University of Alberta

Food Security in Paulatuk, NT – Opportunities and Challenges of a Changing Community Economy

by

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Abstract

This study examines the influence of the wage economy on food security in Paulatuk, NT, and aims to illustrate: a) how individuals are participating in the wage economy and traditional economy in Paulatuk, and in turn how this influences their ability to procure food from the land, as illustrated in Chapter 2; and b) the impact of income on the ability of residents to procure food from the store and through the Food Mail program, as shown in Chapter 3. The thesis aims to answer the question: "how does the wage economy affect the ability of individuals to procure food from the land and the store in Paulatuk, NT?" The influence of the wage economy on the traditional economy must be considered holistically, and store-bought and country foods must be considered as two equal parts of the food security equation in Paulatuk.

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Chapter 1

Introduction

1. Context

The Northern social economy is unique in Canada, in part because of the strong "traditional", subsistence or land-based economy of northern Aboriginal peoples (Abele 1989; Usher et al. 2003). Previous work in the Inuvialuit Settlement Region indicates that traditional harvesting continues to be of importance (Condon et al. 1995; Usher 2002). The wage economy is playing an increasingly influential role in the social, economic and cultural dynamics of Inuvialuit communities with Inuvik having the highest rate of wage employment (74.6%) (Statistics Canada 2010a) and Paulatuk the lowest in the region (40.5%) (Statistics Canada 2010b). In addition to providing many direct economic benefits (i.e. food, furs, tourism opportunities), the traditional economy has been described as fundamentally important to the health and resilience of northern communities (Berkes and Folke 1998; Berkes and Folke 1994; Kuhnlein and Receveur 1996; Usher et al. 2003). A significant body of work already exists about the Northern traditional economy. The "mixed economy model" describes how the wage economy and traditional economy interact together at the local level. There is competing evidence, however, about the net effect of the Northern wage economy on the traditional economy and increasing concerns about the implications for local diet and health (Mackenzie Gas Project 2004). Specifically, there appear to be gaps in our understanding of how the structure and patterns of wage employment (particularly that associated with the oil and gas industry) alter the "time spent on the land" and how such changes may influence diet and health.

This thesis examines the influence of the wage economy on food security in Paulatuk, NT. It considers two key aspects of food security: food procured from the land and food procured from the store. Specifically, this thesis examines:

