date

Contact Information:

Address:
_____

Telephone: _____Email:
_____

_____

Signature (Principal Investigator)

_____

Printed Name

_____

Date

APPENDIX G: MANAGER FOCUS GROUP CONSENT FORM (INUTTITUT)

ANGIUTIKANNIMUT TATATTUGAK (Aulatsijinnut amma Piluattunut Kaujimatitsijinnut)

DALHOUSIE UNIVERSITY
Inspiring Minds

SuliaKanniup Taigusinga: *Nunalinni Kuatsevet niKet Kanuittailinitsanginnut; Isumagijangit Inuit nunalet Nain-imi, Nunatsiavut.*

Pimmagittumik Kaujisattik: *Jennifer Organ*
MES Candidate, Dalhousie University
Email: jforgan@dal.ca, fonninga: (902) 719-2506

Aulatsijinga: *Dr. Chris Furgal, Trent University*
*Email: chrisfurgal@trentu.ca, Fonninga: (*705) 748-1011

Ikajuttinga Aulatsijiup*: Dr. Heather Castleden, Dalhousie University*
Email: heather.castleden@dal.ca, Fonninga: (902) 494-2966

Pigiasiutik Ilinnik KaikKujivugut ilauKataugiamik Kaujisannimut kamagijautillugu Jennifer Organ pijagetsimalluni ilinniavimmit taijamit Dalhousie Ilinniavitsuangani, ilingatillugu Pijagellagiutimmut Avatiujunnik Kaujisattiugiamut. Pigiasittitaumajuk uKâlaKatautillugit amma ikajutsitillugit Nunatsiavut kavamanga, Avatiligijet SuliaKattingit. IlauKataunnet tâtsumani Kaujisannimi Kangatuinnak nukKaviusok ilinnut Kangatuinnak.Kaujisautiujuk nalunaittaujuk atâni. Tamanna ilinnik Kaujititsijuk Kanuk ilinnut ikajotiugunnatunik, ilimanagajattunik, sulitsiagajangitunik, upvalu igvit naluliumautigigajattanik. UKâlaKatigigunnatait Jennifer Organ sunanik apitsotitsaKaguvit tamatsuminga Kaujisanniujummik.

Pidjutinga: Nain mânnaujuk aulatsiKataujuk nunalinni Kuatsevimmik, amma Avatiligijet SuliaKapvinga Nunaligijinni amma Piviannatugijanginni Nunatsiavummi ikajutsisiajuk Kaujisanniujummik Kanuk aulatautsiagajammangât nunalinni Kuatseviujuk amma pitaKatitsigunnaluni niKituKait Kanuittailinitsnagit Nain-imi. Kaujititsiutet tâtsumangat Kaujisannimit sakKetitsigunnatuk Kanuk Nain-imi nunalet Kuatsevinga kamagijautsiagunnamangât ikajutsisiagajammat Nunalet Nain-imi niKituKannik pitaKainnagiamut.

Kaujisanniup âkKisimausinga: Kaujititsiutet tigullataulâttut atautsikâllugit inuit aputsutauKattatillugit Kaujisattulagimmut, Jennifer Organ, ilaKalluni: mânnamut atuKattajunik Nain-imi nunalet Kuatsiavenganik, asinginillu Kaujisapviugunnatunit. Ilagiallugu apitsotet, Jennifer Organ uKâlaKatauKattalâmmijuk pinasuattinut asinginullu ilisimanniKatsiatunut avatiujummik amma aulatsijinnut nuanlet Kuatsevinganik. Tamakkua katingaKatiget killigiudjigunnatillugit nunalunni Kuatsevik Kanuk kamagijaujutsuamangât pannaigutinnik isumagijautillugit mânnaujuk sivunitsamillu attuiniKagajattut avatiujuk asianguvallianingani omajunik niKituKauKattalittunik.

kinakkut ilaugunnaKât Kaujisanniujummot: AtuKattajut Nain-imi nunalet Kuatsevinganik, aulatsijet Nainiup nunalet Kuatsevinganik, asingillu nunalinni Kuatsevimmik aulatsijet KaikKujaulâmmijut atautsikâllutik apitsutaujunnut. Aulatsijet, pinasuattet asingillu KaujimanniKatsiajut avatiujummik KaikKujaulâmmijut ilauKataugiamut katingaKatigejunnut.

kina kamalâkKâ Kaujisannimek: Jennifer Organ, Kaujisattilagiujuk tamatsumani suliaKanniujummik Ilisimallagilittuk ilinniasimallagilluni Dalhousie Ilinniavitsuangani, Halifax, Nova Scotia kamalâttuk

Kaujisannimik. UKattiujuk Nain-imit ilauKatauKattalâttuk apitsujuKanningani amma katingaKatigejunnik uKattiKagumappata ilauKataujut.

IlauKataunnigijait: ApigijaulâkKutit apitsutaugajammangâppit atautsikâllusi atautsimi agvamilu sitonmtimmi pigunnasituaguvit. Apitsuniujummik Jennifer Organ ilinnik apitsuKattalâttuk Kanuk atuKattamangâppit nunalinni Kuatsevimmik, nunalinni Kuatsevik Kanuk aulataugunnamangât, amma uKumaigiKattajannik pitâgasuagiamik niKituKaujunnik.

Kanuk tânna Kaujisannik atuttaugunnamangât: Kaujititsiutet pitâgijaujut tâtsumangat Kaujisannimit atuttaulâttuk tukisiumigiamik Kanuk Nain-imi nunalet Kuatsevinga ikajutsigunnamangât niKituKattagianginnik nunalet Nain-imi.

Ikajutsiuiugunnatut: pitaKangilagingilak ikajutsiutiugunnatunik ilauKataujunnut Kaujisannimut. Taimaigaluatilugu, ilauKataunnet tâtsumunga Kaujisannimut ikajugunnatuk Kanuk piunippâmik kamasongugiamut sivunitsami nunalet Kuatsevinga kamagagijaugiaKammangâta, kiggatunniKatsianiattilugu nunalinnik Nain-imi nunalet Kanuttogutinginnut.

Piusiusimajut: Piusiusimajut tunijaulâttut ilonnainut ilauKatausimajunnut pijagetsimatsialippat Kaujititsiutik amma nunalet Kaujimattitaugetsimatsialippata, sakKiviugunnanimmik.

Ilimanattumegutaugajattut: IlimanattuKallagingilak ilauKataugimaut Kaujisanniujummi. Tâvatuak ilangit inuit iligasusot apitsutaugiamik. Iligasunginet uvannut sivullipautitaulâttuk. Pejagunnalâttaka uKausigisimajatit allasimajunni iligasotiKaguvit, amma petsigunnalunga sunamik uKausigisimajannik pikKujituaguvit.

NukKagunnanik Kaujisannimit: KipilugunnaKutit ilauKataugiamik upvalu nukKagiamik Kaujisannimit Kangatuinnak, ilautillugu sivungani, apitsujuKanningani, amma pijagetsimalippat apitsunet, sulukattaunak uvannik uKautjituaguvit. PivitsaKallagikKutit kiugiaKanginimmik apitsotiujunnik kiugumangitannik.

SiammatitaugiaKanginik: PiggagasuatuKalâkKuk ilauKataunnet siammatitauttailitillugu. Taimâtsainak, ilitatsisiavunga Nain mikijonninganik amma ilangani uKausiusimajut siammakallasot asinnut. Taimailingattilugu, ilinnik pivitsaKatitsilâkKunga Kimmigugiamik uKausigisimajannik amam pellugit atuttauKungitattit. Kaujitigiallalâgivagit atuniaguma uKausigisimajannik apitsutautillutit, pivitsaKatitsialâkKagit angiutiKagiamik/Kipilugiamik atuttauKujingikuvit uKausigisimajannik. kinaummangâppit siammatitauniangituk kisiani uKaguvit allasimatillugu atuttaugunnaninga atet. kisimi ilaujut Kaujisattinut tusâgunnalâttut apitsutaunigisimajannik amma piusiliuttaumajunnik, Ilonnatik piusiliuttaumajut amma allataumajut uvannelâttut tigujaugunnangittumi amma nonguttitaullutik tallimait jâret nâppata Kaujisannik pijagettausimakKâtillugu.

kenaujattâgijausot/Utitttitausot: AkilittaujuKagunnaKuk $50-tut ilonnainut ilaujunnut apitsutaunimmut. Apitsutaunet akuniunitsauniappat sitontimik agvamilu, ilonnatik apitsutaujut pitâgunnatut $60-tut.

Apitsotitsait: ApitsotitsaKaguvit tamatsuminga Kaujisanniujummik, uvannik KaujititsigunnaKutit, Jennifer Organ, Kagitaujakkut: jforgan@dal.ca, upvalu fonnikut (902) 719-2506.

IsumâlutiKaguvit: NâmmasingiutiKaguvit upvalu isumâlutiKaguvit tamatsuminga Kaujisannimik uvannut uKâlautigigunnangittanut, KaujititsigunnaKutit Nunatsiavut Kaujisannimut UKaudjigiajinganut, John Lampe, maunga john_lampe@nunatsiavut.com, upvalu Patricia Lindley, Aulatsijinga Dalhousie University SuliaKapvinganut Inuit Kaujisattauninginnut Aulatsivingani, ikajuttaugumaguvit (902) 494-1462, patricia.lindley@dal.ca. Tamanna Kaujisannik Kimmigutaumajuk ukununga Dalhousie University Social Sciences Ethics Board amma angittaumalluni Nunatsiavut kavamanganut

SuliaKausiup Taijaugusinga: *Nunalinni Kuatsevet ilingajut niKet Kanuittailinitsanginnut; Isumagijaujut Inunnut nunalinnut Nain, Nunatsiavut.*

ATITâGINNIUP PâGINâNGA:

"Uvanga , _____(ilauKataujuk), atuatsisimavunga pidjutiKajumik tâtsuminga Kaujisannimik. PivitsaKattitauvunga uKâlautigigianga amma apitsotikka kiujaumajut nâmmagilittakani. Tukisimavunga taimailinganninganik apitsotet, siammatitsigiaKangitunga ilauKataunniganik. Uvanga angiutiKavunga ilauKataugiamik Kaujisannimut. Taimaigaluattilugu, ilitatsivunga ilauKataunninga Kangatuinnak nukKasok amma nukKagunnalunga Kaujisannimut Kangatuinnak."