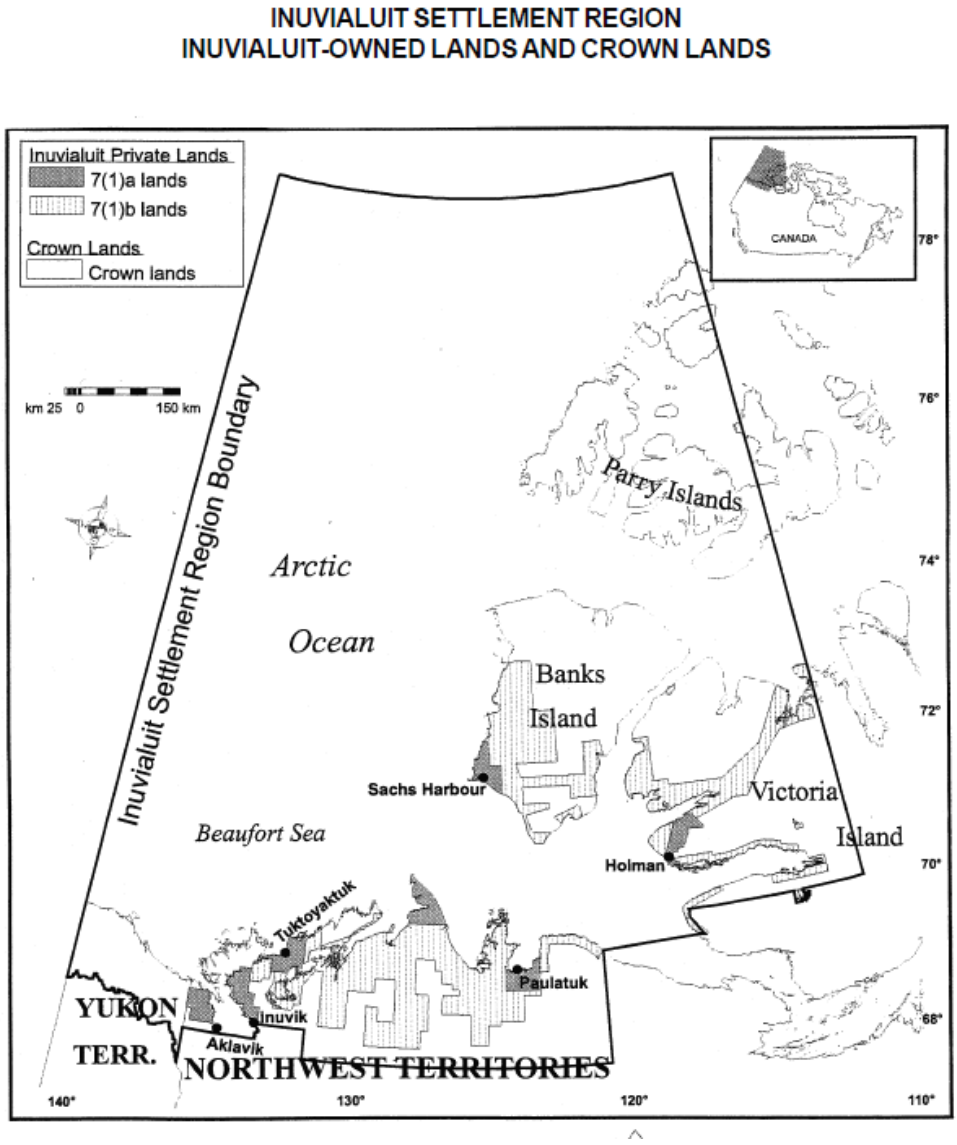
a) how an individual's participation in the wage economy affects their involvement in the traditional economy, and in turn how this affects the ability of individuals to procure food from the land;

b) how income affects the ability of individuals to procure store-bought foods from the local store and through the Food Mail program.

The thesis aims to answer the question "how does the wage economy affect the ability of individuals to procure food from the land and the store in Paulatuk, NT?" The study aims to understand the influence of the wage economy on the traditional economy in Paulatuk, and in turn how this affects the day to day life of Paulatukmiut (Paulatuk residents). The focus is on the lived and perceived experiences of those working in the wage economy in a variety of capacities, and how wage work affects their harvesting lives.

The research was conducted in the community of Paulatuk, NT, an Inuvialuit community situated in the Northwest Territories. It has a population of 311 (NWT Bureau of Statistics 2010: 1). As shown in Figure 1-1, Paulatuk is situated on the coast of the Beaufort Sea.

Figure 1-1. A Map of the Inuvialuit Settlement Region



(Mining North undated: 2)

The research project involved a series of 20 interviews conducted in Paulatuk in the spring of 2008 and a 9 person follow-up workshop in the summer of 2009 that focused on food security in Paulatuk in the summer of 2009.

In Chapter 2, the holistic aspects of the wage economy and traditional economy are explored, and the multiple benefits of harvesting life—cultural continuity,

health and well-being, knowledge sharing, monitoring of the landscape are explored. The impediments to access to healthy and culturally appropriate foods are of key interest. Furthermore, this work aims to contribute to the literature on the role of women in harvesting in the North, an area that deserves far more attention and is vital to acknowledge in the development of employment and harvesting policies in the Arctic. However, the focus is on how the wage economy affects the ability of Paulatuk residents to procure food from the land.

In Chapter 3, the availability and affordability of store-bought foods in Paulatuk is examined, and the affect of income on the ability of Paulatukmiut to access store-bought foods is examined. Suggestions are made to address the challenges that Paulatukmiut face in addressing food security concerns that it currently faces.

Ultimately, the wage and traditional economies must be approached holistically, and country foods and store-bought foods must be considered as part of an integrated whole when approaching food security issues in Paulatuk. [1]

2. Research Purpose and Objectives

The research project examined the qualitative and quantitative effects (in a descriptive manner) of the wage economy on the traditional economy in the Inuvialuit Settlement Region.

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[1] Some sections of Chapter 1 and Chapter 3 were previously published as a chapter in the volume *Humanizing Security in the Arctic* (Daveluy et al. 2010) and are used in this thesis with the knowledge and permission of the publisher, CCI Press.

Todd, Z. (2010). Food security, arctic security: why the local cannot be ignored. In Daveluy, Michelle, Lévesque, Francis, and Ferguson, Jenanne (eds). *Humanizing Security in the Arctic*. Edmonton: Canadian Circumpolar Institute Press. 324p. Occasional Publications Series (ISSN 0068-0303).

The research aimed to make both practical and academic contributions by studying:

> How do different forms and patterns of employment (e.g. part-time, full-time, seasonal, local/fly-in, rotational, other) influence the amount, value, and structure of time spent on the land; social networks utilized for harvesting, sharing and distributing country foods; and dietary patterns / health?
>
> How does the cost and availability of nutritious store-bought foods affect the day-to-day life of Paulatuk residents? What issues pertaining food security are Paulatuk residents concerned about?

3. Literature Review

3.1 General background

This review provides an overview about wage economy in Paulatuk and identifies contemporary issues regarding resource development near the community. It follows with details on the relationship of the wage economy on food security with a focus on literature on the mixed economy, and an emergent literature of store-bought food and the Food Mail program.

The thesis considers how wage employment may influence time spent on the land in the community of Paulatuk, and in turn how this influences the ability of Paulatuk residents to procure food from the land. Previous studies indicate that participation in the wage economy may alter the length of time spent on the land (Chabot 2003; Condon et al. 1995). This is often simplistically described as a quantitative effect – (ie. an increase or decrease). For example, harvesters may only be able to harvest on weekends and holidays, or work around work schedules (Chabot 2003; Condon et al. 1995). The experiences of residents in the community who work in a variety of employment structures are shared in Paper 1 (Chapter 2) to provide a qualitative picture of how different forms of employment shape time spent on the land in the community. The thesis also examines how

income affects the ability of Paulatuk residents to access food from the store.

3.2 History of the Wage Economy in Paulatuk

In order to examine the influence of the contemporary wage economy on the traditional economy and food security in Paulatuk, it is important to understand how the wage economy has shifted over the past hundred years or so in the Paulatuk area.

The Igluyuaryungmiut (Alunik et al. 2003:17) inhabited the area that surrounds current day Paulatuk, including a village called Iglulualuit which was situated close to the mouth of the Horton River (Alunik et al. 2003:17) until the beginning of the 19th century.

Over time, with the influence of commercial whale harvesting, the Hudson's Bay Company and missionary work by the church (Alunik et al. 2003), families moved to the present-day location of the community, which is situated at the base of Darnley Bay. It is located where the Roman Catholic mission built a house and trading post in 1936 that operated from 1936 to 1954 (Abrahamson 1963; Alunik, Kolausok and Morrison 2003; McDonnell 1983; Cockney and Parks Canada 2004).

In the 1930s, with the encroachment of the Great Depression and fur stocks in the area falling, and Hudson's Bay Company posts such as the Letty Harbour post closing in 1937 (McDonnell 1983: 63) people moved out of the area directly surrounding Paulatuk to other communities, such as Tuktoyaktuk (McDonnell 1983: 49-53). However,

> Four or five family groups, about sixty people in all, continued to occupy the territory around Darnley Bay and the Parry Peninsula. Another seventy or so Inuvialuit were camped in the region around the mission at Stanton [located on the Western side of Cape Bathurst]. (McDonnell 1983: 63)

In the mid-1950s the DEW Line station on Cape Parry was built, providing wage

employment for men from the region, with two families situated permanently at the DEW line site while the head of these families worked for the government (Abrahamson 1969:10). The operation of the DEW Line also encouraged people to settle around the DEW Line site (Abrahamson 1969; McDonnell 1983; Cockney and Parks Canada 2004). During this time, the Hudson's Bay Company re-opened its Letty Harbour post in 1954 (McDonnell 1983: 67) and this allowed people in the area to continue harvesting in the region (McDonnell 1983).