AngiutiKavet piusiliuttaugiamot? (kaivallalugu atautsik). ANGIJUK AUKâJUK

AngiutiKavet uKausigisimajatut atuttaugunnaninginnik Kaujisautiusimajut allatauninginnot (kaivallailutit atautsimik). ANGIJUK AUKâJUK

AngiutiKavet tâkkua uKausiusimajut, atuttaupata, ilinnut tunijaugiaKanninginnik amma atet atuttautillugu suliaKausiusimajunut Kaujititsiutingani (kaivallialutit atautsimik)? ANGIJUK AUKâJUK

Angiguvit kulânettunut, tamanna sakKigajattuk kisiani tunijausimaliguvit pijagetsimajunik uKausiusimajunik ilinnut angittauKâlluni.

Atet ilijaukKujait Nakummegutaujunnot tâtsumani allasimajumi asinginnilonet Kaujisautiusimajunnik amma allataumajunni (ilautitsigunnatuk nunalinni uKausiusimajunik, katimatsuajuni, amma tusagatsaujunni)? (kaivallialutit atautsimik) ANGIJUK AUKâJUK

Nalillituinani atet ilijaukKungikkuni nakummegutinnut, killigiudjilutit:
_____

Adjiliuttaumajumik pigumavet allataumajunnek(kaivallailutit atautsimik). ANGIJUK AUKâJUK

Pitâgumavet adjiliuttaumajumik pijagettumik Kaujititsiutimmek (kaivallailutit atautsimik) ANGIJUK AUKâJUK

_____
Allalugu Atet (IlauKataujuk)

_____
Allatuinnasimajuk Atik

_____
Ullunga

IlauKataumajop Kaujisapvigisonga:

Nunangata Tugâgutinga:
_____

Fonninga: _____Kagitaujakkut:
_____

_____
Allasimajanga (Kaujisattilagiup)

_____
Allatuinnasimajanga Atik

_____
Ullunga

Nakummek ilauKataugavit.

APPENDIX H: HARVESTER FOCUS GROUP CONSENT FORM

CONSENT FORM (Focus Group: Harvesters)

DALHOUSIE UNIVERSITY
Inspiring Minds

Project Title: *Community freezers as a catalyst towards food security: Perspectives from Inuit residents of Nain, Nunatsiavut.*

Principal Investigator: *Jennifer Organ*
MES Candidate, Dalhousie University
Email: jforgan@dal.ca, phone: (902) 719-2506

Supervisor: *Dr. Chris Furgal, Trent University*
*Email: chrisfurgal@trentu.ca, Phone: (*705) 748-1011

Co-Supervisor*: Dr. Heather Castleden, Dalhousie University*
Email: heather.castleden@dal.ca, Phone: (902) 494-2966

Introduction: We invite you to take part in a research study being conducted by Jennifer Organ who is a graduate student at Dalhousie University, as part of her Masters of Environmental Studies degree. It is being conducted in cooperation and with the support of the Nunatsiavut Government, Environment Division. Your participation in this study is voluntary and you may withdraw from the study at any time. The study is described below. This description tells you about the benefits, risks, inconvenience, or discomfort which you might experience. You should discuss any questions you have about this study with Jennifer Organ.

Purpose: Nain currently operates a community freezer, and the Environment Division of Lands and Natural Resources for Nunatsiavut is supporting research to explore the management of the community freezer and its role in providing access to wild foods in support of traditional food security in Nain. Information gained from this study will influence the management of the Nain community freezer so that it further supports access to wild foods for residents of Nain.

Study Design: Information will be gained through in-person interviews conducted by the principal investigator, Jennifer Organ, with: current users of the Nain community freezer, individuals who are involved with the management of the community freezer, and other key informants. In addition to interviews, Jennifer Organ will also hold a focus group with harvesters and other local knowledgeable environmental experts and with managers of the community freezer. These focus groups will help to further identify what key factors a community freezer management plan should consider to address current and anticipated future impacts of environmental change on access to wild foods.

Who can Participate in the Study: Users of the Nain community freezer, managers of the Nain community freezer, and other key informants of the community freezer operations will be invited to participate in the in-person interviews. Managers, harvesters and other local knowledgeable environmental experts will be invited to participate in focus groups.

Who will be Conducting the Research: Jennifer Organ, the principal investigator of this project who is a Master's student at Dalhousie University, Halifax, Nova Scotia will be conducting the research. A translator from Nain will be present during the interviews and the focus group if translation is requested from the participant.

Your Participation: You will be asked to participate in a group discussion that will be guided by questions asked by the primary researcher, Jennifer Organ. This activity will require approximately two to three hours of your time. During this focus group Jennifer Organ will ask participants about environmental changes in the region, their perceptions on stresses on access to wild foods that residents may experience, and what key factors you think the Nain community freezer should consider to address impacts of environmental changes on access to wild foods for residents of Nain.

How this research will be used: Information gained from this research will be used to understand how the Nain community freezer can better support access to wild foods for residents of Nain.

Possible Benefits: There are no direct individual benefits from participating in this study. However, participation in this study will help influence best management strategies for future community freezer operation, so that it further represents residents of Nain's interests in the management of the community freezer.

Results: Results will be presented to all participants through a condensed final project report and a form of community presentation to be determined, will take place.

Risks: There is minimal risk in participating in this study. But people are sometimes uncomfortable about being interviewed. Your comfort is my priority. I will strike comments that you have made from the transcripts if you are uncomfortable with them, and I will omit anything you have shared at your discretion.

Withdrawal from the study: You may refuse to participate or to later withdraw from the study at any time, including before, during, and after the focus group, without penalty by simply telling me. You also have the right to leave unanswered any questions you prefer not to answer.

Confidentiality: Because this research is being conducted in a small community and you will be discussing information with other participants, it may not be possible to keep your participation completely confidential. However, every effort will be made to ensure that information communicated outside of the focus group by the primary researcher will be kept confidential. I recognize that Nain is a small community and some comments may be easily attributable to you by others. As such, I will give you an opportunity to review your transcript and remove anything you do not wish used. I will further notify you if I use a quote from your interview to contextualize my writing on the topic, and give you an opportunity to accept/reject the use of that quote in the context of my writing. Your identity will not be revealed unless you give your written permission. Only members of the research team will have access to your interview transcript and recordings. All audio-recordings and transcripts of the interviews will remain with me in a secure location and will be destroyed after five years after the study is completed.

Compensation/Reimbursement: Compensation of $80.00 will be provided to each study participant.

Questions: If you have any questions about this research study, please feel free to contact myself, Jennifer Organ, through email: jforgan@dal.ca, or by phone at (902) 719-2506.

Concerns: If you have any complaints or concerns about this research that you feel you cannot discuss with me, you can contact the Nunatsiavut Research Advisor, John Lampe, at john_lampe@nunatsiavut.com, or Patricia Lindley, Director of Dalhousie University's Office of Human Research Ethics Administration, for assistance at (902) 494-1462, patricia.lindley@dal.ca. This study has been reviewed by the Dalhousie University Social Sciences Ethics Board and approved by the Nunatsiavut Government

Project Title: *Community freezers as a catalyst towards food security: Perspectives from Inuit residents of Nain, Nunatsiavut.*

SIGNATURE PAGE:

"I, _____(participant), have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I understand that due to the nature of the study, confidentiality of my participation may not be achieved. I hereby consent to take part in this study. However I realize that my participation is voluntary and that I am free to withdraw from the study at any time."

Do you agree to be audio-taped? (please circle one). YES NO

Do you agree for your quotations to be used in research publications (please circle one). YES NO

Do you agree to have any quotes used to be attributed to you and have your name appear in the project report? (please circle one) YES NO

If YES, quotes will only be used after you have had a chance to review them in their final presentation format and context and you have given your approval for their appearance and / or their attribution to you specifically.

Would you like your name to be listed in the Acknowledgements section in this thesis and any other research reports and publications (this may include community presentations, conference presentations, and media releases)? (Please circle one) YES NO

If there any circumstances that you do not want your name to be listed in the acknowledgement section, please identify: _____

Would you like a copy of the focus group transcript (please circle one) YES NO

Would you like a copy of the final report (please circle one) YES NO

_____
Signature (Participant)

_____
Printed Name

_____
Date

Participant Contact Information:

Address:

_____

Telephone: _____Email:

_____

_____
Signature (Principle Investigator)

_____
Printed Name

_____

Date

Thank you for your participation.

APPENDIX I: HARVESTER FOCUS GROUP (INUTTITUT)

ANGIUTIKANNIMUT TATATTUGAK(katingaKatigejunnut)

DALHOUSIE UNIVERSITY
Inspiring Minds

SuliaKanniup Taigusinga: *Nunalinni Kuatsevet niKet Kanuittailinitsanginnut; Isumagijangit Inuit nunalet Nain-imi, Nunatsiavut.*

Pimmagittumik Kaujisattik: *Jennifer Organ*
MES Candidate, Dalhousie University
Email: jforgan@dal.ca, fonninga: (902) 719-2506

Aulatsijinga: *Dr. Chris Furgal, Trent University*
*Email: chrisfurgal@trentu.ca, Fonninga: (*705) 748-1011

Ikajuttinga Aulatsijiup*: Dr. Heather Castleden, Dalhousie University*
Email: heather.castleden@dal.ca, Fonninga: (902) 494-2966

Pigiasiutik Ilinnik KaikKujivugut ilauKataugiamik Kaujisannimut kamagijautillugu Jennifer Organ pijagetsimalluni ilinniavimmit taijamit Dalhousie Ilinniavitsuangani, ilingatillugu Pijagellagiutimmut Avatiujunnik Kaujisattiugiamut. Pigiasittitaumajuk uKâlaKatautillugit amma ikajutsitillugit Nunatsiavut kavamanga, Avatiligijet SuliaKattingit. IlauKataunnet tâtsumani Kaujisannimi Kangatuinnak nukKaviusok ilinnut Kangatuinnak.Kaujisautiujuk nalunaittaujuk atâni. Tamanna ilinnik Kaujititsijuk Kanuk ilinnut ikajotiugunnatunik, ilimanagajattunik, sulitsiagajangitunik, upvalu igvit naluliumautigigajattanik. UKâlaKatigigunnatait Jennifer Organ sunanik apitsotitsaKaguvit tamatsuminga Kaujisanniujummik.