The 1950s were a difficult time for residents of Paulatuk, with starvation impacting the region (McDonnell 1983; McKay 1958). In a casual discussion about the community, one resident discussed how low caribou numbers in the 1950s led to starvation for many people.

One of the participants in this project remembered this time when food was scarce:

> *I know how it feel 'cause I was hungry once, and so I like to keep my kids—what I went through before, I don't want them to do that, so that's hard… 'cause I don't want them to be hungry... Think of what you gonna eat next day, so that's hard part, hard thing to think of, stomach sore every day. The worst thing to think of, planning ahead next day what you're going to eat. (John)*

This was also a time when many children were sent to Residential School in Aklavik and later to Inuvik, which had severe impacts on families (Abrahamson 1969: 27; McDonnell 1983: 67; Thrasher et al. 1976: 4).

In these days there was already a relationship between employment and harvesting activity: "An ample diet of country food was obtained by hard work, but the income to provide hunting equipment and supplementary food staples often had to come from relief, as well as from causal wage-labour and trapping". (McDonnell 1983: 64)

The location of the DEW Line site was not ideal for harvesting, however. As Abrahamson points out "the locality is poor in food and fuel, neither good fish nor caribou are found within a day's journey by dog team." (25). Thus the interaction between the wage economy and the traditional economy was potentially affected by the geographical location in which the employment was situated. In other words, where a person works may be very important in terms of how possible it is for them to pursue opportunities in the mixed economy. Jobs situated in places that do not afford many opportunities to harvest, or in times when animal populations are situated far from a work site may impact how likely it is for an individual to harvest. As Ferguson (1962, quoted in McDonnell 1983:55) noted:

> A man's time is no longer his own and he may no longer travel where and when he pleases. Not only is his movement restricted but the rest of his life is very different. These Eskimos are now located close to a Dewline site which is not necessarily suitable for hunting and trapping.

As Abrahamson (1969) noted, Inuvialuit situated at Cape Parry in the 1960s "expressed a desire to live at the head of Darnley Bay in order to be closer to coal and other resources in that locality" (28), and he goes on to note that "housing at the head of Darnley Bay will bring some families closer to fuel, fish and caribou, and will allow the extension of traplines in that unused country." (28). Thus, despite economic opportunities with the DEW Line, the accessibility of country foods were an important factor in enabling families to meet their overall needs.

By 1967 the community near the Mission house had begun to be established and became the settlement that exists in this location today (Alunik et al. 2003: 213).

In the 1970s there was oil and gas exploration in the region, with some people from Paulatuk working for Canmar, and some community members working as monitors for activity undertaken by Dome, Esso and Gulf (Tener and Beaufort Sea Environmental Assessment Panel 1983). A series of workshops and a public meeting were held in Paulatuk to assess the environmental impacts of a proposed tanker route in the Beaufort Sea and a study conducted in the community by

Mr. Gilbert Ruben and presented at a public meeting for the Beaufort Sea Environmental Panel on September 20, 1983 found that community members were "interested in the industry and what will happen in the future because they want to be involved in it" (15) but were also "concerned about the animals and the land where the industry is working. They hunt the animals for survival or for income." (15). This suggests that Paulatuk residents were interested in balancing their involvement in the wage economy with their involvement in the traditional economy in order to maximize the benefits of the 'dual' or 'mixed' economy (Asch 1976b; Usher 1976).

By following a mixed economy, Inuvialuit are able to benefit from the rich renewable resources in the region, and also maximize the benefits of equipment and supplies (technology and resources) that allow harvesters to ensure they can meet the food needs of their household or family (Condon et al. 1995). As Asch (1976a) pointed out in a statement to the Mackenzie Valley Pipeline Inquiry Commission:

> Without modern hunting equipment, including rifles and snowmobiles, it would be virtually impossible for Native people to continue to pursue their traditional land-based subsistence activities in the contemporary situation: for in many cases they are located in areas far removed from traditional hunting grounds and, often, suffer from a lack of labour power. (Asch 1976a: 7).

While Abrahamson (1969) noted the transition of harvesters living at Cape Parry from a hunting economy to a trapping economy, and predicted a shift away from reliance on the land for resources, the decades proceeding his observations seem to indicate a great deal of resilience in terms of traditional harvesting activity in the Paulatuk area. Rather than lose hunting ability, harvesters who trapped continued to harvest animals and fish from the land (McDonnell 1983), and sustained levels of harvesting in Paulatuk today (NWT Bureau of Statistics 2007) indicate that it is possible to pursue harvesting activities and wage

opportunities and sustain high levels of harvesting. The question thus becomes: what facets of employment facilitate and what facets of employment hinder traditional harvesting activity in the Inuvialuit Settlement Region, and in turn, what types of employment are ideal in order to support the mixed economy—and the ability of individuals to get food from the land and from the store--in Paulatuk?

3.2.2 History of Food Security in Paulatuk

Food security is defined by the United Nations Food and Agriculture Organization (2009) as occurring "when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life". However, as Chabot (2008) points out, "food security is an objective to be achieved but it is also a *situation lived through"* (143), one that depends upon the unique time, place and socio-cultural context in which it is being experienced. While the Food and Agriculture Organization provides a broad definition of food security that is meant to apply to communities throughout the world, local meanings of food security and what it is to be 'food secure' are shaped by local food histories and cultural values.

In this section, I attempt to elucidate some of the unique socio-cultural aspects of food security in the Arctic, and also to bring to bear the historical contexts that shape food security in northern Canada. There is currently a strong focus on contemporary food security concerns (Egeland 2010; Sharma et al. 2009). However, in order to fully understand current food security concerns, it is important to understand how food security in northern Aboriginal communities fits into a longer historical narrative that involved periods of scarcity and abundance (Cockney and Parks Canada 2004; McKay 1958). Thus, it is important to put current arctic food security concerns into a historical context: in the past Paulatuk residents worked hard to procure food from the land on which they relied (Cockney and Parks Canada 2004). This meant that people were subject to periods of hunger when animals or plants were hard to access (McKay 1958;

Cockney and Parks Canada 2004). The 1950s were a difficult time for residents of Paulatuk, with starvation impacting the region (McDonnell 1983; McKay 1958; Cockney and Parks Canada 2004). As McKay (1958: 109) noted of families living at Cape Parry, north of the current location of the community of Paulatuk, in the 1950s:

> there are usually periods every year when the food supply is low and the people may be weakened by malnutrition and become more susceptible to disease. In the spring of 1955, four people died, this figure representing about 7 per cent of the entire population.

In the *Paulatuuq Oral History Project* (Cockney and Parks Canada 2004), elders shared experiences of food scarcity, which often forced families to relocate in order to increase their opportunities to hunt adequate food. Moses Agnaoyok remembers difficulties procuring adequate food at the PIN 1 Distant Early Warning (DEW) Line site east of Paulatuk: "We weren't doing good in east, PIN 1. We nearly got...we nearly starved a few times so we had to move to another place this way" (Cockney and Parks Canada 2004: 116). Food security in the past was also highlighted in participants' responses to interview questions during the course of fieldwork. The difficulty of procuring food from the land meant hard work and uncertainty.