Pidjutinga: Nain mânnaujuk aulatsiKataujuk nunalinni Kuatsevimmik, amma Avatiligijet SuliaKapvinga Nunaligijinni amma Piviannatugijanginni Nunatsiavummi ikajutsisiajuk Kaujisanniujummik Kanuk aulatautsiagajammangât nunalinni Kuatseviujuk amma pitaKatitsigunnaluni niKituKait Kanuittailinitsnagit Nain-imi. Kaujititsiutet tâtsumangat Kaujisannimit sakKetitsigunnatuk Kanuk Nain-imi nunalet Kuatsevinga kamagijautsiagunnamangât ikajutsisiagajammat Nunalet Nain-imi niKituKannik pitaKainnagiamut.

Kaujisanniup âkKisimausinga: Kaujititsiutet tigullataulâttut atautsikâllugit inuit aputsutauKattatillugit Kaujisattulagimmut, Jennifer Organ, ilaKalluni: mânnamut atuKattajunik Nain-imi nunalet Kuatsevinganik, asinginillu Kaujisapviugunnatunit. Ilagiallugu apitsotet, Jennifer Organ uKâlaKatauKattalâmmijuk pinasuattinut asinginullu ilisimanniKatsiatunut avatiujummik amma aulatsijinnut nunalet Kuatsevinganik. Tamakkua katingaKatiget killigiudjigunnatillugit nunalunni Kuatsevik Kanuk kamagijaujutsuamangât pannaigutinnik isumagijautillugit mânnaujuk sivunitsamillu attuiniKagajattut avatiujuk asianguvallianingani omajunik niKituKauKattalittunik.

kinakkut ilaugunnaKât Kaujisanniujummot: AtuKattajut Nain-imi nunalet Kuatsevinganik, aulatsijet Nainiup nunalet Kuatsevinganik, asingillu nunalinni Kuatsevimmik aulatsijet KaikKujaulâmmijut atautsikâllutik apitsutaujunnut. Aulatsijet, pinasuattet asingillu KaujimanniKatsiajut avatiujummik KaikKujaulâmmijut ilauKataugiamut katingaKatigejunnut.

kina kamalâkKâ Kaujisannimek: Jennifer Organ, Kaujisattilagiujuk tamatsumani suliaKanniujummik Ilisimallagilittuk ilinniasimallagilluni Dalhousie Ilinniavitsuangani, Halifax, Nova Scotia kamalâttuk Kaujisannimik. UKattiujuk Nain-imit ilauKatauKattalâttuk apitsujuKanningani amma katingaKatigejunnik uKattiKagumappata ilauKataujut.

IlauKataunnigijait: ApigijaulâkKutit apitsutaugajammangâppit katingaKatigennisinni Apitsutiujummut Jennifer Organ. Tamanna imaKâ ingganiKalâttuk maggonit pingasunut sitontinnut. katingaKatigennisinni Jennifer Organ apigiKattalâttuk ilauKataujunnik pillugu silak asianguvallianinga nunagijaujummi, isumagijanginnik uKumailutauKattajunik niKitukattâgiamut nunaliujuit, amma sunait pidjutauluammangâta isumagijatit Nainiup nunalet Kuatsevinga isumatsasiugutiKagiaKammangât kamagiamik attuinigigajattanganik avatiujuk asianguvallianingani niKituKattâgiamik nunalet Nain-imi.

Kanuk tânna Kaujisannik atuttaugunnamangât: Kaujititsiutet pitâgijaujut tâtsumangat Kaujisannimit atuttaulâttuk tukisiumigiamik Kanuk Nain-imi nunalet Kuatsevinga ikajutsigunnamangât niKituKattâgianginnik nunalet Nain-imi.

Ikajutsiuiugunnatut: pitaKangilagingilak ikajutsiutiugunnatunik ilauKataujunnut Kaujisannimut. Taimaigaluatilugu, ilauKataunnet tâtsumunga Kaujisannimut ikajugunnatuk Kanuk piunippâmik kamasongugiamut sivunitsami nunalet Kuatsevinga kamagagijaugiaKammangâta, kiggatunniKatsianiattilugu nunalinnik Nain-imi kamasongugiamut nunalet Kuatsevinganik.

Piusiusimajut: Piusiusimajut tunijaulâttut ilonnainut ilauKatausimajunnut pijagetsimatsialippat Kaujititsiutik amma nunalet Kaujimattitaugetsimatsialippata, sakKiviugunnanimmik.

Ilimanattumegutaugajattut: IlimanattuKallagingilak ilauKataugimaut Kaujisanniujummi. Tâvatuak ilangit inuit iligasusot apitsutaugiamik. Iligasunginet uvannut sivullipautitaulâttuk. Pejagunnalâttaka uKausigisimajatit allasimajunni iligasotiKaguvit, amma petsigunnalunga sunamik uKausigisimajannik pikKujituaguvit.

NukKagunnanik Kaujisannimit: KipilugunnaKutit ilauKataugiamik upvalu nukKagiamik Kaujisannimit Kangatuinnak, ilautillugu sivungani, apitsujuKanningani, amma pijagetsimalippat apitsunet, sulukattaunak uvannik uKautjituaguvit. PivitsaKallagikKutit kiugiaKanginimmik apitsotiujunnik kiugumangitannik.

SiammatitaugiaKanginik: PiggagasuatuKalâkKuk ilauKataunnet siammatitauttailitillugu. Taimâtsainak, ilitatsisiavunga Nain mikijonninganik amma ilangani uKausiusimajut siammakallasot asinnut. Taimailingattilugu, ilinnik pivitsaKatitsilâkKunga Kimmigugiamik uKausigisimajannik amam pellugit atuttauKungitattit. Kaujitigiallalâgivagit atuniaguma uKausigisimajannik apitsutautillutit, pivitsaKatitsialâkKagit angiutiKagiamik/Kipilugiamik atuttauKujingikuvit uKausigisimajannik. kinaummangâppit siammatitauniangituk kisiani uKaguvit allasimatillugu atuttaugunnaninga atet. kisimi ilaujut Kaujisattinut tusâgunnalâttut apitsutaunigisimajannik amma piusiliuttaumajunnik, Ilonnatik piusiliuttaumajut amma allataumajut uvannelâttut tigujaugunnangittumi amma nonguttitaullutik tallimait jâret nâppata Kaujisannik pijagettausimakKâtillugu.

kenaujattâgijausot/Utittitausot: AkilittaujuKagunnaKuk $80-tut ilonnainut ilaujunnut apitsutaunimmut.

Apitsotitsait: ApitsotitsaKaguvit tamatsuminga Kaujisanniujummik, uvannik KaujititsigunnaKutit, Jennifer Organ, Kagitaujakkut: jforgan@dal.ca, upvalu fonnikut (902) 719-2506.

IsumâlutiKaguvit: NâmmasingiutiKaguvit upvalu isumâlutiKaguvit tamatsuminga Kaujisannimik uvannut uKâlautigigunnangittanut, KaujititsigunnaKutit Nunatsiavut Kaujisannimut UKaudjigiajinganut, John Lampe, maunga john_lampe@nunatsiavut.com, upvalu Patricia Lindley, Aulatsijinga Dalhousie University SuliaKapvinganut Inuit Kaujisattauninginnut Aulatsivingani, ikajuttaugumaguvit (902) 494-1462, patricia.lindley@dal.ca. Tamanna Kaujisannik Kimmigutaumajuk ukununga Dalhousie University Social Sciences Ethics Board amma angittaumalluni Nunatsiavut kavamanganut

SuliaKausiup Taijaugusinga: *Nunalinni Kuatsevet ilingajut niKet Kanuittailinitsanginnut; Isumagijaujut Inunnut nunalinnut Nain, Nunatsiavut.*

ATITâGINNIUP PâGINâNGA:

“Uvanga , _____(ilauKataujuk), atuatsisimavunga pidjutiKajumik tâtsuminga Kaujisannimik. PivitsaKattitauvunga uKâlautigigianga amma apitsotikka kiujaumajut nâmmagilittakani. Tukisimavunga taimailinganninganik apitsotet, siammatitsigiaKangitunga ilauKataunniganik. Uvanga angiutiKavunga ilauKataugiamik Kaujisannimut. Taimaigaluattilugu, ilitatsivunga ilauKataunninga Kangatuinnak nukKasok amma nukKagunnalunga Kaujisannimut Kangatuinnak.”

AngiutiKavet piusiliuttaugiamot? (kaivallalugu atautsik). ANGIJUK AUKâJUK

AngiutiKavet uKausigisimajatut atuttaugunnaninginnik Kaujisautiusimajut allatauninginnot (kaivallailutit atautsimik). ANGIJUK AUKâJUK

AngiutiKavet tâkkua uKausiusimajut, atuttaupata, ilinnut tunijaugiaKanninginnik amma atet atuttautillugu suliaKausiusimajunut Kaujititsiutingani (kaivallialutit atautsimik)? ANGIJUK AUKâJUK

Angiguvit kulânettunut, tamanna sakKigajattuk kisiani tunijausimaliguvit pijagetsimajunik uKausiusimajunik ilinnut angittauKâlluni.