Thus, it is not surprising that when families moved to the permanent current location of Paulatuk, at the base of Darnley Bay, households faced hardship. As Bob pointed out:

> *Yeah, the first few years here it was pretty tough 'cause of no housing. Had to live in tents with snow blocks around. That's in the wintertime, and you always had to go out to get wood. Every day, work, eh? [Pause] That, those years, you basically had to travel with dog teams.*

As Dorothy, an elder, pointed out throughout her interview, Paulatuk in the past was characterized by how tough life was before. She recounted her memories of

the work and effort that went into ensuring her family was fed:

> *Lots of way you could go—oh, we don't stay in one place, but we hunt anything. As we used to hunt squirrels too, eh? We could hunt anything. Seal, they hunt seal. All any old way you could—they could do anything, my parents. Once they have dogs, that time they have to make that food too, eh? They got ground and put anything in the ground, put dog meat. That's how you used to—tough life, long ago.*

These struggles are not confined to the distant past. With wildlife populations shifting over time—on their own inherent timeline, community members have long had to be flexible in order to adapt harvesting activities to accommodate animal migration patterns and population shifts. As recently as the 1990s the community faced uncertainty regarding caribou populations. As one participant who works part-time pointed out, wildlife population fluctuations affect the availability of food. When it comes to how long it takes to get enough food to meet an individual or household's needs:

> *It depends on how, how quick you can get your char or whitefish. Back in the '70s, '80s, you'd be out maybe for a week. [Pause] And same with the caribou hunts. You're out there, in the '60s, '70s, and '80s you were out there just for about three, four days. [Pause] Now, it's, it's all coming back though. Our caribous never leave our area year-round. We have caribous year-round again. Then, '90s, oh, gee, they were hard to come by. Everything left here in the '90s. [Pause] Last five years, it's been really good. We've been having our caribous stay around all, all, all year round you get caribous on the east Brock River side and on the west, the Parry Peninsula, you have caribous there year-round. (Bob)*

As noted in Chapter 2 of this thesis, a recent caribou quota has reintroduced concerns about access to adequate food. Although some participants, like Bob, noted that caribou are easier to come by now than in the 1990s, a quota imposed in 2007 has restricted harvesting to two caribous per household per year.

Many participants expressed concerns about the impact that this quota has on household food security. Some participants indicated that they were replacing caribou with other wild game while others indicated that the quota forced individuals to rely on more store-bought meats:

> *Time's changing, yeah. We're ready to go hungry pretty soon. Now, I'm better off to stick to the seals now and muskox. That's what I'm doing now.* (John)

> *Like, we can get a, try and get as much meat as we could, but then there's just so much that you can get when there's this restriction on right now. People—two caribous a year is unbelievable, unbelievably crazy. I mean, when you depend on that food and you only can get two. I know it's, I guess it's good for something that they're doing that, but when you're trying to survive by wildlife, it's hard. I mean, if you get a caribou, you can last for a month or so, maybe more if you cut it up all good and stuff like that. It can last you a long time, but with the Northern [ie: store-bought] foods, you pretty much have to buy it every day and just, like, people aren't made of money. [Laughter] (Melanie)*

Changes in the ability to harvest caribou create even more pressure on existing resources in the community, and makes it more challenging for households to balance their needs for healthy foods.

While responses obtained in interviews provide rich narratives that indicate that individuals and households have long been subject to food security issues, influenced by location, wildlife populations, employment opportunities and other factors, it is also important to note that the availability of fresh foods, such as fruits and vegetables, has changed significantly from twenty or thirty years ago. However, the cost of these items is a major concern, hampering the ability of individuals to consume the recommended amounts of these foods. As Bob indicated:

Yes, you have more fresh products than when we were back in the '70s, '80s. It would cost an arm and a leg just for those things now. You used to get them in the cans, it was, we were happy with that. Canned vegetables, yes. Now, with these fresh products, they cost us a lot of money just to get that.

Costs way more now. You barely keep up with what you make now. Food is so costly now. I think you can see for yourself, when you go to the Northern store. You see the cost of food.

It is important to keep the relationship between the wage economy and store-bought foods rooted in a historical context to understand how contemporary issues regarding the cost and availability of food in the community fit into a longer narrative in the region, and to understand how long food security issues have affected the community.

3.3 Mixed Economy: Key Issues

The literature suggests there are many other complex ways that wage employment influences the traditional economy. This review speaks to these complexities in terms of wage work, social networks (sharing, social capital) and environmental influences that shape how the wage economy influences the wage economy and food security in the Arctic.

Economic Factors

The discussion on the obvious financial contributions of the wage economy to the traditional economy has been well established in previous studies that illustrate how harvesting strategies must negotiate both the "time allocation problem" (Usher et al. 2003: 178), and economic considerations (Chabot 2003; Condon et al. 1995; Nadasdy 2003; Usher et al. 2003). This work aims to increase understanding about the interactions between the Northern social economy and the formal (wage) economy in a region facing increasing resource development and in a community that has not been extensively studied in the past.

According to the Northern Food Basket measure, the cost of market food in Paulatuk ($347 per week for a family of four in 2006) is much higher than Inuvik ($216 per week per family of four in 2006) (INAC 2008a), while the mean household income is lower (Statistics Canada 2010a; Statistics Canada 2010b), which may influence dietary choices. This suggests Paulatuk to be a useful context for exploring how the wage economy influences the dynamics of the traditional economy.

Social Factors

Access to equipment is an important factor in harvesting activity (Condon et al. 1995), and the sharing of equipment can be of import to those who are unable to afford to purchase these items (Nadasdy 2003; Wenzel 1995). This also affects the structure of time spent on the land, as harvesters may pursue "joint ventures" (Nadasdy 2003: 71) or informal sharing partnerships and patterns in order to combine available resources for harvesting activities. This sharing, sometimes described in terms of social capital is vital to ensuring harvesting activities (Duhaime et al. 2004). As Nadasdy (2003) notes of hunting activities by members of the Kluane First Nation:

> Hunting today requires a significant degree of capital; one needs vehicles (trucks, snowmobiles, ATVs, boats), fuel, guns, ammunition, binoculars, knives, packboards, stoves, tents, and an array of other equipment. Not many individuals in the community own everything they need to hunt. As a result, most hunts remain joint ventures, with several people pooling their resources and hunting together. (71)

Although wage employment may alter the structure and amount of time spent on the land, it is also beneficial to harvesting, as wage income facilitates harvesting (Chabot 2003; Condon et al. 1995; Usher et al. 2003). As Usher et al. (2003) illustrate, the ability to procure equipment that enables rapid transportation can be very important in negotiating between spending time on the land and time off the land:

> The successful harvesting household is often also the successful wage-earning household, as this cash income is used for purchasing harvesting equipment, and especially fast means of transport. This is the key means of resolving the time allocation problem, mainly for men, between wage work and harvesting. (178)

In addition to procuring equipment for harvesting, one must also be able to invest in fuel and market foods in order to spend time on the land; this represents another consideration in terms of the ability to harvest traditional foods (Condon et al. 1995; Chabot 2003). As Chabot (2003) points out:

> When expenses related to the purchase of vehicles and their amortization, according to their probable lifespan based on an intensive use, food production of super-hunter households required an annual minimum investment of approximately $9300 (Chabot 2001a). In addition, significant, but not measured, resources (time and energy spent to maintain equipment, material obtained through social networks, and an estimated $1000-$2400 for imported food brought along during hunting and fishing trips) could be included in this sum of money. (24)

Sharing networks have shifted over the century from those described by early anthropologists visiting the Canadian Arctic (Wenzel 1995; Condon et al. 1998) at a time when the Northern economy in the Inuvialuit Settlement Region was based very heavily on harvesting of animals, fish and plants for both personal consumption as well as trade with whalers and fur merchants (Alunik et al. 2003; McDonell 1983) to networks that reflect current economic and social realities, including a regional economy that relies more heavily on wage employment tied to the pursuit of resource extraction in the form of oil and gas and mining activities to support regional development (Condon et al. 1995; Mackenzie Gas Project 2004). Wenzel (1995) describes sharing patterns in Clyde River, Nunavut that include sharing of harvesting equipment, in addition to the sharing and distribution of harvested foods. Collings et al (1998) illustrate how current sharing

patterns in Holman [Uluhaktok], NWT, incorporate both familial and non-kin sharing relationships.