Atet ilijaukKujait Nakummegutaujunnot tâtsumani allasimajumi asinginnilonet Kaujisautiusimajunnik amma allataumajunni (ilautitsigunnatuk nunalinni uKausiusimajunik, katimatsuajuni, amma tusagatsaujunni)? (kaivallialutit atautsimik) ANGIJUK AUKâJUK

Nalillituinani atet ilijaukKungikkuni nakummegutinnut, killigiudjilutit:
_____

Adjiliuttaumajumik pigumavet allataumajunnek(kaivallailutit atautsimik). ANGIJUK AUKâJUK

Pitâgumavet adjiliuttaumajumik pijagettumik Kaujititsiutimmek (kaivallailutit atautsimik) ANGIJUK AUKâJUK

_____
Allalugu Atet (IlauKataujuk)

_____
Allatuinnasimajuk Atik

_____
Ullunga

IlauKataumajop Kaujisapvigisonga:

Nunangata Tugâgutinga:
_____

Fonninga: _____Kagitaujakkut:
_____

_____
Allasimajanga (Kaujisattilagiup)

_____
Allatuinnasimajanga Atik

_____

Ullunga

Nakummek ilauKataugavit.

APPENDIX J: USER INTERVIEW CONSENT FORM

CONSENT FORM (Interviews - users)

DALHOUSIE UNIVERSITY
Inspiring Minds

Project Title: *Community freezers as a catalyst towards food security: Perspectives from Inuit residents of Nain, Nunatsiavut.*

Principal Investigator: *Jennifer Organ*
MES Candidate, Dalhousie University
Email: jforgan@dal.ca, phone: (902) 719-2506

Supervisor: *Dr. Chris Furgal, Trent University*
*Email: chrisfurgal@trentu.ca, Phone: (*705) 748-1011

Co-Supervisor*: Dr. Heather Castleden, Dalhousie University*
Email: heather.castleden@dal.ca, Phone: (902) 494-2966

Introduction: We invite you to take part in a research study being conducted by Jennifer Organ who is a graduate student at Dalhousie University, as part of her Masters of Environmental Studies degree. It is being conducted in cooperation and with the support of the Nunatsiavut Government, Environment Division. Your participation in this study is voluntary and you may withdraw from the study at any time. The study is described below. This description tells you about the benefits, risks, inconvenience, or discomfort which you might experience. You should discuss any questions you have about this study with Jennifer Organ.

Purpose: Nain currently operates a community freezer, and the Environment Division of Lands and Natural Resources for Nunatsiavut is supporting research to explore the management of the community freezer and its role in providing access to wild foods in support of traditional food security in Nain. Information gained from this study will influence the management of the Nain community freezer so that it further supports access to wild foods for residents of Nain.

Study Design: Information will be gained through in-person interviews conducted by the principal investigator, Jennifer Organ, with: current users of the Nain community freezer, individuals who are involved with the management of the community freezer, and other key informants. In addition to interviews, Jennifer Organ will also hold a focus group with harvesters and other local knowledgeable environmental experts and with managers of the community freezer. These focus groups will help to further identify what key factors a community freezer management plan should consider to address current and anticipated future impacts of environmental change on access to wild foods.

Who can Participate in the Study: Users of the Nain community freezer, managers of the Nain community freezer, and other key informants of the community freezer operations will be invited to participate in the in-person interviews. Managers, harvesters and other local knowledgeable environmental experts will be invited to participate in focus groups.

Who will be Conducting the Research: Jennifer Organ, the principal investigator of this project who is a Master's student at Dalhousie University, Halifax, Nova Scotia will be conducting the research. A translator from Nain will be present during the interviews and the focus group if translation is requested from the participant.

Your Participation: You will be asked to be interviewed in a one-on-one situation for approximately one and a half hours at a time of mutual convenience. During this interview Jennifer Organ will ask you questions about your use of the community freezer, community freezer operations, and challenges you experience in regards to access to wild foods.

How this research will be used: Information gained from this research will be used to understand how the Nain community freezer can better support access to wild foods for residents of Nain.

Possible Benefits: There are no direct individual benefits from participating in this study. However, participation in this study will help influences best management strategies for future community freezer operation, so that it further represents residents of Nain's interests in the management of the community freezer.

Results: Results will be presented to all participants through a condensed final project report and a form of community presentation to be determined, will take place.

Risks: There is minimal risk in participating in this study. But people are sometimes uncomfortable about being interviewed. Your comfort is my priority. I will strike comments that you have made from the transcripts if you are uncomfortable with them, and I will omit anything you have shared at your discretion.

Withdrawal from the study: You may refuse to participate or to later withdraw from the study at any time, including before, during, and after the interview, without penalty by simply telling me. You also have the right to leave unanswered any questions you prefer not to answer.

Confidentiality: Every effort will be made to ensure your participation is confidential. At the same time, I recognize that Nain is a small community and some comments may be easily attributable to you by others. As such, I will give you an opportunity to review your transcript and remove anything you do not wish used. I will further notify you if I use a quote from your interview to contextualize my writing on the topic, and give you an opportunity to accept/reject the use of that quote in the context of my writing. Your identity will not be revealed unless you give your written permission. Only members of the research team will have access to your interview transcript and recordings. All audio-recordings and transcripts of the interviews will remain with me in a secure location and will be destroyed after five years after the study is completed.

Compensation/Reimbursement: Compensation of $50 will be provided to each study participant. If the interview takes longer than one and a half hours, each participant will be given $60.

Questions: If you have any questions about this research study, please feel free to contact myself, Jennifer Organ, through email: jforgan@dal.ca, or by phone at (902) 719-2506.

Concerns: If you have any complaints or concerns about this research that you feel you cannot discuss with me, you can contact the Nunatsiavut Research Advisor, John Lampe, at john_lampe@nunatsiavut.com, or Patricia Lindley, Director of Dalhousie University's Office of Human Research Ethics Administration, for assistance at (902) 494-1462, patricia.lindley@dal.ca. This study has been reviewed by the Dalhousie University Social Sciences Ethics Board and approved by the Nunatsiavut Government

Project Title: *Community freezers as a catalyst towards food security: Perspectives from Inuit residents of Nain, Nunatsiavut.*

SIGNATURE PAGE:

"I, _____(participant), have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I understand that due to the nature of the study, confidentiality of my participation may not be fully achieved. I hereby consent to take part in this study. However I realize that my participation is voluntary and that I am free to withdraw from the study at any time."

Do you agree to be audio-taped? (please circle one). YES NO

Do you agree for your quotations to be used in research publications (please circle one). YES NO

Do you agree for these quotes, if used, to be attributed to you and your name presented in the project report (please circle one)? YES NO

If Yes to either of the above, this will only be done after presenting to you the final text of the quote and its presentation in the final format and context, for your approval.

Would you like your name to be listed in the Acknowledgements section in this thesis and any other research reports and publications (this may include community presentations, conference presentations, and media releases)? (Please circle one) YES NO

If there any circumstances that you do not want your name to be listed in the acknowledgement section, please identify: _____

Would you like a copy of your transcript (please circle one). YES NO

Would you like a copy of the final project report (please circle one) YES NO

_____
Signature (Participant)

_____
Printed Name

_____
Date

Participant Contact Information:

Address:

_____

Telephone: _____Email:

_____

_____
Signature (Principal Investigator)

_____
Printed Name

_____
Date

Thank you for your participation

APPENDIX K: USER INTERVIEW CONSENT FORM (INUTTITUT)

ANGIUTIKANNIMUT TATATTUGAK(Apitsotet-atuKattajunut)

DALHOUSIE UNIVERSITY
Inspiring Minds

SuliaKanniup Taigusinga: *Nunalinni Kuatsevet niKet Kanuittailinitsanginnut; Isumagijangit Inuit nunalet Nain-imi, Nunatsiavut.*

Pimmagittumik Kaujisattik: *Jennifer Organ*
MES Candidate, Dalhousie University
Email: jforgan@dal.ca, fonninga: (902) 719-2506

Aulatsijinga: *Dr. Chris Furgal, Trent University*
*Email: chrisfurgal@trentu.ca, Fonninga: (*705) 748-1011

Ikajuttinga Aulatsijiup*: Dr. Heather Castleden, Dalhousie University*
Email: heather.castleden@dal.ca, Fonninga: (902) 494-2966

Pigiasiutik Ilinnik KaikKujivugut ilauKataugiamik Kaujisannimut kamagijautillugu Jennifer Organ pijagetsimalluni ilinniavimmit taijamit Dalhousie Ilinniavitsuangani, ilingatillugu Pijagellagiutimmut Avatiujunnik Kaujisattiugiamut. Pigiasittitaumajuk uKâlaKatautillugit amma ikajutsitillugit Nunatsiavut kavamanga, Avatiligijet SuliaKattingit. IlauKataunnet tâtsumani Kaujisannimi Kangatuinnak nukKaviusok ilinnut Kangatuinnak.Kaujisautiujuk nalunaittaujuk atâni. Tamanna ilinnik Kaujititsijuk Kanuk ilinnut ikajotiugunnatunik, ilimanagajattunik, sulitsiagajangitunik, upvalu igvit naluliumautigigajattanik. UKâlaKatigigunnatait Jennifer Organ sunanik apitsotitsaKaguvit tamatsuminga Kaujisanniujummik.

Pidjutinga: Nain mânnaujuk aulatsiKataujuk nunalinni Kuatsevimmik, amma Avatiligijet SuliaKapvinga Nunaligijinni amma Piviannatugijanginni Nunatsiavummi ikajutsisiajuk Kaujisanniujummik Kanuk aulatautsiagajammangât nunalinni Kuatseviujuk amma pitaKatitsigunnaluni niKituKait Kanuittailinitsnagit Nain-imi. Kaujititsiutet tâtsumangat Kaujisannimit sakKetitsigunnatuk Kanuk Nain-imi nunalet Kuatsevinga kamagijautsiagunnamangât ikajutsisiagajammat Nunalet Nain-imi niKituKannik pitaKainnagiamut.

Kaujisanniup âkKisimausinga: Kaujititsiutet tigullataulâttut atautsikâllugit inuit aputsutauKattatillugit Kaujisattulagimmut, Jennifer Organ, ilaKalluni: mânnamut atuKattajunik Nain-imi nunalet Kuatsevinganik, asinginillu Kaujisapviugunnatunit. Ilagiallugu apitsotet, Jennifer Organ uKâlaKatauKattalâmmijuk pinasuattinut asinginullu ilisimanniKatsiatunut avatiujummik amma aulatsijinnut nunalet Kuatsevinganik. Tamakkua katingaKatiget killigiudjigunnatillugit nunalunni Kuatsevik Kanuk kamagijaujutsuamangât pannaigutinnik isumagijautillugit mânnaujuk sivunitsamillu attuiniKagajattut avatiujuk asianguvallianingani omajunik niKituKauKattalittunik.

kinakkut ilaugunnaKât Kaujisanniujummot: AtuKattajut Nain-imi nunalet Kuatsevinganik, aulatsijet Nainiup nunalet Kuatsevinganik, asingillu nunalinni Kuatsevimmik aulatsijet KaikKujaulâmmijut atautsikâllutik apitsutaujunnut. Aulatsijet, pinasuattet asingillu KaujimanniKatsiajut avatiujummik KaikKujaulâmmijut ilauKataugiamut katingaKatigejunnut.

kina kamalâkKâ Kaujisannimek: Jennifer Organ, Kaujisattilagiujuk tamatsumani suliaKanniujummik Ilisimallagilittuk ilinniasimallagilluni Dalhousie Ilinniavitsuangani, Halifax, Nova Scotia kamalâttuk Kaujisannimik. UKattiujuk Nain-imit ilauKatauKattalâttuk apitsujuKanningani amma katingaKatigejunnik uKattiKagumappata ilauKataujut.

IlauKataunnigijait: ApigijaulâkKutit apitsutaugajammangâppit atautsikâllusi atautsimi agvamilu sitonmtimmi pigunnasituaguvit. Apitsuniujummik Jennifer Organ ilinnik apitsuKattalâttuk Kanuk atuKattamangâppit nunalinni Kuatsevimmik, nunalinni Kuatsevik Kanuk aulataugunnamangât, amma uKumaigiKattajannik pitâgasuagiamik niKituKaujunnik.

Kanuk tânna Kaujisannik atuttaugunnamangât: Kaujititsiutet pitâgijaujut tâtsumangat Kaujisannimit atuttaulâttuk tukisiumigiamik Kanuk Nain-imi nunalet Kuatsevinga ikajutsigunnamangât niKituKattâgianginnik nunalet Nain-imi.

Ikajutsiuiugunnatut: pitaKangilagingilak ikajutsiutiugunnatunik ilauKataujunnut Kaujisannimut. Taimaigaluatilugu, ilauKataunnet tâtsumunga Kaujisannimut ikajugunnatuk Kanuk piunippâmik kamasongugiamut sivunitsami nunalet Kuatsevinga kamagagijaugiaKammangâta, kiggatunniKatsianiattilugu nunalinnik Nain-imi kamasongugiamut nunalet Kuatsevinganik.

Piusiusimajut: Piusiusimajut tunijaulâttut ilonnainut ilauKatausimajunnut pijagetsimatsialippat Kaujititsiutik amma nunalet Kaujimattitaugetsimatsialippata, sakKiviugunnanimmike.

Ilimanattumegutaugajattut: IlimanattuKallagingilak ilauKataugimaut Kaujisanniujummi. Tâvatuak ilangit inuit iligasusot apitsutaugiamik. Iligasunginet uvannut sivullipautitaulâttuk. Pejagunnalâttaka uKausigisimajatit allasimajunni iligasotiKaguvit, amma petsigunnalunga sunamik uKausigisimajannik pikKujituaguvit.

NukKagunnanik Kaujisannimit: KipilugunnaKutit ilauKataugiamik upvalu nukKagiamik Kaujisannimit Kangatuinnak, ilautillugu sivungani, apitsujuKanningani, amma pijagetsimalippat apitsunet, sulukattaunak uvannik uKautjituaguvit. PivitsaKallagikKutit kiugiaKanginimmik apitsotiujunnik kiugumangitannik.

SiammatitaugiaKanginik: PiggagasuatuKalâkKuk ilauKataunnet siammatitauttailitillugu. Taimâtsainak, ilitatsisiavunga Nain mikijonninganik amma ilangani uKausiusimajut siammakallasot asinnut. Taimailingattilugu, ilinnik pivitsaKatitsilâkKunga Kimmigugiamik uKausigisimajannik amam pellugit atuttauKungitattit. Kaujitigiallalâgivagit atuniaguma uKausigisimajannik apitsutautillutit, pivitsaKatitsialâkKagit angiutiKagiamik/Kipilugiamik atuttauKujingikuvit uKausigisimajannik. kinaummangâppit siammatitauniangituk kisiani uKaguvit allasimatillugu atuttaugunnaninga atet. kisimi ilaujut Kaujisattinut tusâgunnalâttut apitsutaunigisimajannik amma piusiliuttaumajunnik, Ilonnatik piusiliuttaumajut amma allataumajut uvannelâttut tigujaugunnangittumi amma nonguttitaullutik tallimait jâret nâppata Kaujisannik pijagettausimakKâtillugu.

kenaujattâgijausot/Utittitausot: AkilittaujuKagunnaKuk $50-tut ilonnainut ilaujunnut apitsutaunimmut. Apitsutaunet akuniunitsauniappat sitontimik agvamilu, ilonnatik apitsutaujut pitâgunnatut $60-tut.

Apitsotitsait: ApitsotitsaKaguvit tamatsuminga Kaujisanniujummik, uvannik KaujititsigunnaKutit, Jennifer Organ, Kagitaujakkut: jforgan@dal.ca, upvalu fonnikut (902) 719-2506. **IsumâlutiKaguvit:** NâmmasingiutiKaguvit upvalu isumâlutiKaguvit tamatsuminga Kaujisannimik uvannut uKâlautigigunnangittanut, KaujititsigunnaKutit Nunatsiavut Kaujisannimut UKaudjigiajinganut, John Lampe, maunga john_lampe@nunatsiavut.com, upvalu Patricia Lindley, Aulatsijinga Dalhousie University SuliaKapvinganut Inuit Kaujisattauninginnut Aulatsivingani, ikajuttaugumaguvit (902) 494-1462, patricia.lindley@dal.ca. Tamanna Kaujisannik Kimmigutaumajuk ukununga Dalhousie University Social Sciences Ethics Board amma angittaumalluni Nunatsiavut kavamanganut

SuliaKausiup Taijaugusinga: *Nunalinni Kuatsevet ilingajut niKet Kanuittailinitsanginnut; Isumagijaujut Inunnut nunalinnut Nain, Nunatsiavut.*

ATITâGINNIUP PâGINâNGA:

“Uvanga , _____(ilauKataujuk), atuatsisimavunga pidjutiKajumik tâtsuminga Kaujisannimik. PivitsaKattitauvunga uKâlautigigianga amma apitsotikka kiujaumajut nâmmagilittakani. Tukisimavunga taimailinganninganik apitsotet, siammatitsigiaKangitunga ilauKataunniganik. Uvanga angiutiKavunga ilauKataugiamik Kaujisannimut. Taimaigaluattilugu, ilitatsivunga ilauKataunninga Kangatuinnak nukKasok amma nukKagunnalunga Kaujisannimut Kangatuinnak.”

AngiutiKavet piusiliuttaugiamot? (kaivallalugu atautsik). ANGIJUK AUKâJUK

AngiutiKavet uKausigisimajatut atuttaugunnaninginnik Kaujisautiusimajut allatauninginnot (kaivallailutit atautsimik). ANGIJUK AUKâJUK

AngiutiKavet tâkkua uKausiusimajut, atuttaupata, ilinnut tunijaugiaKanninginnik amma atet atuttautillugu suliaKausiusimajunut Kaujititsiutingani (kaivallialutit atautsimik)? ANGIJUK AUKâJUK

Angiguvit kulânettunut, tamanna sakKigajattuk kisiani tunijausimaliguvit pijagetsimajunik uKausiusimajunik ilinnut angittauKâlluni.

Atet ilijaukKujait Nakummegutaujunnot tâtsumani allasimajumi asinginnilonet Kaujisautiusimajunnik amma allataumajunni (ilautitsigunnatuk nunalinni uKausiusimajunik, katimatsuajuni, amma tusagatsaujunni)? (kaivallialutit atautsimik) ANGIJUK AUKâJUK

Nalillituinani atet ilijaukKungikkuni nakummegutinnut, killigiudjilutit:
_____

Adjiliuttaumajumik pigumavet allataumajunnek(kaivallailutit atautsimik). ANGIJUK AUKâJUK

Pitâgumavet adjiliuttaumajumik pijagettumik Kaujititsiutimmek (kaivallailutit atautsimik) ANGIJUK AUKâJUK

_____
Allalugu Atet (IlauKataujuk)

_____
Allatuinnasimajuk Atik

_____
Ullunga

IlauKataumajop Kaujisapvigisonga:

Nunangata Tugâgutinga:
_____

Fonninga: _____Kagitaujakkut:
_____

_____
Allasimajanga (Kaujisattilagiup)

_____
Allatuinnasimajanga Atik

_____
Ullunga

Nakummek ilauKataugavit.

APPENDIX L: MANAGER FOCUS GROUP GUIDE

Focus Group Guide: Managers and Key Informants of Nain Community Freezer

Introductory question:

1. Can you tell me a little bit about the community freezer and how it is managed?

Follow-up:

i. (Refer to the chart for potential follow-up questions for operation-specific details – found at end of this document)
ii. Can you tell me about Ulapitsaijet and other programs they manage or organize?
iii. Are there are other freezer or food support programs that offer wild foods to residents in Nain?

Transition Questions:

2. Why is there a need for the community freezer?

Follow-up:

i. Why do you think residents currently use the freezer?
ii. Do you think there will be new or ongoing stresses that will influence future needs for the freezer program?

3. Can you tell me about how people use the freezer?

Follow-up:

i. How do people receive foods from the freezer? (do they physically access the freezer, or are they delivered foods from the freezer?
ii. How often do people use the freezer?
iii. How much food do they take each visit (are there any restrictions on how much they can take)?

4. Does use of the freezer change significantly between seasons?

Follow-up:

i. Do you notice difference in users between seasons?
ii. Do you notice a difference in the types or amount of food that people will access during different times of the year?
iii. Overall, do you notice times of the year that people use the freezer more?
iv. Does the available stock fluctuate significantly between seasons (type and amount). Why?

5. What do you think characterizes who uses the freezer program?

Follow-up:

i. Are there things that are common among users that you think are influencing them to access the freezer to get wild foods?

Key Questions:

6. What are some strengths of the community freezer program as it is currently operated?

   Follow-up:

   i. What do you think contributes to these strengths? (funding, volunteers, staff, etc)

7. What are some challenges that the community freezer program experiences in meeting its goals?

   Follow-up:

   i. How do you think these challenges can be overcome?

8. Are there any other future trends (things changing in the community that you are aware of today) that you think might influence the management of the community freezer? (including use, or users of the community freezer? The freezer stock and availability?)

   Follow-up:

   i. How do you think management can address this (explain)?

Ending Question

9. Is there anything else about the community freezer that you would like to discuss?

Operational Questions: Information about the following operational characteristics that are not gained from this focus group will be gained through follow-up interviews with managers and/or suppliers.

	Nain Community Freezer
Operational:	
Location	
Accessibility *How often is it open (what hrs) and who can gain access from the public ?*	
Size/Quantity (capacity – cubic ft estimate ?)	
Date of establishment/purchase	
Reason for establishment and evidence for need *Can you tell me about Ulapitsaijet?	
Intended goal of the freezer (official if documented, or unofficial) *(what, to whom, when and why)*	

Who operates the freezer? originator and current (if different)	
Consistency of operation *Has it always been operating since the start date ?*	
Who funds the freezer operations? *(sources, yrs)*	
When is the freezer in operation (year-round, seasonal?)	
Who stocks the freezer?	
How are these individuals chosen?	
Are those who stock the freezer hired or compensated in any way, or is it a volunteer basis?	
Was compensation offered in previous years? If compensation for these services ended, why?	
How is the food made available to users? (packaged, etc?)	
How is the food distributed?	
What is typically stocked in the freezer?	
Is the freezer advertised? Where/how?	
Are there announcements when the freezers are stocked, or when specific foods are available in the freezers?	
Who typically uses the freezer?	
Frequency of use *How busy is the freezer ?* *(e.g. ave requests / week)*	
Adequacy *Does the freezer not meet, meet or surpass the demand in terms of **quantity of food?*** *Does the freezer not meet, meet or surpass the demand in terms of **quality and choice of food?***	
Other	
Elements that lead to the success of the freezer program?	
Elements that lead to challenges of the program?	
Other critical factors to understand the operation and management of the freezer ?	

APPENDIX M: HARVESTER FOCUS GROUP GUIDE

Focus Group Guide: Harvesters/Other knowledgeable environmental observers

Introductory question:

1. Can you tell me about the hunting and harvesting activities in Nain?

Transition Questions:

2. Are there any changing environmental conditions that you have observed or heard of in the area?

Follow-up:
*i. *what are they?*
ii. Is this common in previous years?

3. Have these changes had an impact on wild food species in the area?

Follow-up:
i. what changes have you noticed?

4. Have these changes impacted your ability to access wild foods?

Follow-up
i. how?
ii. What about the availability and quality of these foods?

5. Do you think these changes will continue to take place in the future? (or will they be ongoing?)

Key Questions:

1. Do any of you know about the freezer program Located at the Labrador Inuit Development Corporation?
Follow-up
i. do you provide foods to the program?
ii. Has anyone supplied foods to the freezer in the past?

Briefly describe the freezer program located at the Labrador Inuit Development Corporation to the group so the following questions are best answered.

6. How do you think these challenges of accessing wild foods that you have all discussed impacts the ability for the community freezer to supply foods to residents? *(refer to notes on board as a reference point)*

7. What do you think a community freezer program should consider to address these challenges?

Ending Question (all things considered, summary question, or insurance question)

1. If I am trying to learn about how the community freezer can further support access to wild foods for residents, what else have we not talked about that you think I should know or be aware of or that you would like to mention?

2. Is there anything else that you would like to say or discuss before we finish the discussion?

Thank you!

APPENDIX N: USER INTERVIEW GUIDE

Part One: addressing the question: *"How does the community freezer influence access to wild foods for current users?"*

1. **What wild foods do you eat?**

Follow-up:

i. Do you eat different types of wild foods during different times of the year? *(what are they and when do you eat them?)*

2. **Where do you normally get these foods?**

Follow-up:

i. Is there an active hunter in your household?
ii. Do you or your household distribute country food to other members of the community? (who, how often)

3. **Do you get these foods from other places as well?**

Follow-up:

i. If yes, can you please explain more? (where, who, how often)

4. **Have you experienced any challenges getting wild foods in the past year?**

Follow-up

i. If yes, can you please explain more/why?
ii. Are these challenges that you have experienced previous to last year ? (or are they only new challenges in the last year) Are there any other challenges you have experienced in previous years ?
iii. When you have been challenged to get wild foods where do you go to get them (if not from your own harvesting activities?) (e.g. friends, family, freezer-if yes which one; other modes?) or do you go without?
iv. Do you own hunting equipment? If yes, what hunting equipment do you own? Is this equipment useable (is it in operation)? Do you borrow equipment from others? If so, what and from whom ?
Is there other equipment that you would like to own and don't? Why would you like to own it?

5. **How did you learn about the freezer located at the Labrador Inuit Development Corporation?**

Follow-up:

i. When did you begin to use the freezer? (first get any foods from the freezer)

6. Did you get from the freezer in the past 12 months? If yes, what did you get and when did you get them?

Follow-up:

i. Was your use in the last year typical for your use of the freezer in previous years ? If no, how ?
ii. Are these foods that you mentioned always available at the freezer?
iii. Are other foods that you prefer to eat available at the freezer?
iv. Are the foods that you get from the community freezer typically for yourself or for others?
v. Are there any other foods that you received from the community freezer in past years?

7. How do you get foods from the freezer?

Follow-up:

i. How do you know when foods are available at the freezer?
ii. Do you go to the freezer, or does someone else bring the foods to you?
iii. At what times can you access the freezer?
iv. In what form is the food made available (how are the meats prepared and packaged, etc – and is this suitable for you as a user?) What would you prefer in terms of the form the food is available to you in?

8. How often did you go to or request foods from the freezer in the past year?

Follow-up:

i. Are there times *(or seasons?)* of the year that you typically use the community freezer more than others? *If yes,*
ii. Why?
iii. Have you ever tried or needed to access the freezer but could not? Why not?

*Proceed to Part 2 if environmental stresses were mentioned earlier. If not, continue to question 9 and 10.

9. Overall, how do you think the freezer located at the Labrador Inuit Development Corporation helps to address those challenges that you experience in accessing wild foods? (or helps you to access wild foods?)

Follow-up:

i. If the community freezer was not available, how do you think this would change your wild food consumption? how would this make you feel?

Closing question:

10. If I am trying to learn about the freezer program at LIDC and user's perspectives is there anything else about the freezer or how, why, or when you access it that you would like to talk about or you think I should understand?

11. Do you plan to continue using the freezer in the future? Why?

12. Do you expect there to be any changes in your use of the freezer in the future? (do you plan on using it more or less ? or for different things or at different times of year?)

Part 2*:* Addressing the question: *"What key factors should the community freezer management consider to address current and anticipated future impacts of environmental changes on access to wild foods for residents of Nain?"*

1. **How (if at all) do you think the community freezer can assist with the challenge of accessing wild foods that you may be facing?** *(speak specifically to what the user has identified in question #4)*

2. **Overall, how do you think the freezer located at the Labrador Inuit Development Corporation helps to address those challenges that you experience of accessing wild foods? (or helps you to access wild foods?)**

Follow-up:

ii. If the community freezer was not available, how do you think this would change your wild food consumption? Or how would this make you feel?

Closing question:

3. **If I am trying to learn about the freezer program at LIDC and user's perspectives is there anything else about the freezer or how, why, or when you access it that you would like to talk about?**

4. **Do you plan to continue using the freezer in the future? Why?**

APPENDIX O: RECRUITMENT SCRIPTS

Recruitment Script: Managers of Nain Community Freezer

Hello,

My name is Jennifer Organ, and I am a student at Dalhousie University working with Chris Furgal from Trent University and Tom Sheldon from the Nunatsiavut Environment Division of the Department Lands and Natural Resources regarding access to wild foods and how the community freezer can support access to these foods for community members of Nain. I met with you briefly in July while I was Nain to discuss the project, and I am excited to return to Nain this fall.

I was hoping I could talk to you about the community freezer project I am working on. I would like to speak to managers of the community freezer to help understand how the Nain community freezer can further and better support access to wild foods for residents of Nain.

This project is funded by ArcticNet, and has been reviewed by the Dalhousie University Social Sciences Ethics Board and the Nunatsiavut Government.

Would you be interested in participating in an interview (or focus group) so that I could ask you some questions about the community freezer, your role in the management of the freezer, its' strengths and challenges that it faces, and stresses on access to wild foods that users experience?

[If yes, provide a hard copy of information letter, and set up a time and meeting space to meet. Present the consent form to the participant at the onset of the meeting]

[If no, thank the participant for taking the time to listen to you and ask if he/she can recommend anyone else who may be interested in learning and/or participating in this project]

Recruitment Script: Harvester Focus Groups

Hello,

My name is Jennifer Organ, and I am a student at Dalhousie University working with Chris Furgal from Trent University and Tom Sheldon from the Nunatsiavut Environment Division of the Department Lands and Natural Resources regarding access to wild foods and how the community freezer can support access to these foods for community members of Nain. I am excited to be working with this project.

I was hoping I could talk to you about the subject. I would like to speak to harvesters and other individuals who hold knowledge of impacts of environmental changes in the region

on access to wild foods. This information will be used to help understand how the Nain community freezer can better support access to wild foods for residents of Nain.

This project is funded by ArcticNet, and has been reviewed by the Dalhousie University Social Sciences Ethics Board and the Nunatsiavut Government.

Would you be interested in participating in a focus group for the project so I could ask you and other participants questions about environmental changes in the region, and what key factors you think the community freezer should address to better support access to wild foods for residents of Nain?

[If yes, provide a hard copy of information letter, and set up a time and meeting space to meet. Present the consent form to the participant at the onset of the meeting]

[If no, thank the participant for taking the time to listen to you and ask if he/she can recommend anyone else who may be interested in learning and/or participating in this project]

APPENDIX P: RESEARCH RESULTS INFORMATION SESSION POSTER

Research Results Information Session

NUNATSIAVUT kavamanga Government

Project Leaders:
Chris Furgal, Trent University
Tom Sheldon, Nunatsiavut Government

TRENT UNIVERSITY

Come to learn and discuss project results from research taking place in Nain!

Sharing What We Know About Sea Ice Travel Safety - Agata Durkalec

Community Freezers Supporting Food Security: Perspectives from Residents of Nain - Jennifer Organ

Inuit Knowledge and the Nunatsiavut Government's Environmental Protection Act - Meghan Buckham

Anomalous Year Impact and Adaptation Study - Rodd Laing

Community Freezer Program Update - Katie Winters

Tuesday, June 26th at 7 pm in the Pulâpvik Room in the Parks Canada Building (large room upstairs)

Your attendance and participation in the workshop would be greatly appreciated. Researchers will be present to answer questions about the results for each of the research projects.

Snacks and refreshments will be provided.

For more information contact the research centre at 709-922-2380

APPENDIX Q: RESULTS FACT SHEET FOR NAIN RESIDENTS

Community Freezers Supporting Food Security: Perspectives from Residents of Nain, Nunatsiavut

Research Project Report

by Jennifer Organ

What is this project about?

Access to wild foods has become more difficult in many northern communities, including Nain, due to social, political, economic and environmental changes taking place. Community freezers are being considered as one way through which residents can provide safe and secure access to healthy wild foods to those who need it the most. The Environment Division of Lands and Natural Resources of the Nunatsiavut Government is trying to understand how community freezer initiatives can further support wild food needs of residents in Nain and other Nunatsiavut communities.

This project has been working to:

- Evaluate how the former community freezer located at the LIDC building supported access to wild foods for residents.
- Identify key factors to consider for future community freezer management to further support access to wild foods for residents.

How was it done?

- Interviews with community freezer managers, users, and harvesters;
- Document review of other community freezer initiatives and wild food consumption in Nunatsiavut;
- Personal observations of harvesting practices and community freezer activity.

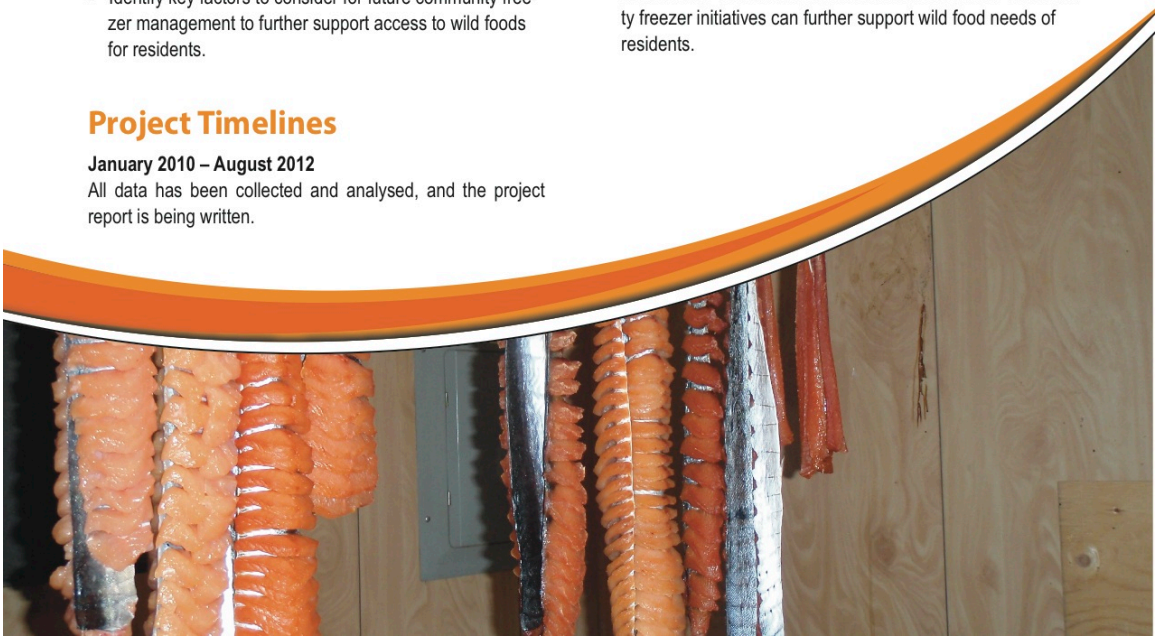
What are the motivations for this study?

- Access to wild foods is becoming more difficult due to social, political, economic and environmental conditions.
- Environment Division of Lands and Natural Resources of the Nunatsiavut Government wants to understand how community freezer initiatives can further support wild food needs of residents.

Project Timelines

January 2010 – August 2012

All data has been collected and analysed, and the project report is being written.



What did we find?

1. Stresses on access to wild foods:

Community members who accessed the freezer described factors that made it difficult for them to access wild foods. The following are examples of factors challenging their access to wild foods:

Socio-political: Lack of a social network to receive foods from or to go harvesting with wild food consumption behaviours becoming more individualized.

Economic: Low cost-benefit ratio of harvesting activities discourage participants to participate in harvesting activities that now require further distances to travel.

Environmental: Shifts in wildlife populations and migration patterns as well as unsuitable weather conditions for participation in harvesting practices.

2. Key factors to consider:

The community freezer currently supports access to wild foods for residents who can't get these foods through other social, economic or physical means. There are, however, some obstacles for the community freezer to meet current wild food needs:

- The community freezer is not able to satisfy some wild food needs through this program because of recent changes in the physical natural environment.
- Feelings associated with use and potential dependency on this program might hinder short term and long-term wild food accessibility for the community, regardless of the amount of foods available.
- Current and potentially long-term support through this program is influenced by interest for this program to be managed in ways that are socially acceptable and that reflect traditional sharing practices.There are different opinions about what is socially acceptable in the community that will be important to be aware of as the community continues to adapt to changing environments.

DALHOUSIE UNIVERSITY *Inspiring Minds*

TRENT UNIVERSITY

NUNATSIAVUT kavamanga Government

With funding from:

Aboriginal Affairs and Northern Development Canada / Affaires autochtones et Développement du Nord Canada

ArcticNet

NASIVVIK

For more information, please contact any of the following people at the addresses provided below:

Jennifer Organ
Researcher, Dalhousie University
Halifax, Nova Scotia
Tel: (902) 719 2506
Email: jforgan@dal.ca

Tom Sheldon
Environment Division, Nunatsiavut Government
Nain, Nunatsiavut
Tel: (709) 922 2942
Email: tom_sheldon@nunatsiavut.com

Dr. Chris Furgal
Associate Professor, Trent University
Peterborough, Ontario
Tel: (705) 748 1011 ext 7953
Email: chrisfurgal@trentu.ca

APPENDIX R: DALHOUSIE UNIVERSITY RESEARCH ETHICS APPROVAL

DALHOUSIE UNIVERSITY
Inspiring Minds

Social Sciences and Humanities Research Ethics Board
Letter of Approval

Date: October 19,2010.

To: Jennifer Organ , School for Resource and Environmental Studies
Dr. Heather Castleden , School for Resource and Environmental Studies

The Social Sciences Research Ethics Board has examined the following application for research involving human subjects:

Project # 2010-2314 (version 2)

Title: Community Freezers as a Catalyst Towards Food Security: Perspectives From Inuit Residents of Nain, Nunatsiavut (Phase II)

and found the proposed research involving human subjects to be in accordance with Dalhousie Guidelines and the Tricouncil Policy Statement on *Ethical Conduct in Research Using Human Subjects.* This approval will be in effect for 12 months from the date indicated below and is subject to the following conditions:

1. Prior to the expiry date of this approval an annual report must be submitted and approved.
2. Any significant changes to either the research methodology, or the consent form used, must be submitted for ethics review and approval *prior to their implementation.*
3. You must also notify Research Ethics when the project is completed or terminated, at which time a final report should be completed.
4. Any adverse events involving study participants are reported immediately to the REB

Effective Date: October 18,2010.
Expiry Date: October 18,2011.

signed:
Dr. Stephen Coughlan (Chair SSHREB)

IMPORTANT FUNDING INFORMATION - *Do not ignore*

To ensure that funding for this project is available for use, you must provide the following information and FAX this page to RESEARCH SERVICES at 494-1595

Name of grant /contract holder _____ Dept. _____
Signature of grant / contract holder _____
Funding agency _____
Award Number _____ Dal Account # (if known) _____

Dalhousie Research Services • Research Ethics • 5248 Morris Street • Halifax, NS, Canada • B3J 1B4
Tel: 902-494-1462 • Fax: 902-494-1595 • Email: Patricia.Lindley@dal.ca • www.dal.ca/~research

APPENDIX S: NUNATSIAVUT ETHICS APPROVAL

Nunatsiavut
kavamanga Government

Nunamik amma Nunamiutanik

Lands and Resources

29th October 2010

Jennifer Organ
Masters of Environmental Studies Candidate
School For Resource and Environmental Studies
6100 University Avenue, Suite 5010
Halifax, Nova Scotia
B3H 3J5

Email: jforgan@dal.ca
Phone: (902) 719-2506

Dear Ms. Jennifer Organ:

Re: Research Proposal - Community Freezers as a Catalyst Towards Food Security: Perspectives from Inuit Residents of Nain, Nunatsiavut.
Please Note: This project is being conducted within a larger project entitled 'Food Security, Ice, Climate and Community Health: Climate change impacts on traditional food security in Canadian Inuit Communities.' By Chris Furgal and funded under ArcticNet.

As stated in the Research Process a review to your proposal was initiated, involving appropriate Inuit Community Government(s) and NG staff ensuring for a comprehensive review.

It is strongly supported by the Environment Division within the Department of Lands and Natural Resources of the Nunatsiavut Government and they have been working with you on the development of this project for over 4 months. The Nain Inuit Community Government is also in support of this project and says that it is long overdue piece of work.

Please accept this letter as confirmation of the Nunatsiavut Governments support for the above research project as outlined in your application, subject to the following suggestions:

17 Sandbanks Road, PO Box 70, Nain, NL, Canada A0P 1L0 ◗ Tel: 709.922.2942 Fax: 709.922.2931 ◗ Email: nain_reception@nunatsiavut.com

Makkovik
PO Box 92
Makkovik, NL A0P 1J0
Tel: 709.923.2365
Fax: 709.923.2366

Hopedale
PO Box 91
Hopedale, NL A0P 1G0
Tel: 709.933.3777
Fax: 709.933.3746

Rigolet
PO Box 47
Rigolet, NL A0P 1P0
Tel: 709.947.3383
Fax: 709.947.3371

Postville
General Delivery
Postville, NL A0P 1N0
Tel: 709.479.9880
Fax: 709.479.9891

Happy Valley - Goose Bay
1A Hillcrest Road, PO Box 909, Stn. 'B'
Happy Valley - Goose Bay, NL A0P 1E0
Tel: 709.896.8582
Fax: 709.896.2610

North West River
7-13 River Road, PO Box 234
North West River, NL A0P 1M0
Tel: 709.497.8356
Fax: 709.497.8311

www.nunatsiavut.com

1. Traditional Knowledge is a very important issue for the NG and beneficiaries to the Agreement. All of the Traditional Knowledge data, raw and processed, that is collected is to be shared with NG. We require exact copies of all the raw and processed data, plus exact copies of any recording and transcripts.

2. Please provide a scanned e-copy of the signed ethics approval letter from your institution to the NG Research Office.

3. In your proposal you state that your land use application was approved in July during the initial visit, and a separate permit will be applied for upon arrival to Nain in October/November.

   The Department of Land and Natural Resources Nunatsiavut does not recall seeing a land use permit application and does not have any record of issuing any permits. After the Director of Lands reviewed the proposal he does not see any reason why you would need a land use permit.

4. We recommend that you include the following questions in you research project:
   How would they choose the harvesters?

   Currently NG has little to no regulatory processes in place to deal with Harvesting. How would this affect total harvest by these harvesters?

   Will individuals utilizing the freezer have to transfer their right to harvest to harvesters?

5. Please provide copies of any reports, journal articles, papers, posters or other publications related to this project to the, Nunatsiavut Inuit Research Advisor, and the Director of Renewable Resources, Department of Lands and Resources, Nunatsiavut Government upon completion of your work.

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1. completion of your work. A plain language summary detailing the work, translated into Nunatsiavut Inuktitut should also be provided.

2. NG would appreciate copies of any photographs that you acquire during your research in the Nunatsiavut area as Nunatsiavut Government is developing a digital database of regional photos. Recognition will always be given to the photographer.

Please note that if you are going to make any changes to your proposal, any such changes must be considered and supported by the NGRAC before they are implemented.

We thank you for considering our feedback on your work and look forward to more collaboration.

Sincerely,

John Lampe
Chair, Nunatsiavut Government
Research Advisory Committee
Nunatsiavut Government
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APPENDIX T: NUNATSIAVUT RESEARCH ETHICS AMMENDMENT RE: RAW DATA

Nunatsiavut
kavamanga Government

Nunamik amma Nunamiutanik

Lands and Resources

24th March 2011

Jennifer Organ
Masters of Environmental Studies Candidate
School For Resource and Environmental Studies
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Phone: (902) 719-2506

Re: Research Proposal - Community Freezers as a Catalyst Towards Food Security: Perspectives from Inuit Residents of Nain, Nunatsiavut.

Dear Ms. Jennifer Organ:

This is concerning NG's support letter for this project dated 29 Oct 10 and specifically on the issue of Traditional Knowledge Data.

After further discussion the Nunatsiavut Government Research Advisory Committee (NGRAC) has decided to withdraw suggestion Number #1 listed in the above mentioned letter:

1. Traditional Knowledge is a very important issue for the NG and beneficiaries to the Agreement. All of the Traditional Knowledge data, raw and processed, that is collected is to be shared with NG. We require exact copies of all the raw and processed data, plus exact copies of any recording and transcripts.

The NGRAC suggests that the raw data reside with the University because the project is already underway and participants did not consent to having the raw data shared with the NG.

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APPENDIX U: CODING SCHEMES AND DEFINITIONS

Topical Codes	Children/grandchildren nodes..	Definition (as used in this thesis)
1. Wild Food Values (AF)	a. Expressions of and/or need for wild foods b. Going the distance for wild foods c. Attitudes towards paying for wild foods d. Comparisons to market foods	
2. Harvesting and wild food consumption practices in and around Nain (HW)	a. Hunting seasons and locations of harvesting practices b. Places where you can buy wild foods. (commercialization of wild foods) c. Other wild food support programs identified d. Community Sharing and distribution of wild foods e. Communications, knowledge transmission of where foods are.	e. Community feasts, characteristics of household freezers, intercommunity trade, and any other sharing practices of wild foods that was described by participants
3. Changing Environmental Conditions in Nain		Changes in the local ecological environment that are changing, but may not be challenging access to wild foods.
4. Current Stresses on Access to Wild Foods (CS)	a. Social Stresses i. Population growth (Over harvesting? – this would include population growth ii. Physical health of individuals *iii.* Risk Communications (health advisories*, travel safety, loss of hunting equipment due to poor conditions influence the duration and frequency of harvesting activities) **need to understand if these are based on lived experiences of the participant or through word of mouth.* iv. Knowledge transmissions (people following others to same harvesting areas (over harvesting), **unfamiliarity of new harvesting areas, and…** v. Attitudes towards going new distances for food (lived experiences influencing attitudes towards the value of harvesting in current or expected harvesting conditions) vi. Wild food theft vii. Lack of Networks (not enough networks to supply individuals with foods, and not enough	Social, political, economic and environmental characteristics that challenged the identified study population to get wild foods during the 12 months (approximately) prior to interviews. Social: human relationships (immediate family, the nuclear household, and other networks), including the attitudes and behaviours that these individuals or groups may have. Political = government regulations and policy Economic = financial constraints Environmental = the physical ecological environment

	resources to share to extended networks and/or meet the increased demand for foods in the community (need to be more individualized) viii. Location of preferred harvesting areas not easily accessible, or are no longer favourable harvesting grounds…this includes both local and further?....or do I keep this separate and include 'place' as a theme for stresses on access to foods….? ix. Changing expectations (as to what people should or can provide to them influences how much wild food people ask for from their networks.)..might go with lack of networks. b. Political stresses i. FAC ii. Political Boundaries iii. Harvesting Regulations (caribou consult…might fit under anticipated future stresses moreso) iv. Access to information of where caribou herds are located… c. Economic stresses i. Time (is it economical to go the distance for foods?) ii. Cost of hunting equipment (including ongoing maintenance..gas, bullets, etc.) iii. Access to hunting equipment (Would this include FAC?) iv. Changes in commercial wild food production in Nain v. Work/other financial commitments d. Environmental stresses i. wildlife availability (changing patterns and populations…including vegetation (berried, etc)) ii. wildlife quality iii. weather conditions iv. industrial activity v. Location of preferred harvesting areas and homes.	
3. Coping mechanisms		This includes anything that research participants did in the

adopted by residents in response to stresses on access to wild foods		12 months (approximately) previous to their interview to fulfill their personal food needs in response to stresses to access to wild foods (Those behaviours adopted to try to maintain their wild food consumption, and/or those behaviours that are adopted to replace their wild food consumption)
4. Anticipated future stresses on access to wild foods (FS)	a. Social stress b. Political stresses c. Economic stresses d. Environmental stresses	Social, political, economic and environmental changes that the study population thinks might challenge them to get wild foods in the future (no restriction on time)
5. Nain community freezer operations (CF)	a. Background/context information: i. Reason for establishment. ii. Location/physical characteristics of freezer iii. Supply: Suppliers, storage, funding, foods available and frequency (seasonal, annual variations). iv. Communications and distribution. v. Characteristics of use and indicators of demand b. Future considerations c. Other	a. This will be information that is primarily objective (facts about when the freezer was established, who manages it, and other information guided by the evaluation grid developed during the data collection phase) b. This will include thoughts on how the community freezer is perceived by users and managers. For example, during some interviews people showed some confusion of the freezer being named a 'community freezer' and one individual described the freezer as a 'local hunting ground'.
6.Characteristics of Access (for current users) (CA)	a. foods accessed at freezer b. how do users access the freezer? c. frequency of use d. how did users learn about the freezer? e. how do users know if there are foods in the freezer? f. Who else is food for? g. Feelings associated with use of freezer. h. Reasons for use (direct indications).	a. This will include the type of food, quantity, and when they were able to get these types of food from the freezer during the past 12 months and former years. Quantity, the type of food and the time of year they acquired these foods from the freezer b. how do they receive foods offered by the freezer (c. Seasonal use, and times that users may have approached or requested foods from the freezer, but there was no food available. ***overall, how to do users interact with the freezer**

7. Current users (CU)	a. wild food preferences b. wild foods users are currently able to get and frequency c. 'daily getting' of wild foods d. Access to hunting equipment e. Market food consumption	e. Ways that users received wild foods beyond the community freezer during the 12 months (approximately) prior to interviews. ***overall 'who are the people who use the freezer, excluding details about their interactions with the freezer'**
8. Household Freezers		References to personal household freezers (management of freezer supply, etc.)
9. Changing wild food consumption patterns and preferences		