Ecological Influences

Harvesters may also pursue shorter day trips, pursuing species that can be obtained on such trips (Condon et al. 1995). Another factor influencing the impact of the wage economy on the time spent on the land is the changing nature of arctic ecosystems, particularly those impacted by climate change and increasing resource development. Northern populations face shifting physical conditions and variable climatic events on a regular basis, which has necessitated an ability to adapt quickly to change, and has meant that resilience has been important to enable Northern Aboriginal peoples to survive on the land (Huntington et al. 2004; Berkes and Jolly 2001; Duerden 2004; Nuttall et al. 2004). However, recent changes in climate have become more frequent, more extreme, and unpredictable (Berkes and Jolly 2001; Chapin et al. 2004; Fox 2002; Huntington et al. 2004). This has ramifications for communities that continue to rely on the land for subsistence activities, such as hunting, fishing and trapping (Berkes and Jolly 2001; Fox 2002; Huntington et al. 2004; Guyot et al. 2006; Myers et al. 2005). The drastic ecological changes caused by climate change intrinsically impact the social realities of northern communities. Traditional foods represent a clear link between ecological and social well-being in arctic communities. Country foods represent not only sustenance, but through the act of procuring country foods on the land and consuming highly nutritious foods from the land (Kuhnlein et al. 2002), traditional foods are also important for health, well-being, and maintaining a connection to the environment (Adelson 2000; Parlee et al. 2005b). Thus, country foods intrinsically link human health and well-being to the health of the land (Adelson 2000; Parlee et al. 2005b). Traditional foods also have important social and cultural roles, as the "the process of procuring, preparing and consuming traditional foods…is an integral part of Inuit identity" (Wein et al. 1996). In other words, traditional foods are part of *being* for northern Indigenous

peoples.

In Canada's Arctic, traditional harvesting remains an important source of food for many northern residents (Berkes and Jolly 2001; Guyot et al. 2006; Myers et al. 2005; Usher 2002). Usher (2002) points out that in the Inuvialuit Settlement Region alone, traditional foods represent a non-cash or in-kind value of over 3 million dollars annually (25). Traditional foods are also known to be more nutritious than market foods, drawing upon a variety of plant and animal sources that provide broad range of macro and micronutrients (Kuhnlein et al. 2002). In the Canadian Arctic, market foods are generally found to be higher in fat and refined carbohydrates (Kuhnlein and Receveur 1996), while traditional foods are found to be higher in protein and a variety of minerals. A diet rich in country foods plays a key role in preventing diabetes mellitus II, cardiovascular disease, obesity and dental caries, as the refined sugars and processed fats found predominantly in market foods are linked to these illnesses (Guyot et al. 2006; Kuhnlein and Receveur 1996; Kuhnlein 2002). Traditional foods are integral to the *being* of many northern residents (Guyot et al. 2006). For example, in the Kitikmeot Region of Nunavut, caribou is important as "subsistence, identity, culture, and tradition" (Thorpe et al. 2002: 201). For Teetl'it Gwichin women in Fort McPherson, time spent on the land harvesting berries is vital for maintaining a sense of well-being, social connections, and also cultural continuity (Parlee et al. 2005b).

It has been noted that changes in climate events are interfering with the ability of Northerners to access traditional resources: "increased variability and the greater frequency of extreme events create adaptation problems because they interfere with the ability of people to access resources on the land, making resource availability itself less predictable" (Berkes and Jolly 2001: Section 1, Par 4).

The knowledge required to procure country foods is vital to cultural continuity—the continued transmission of knowledge, practices and beliefs from generation to generation (Chandler and Lalonde 1998) and to sustainable management of

local resources (Chaplin et al. 2004; Parlee et al. 2005b). As noted in Thorpe et al. (2002):

> IQ (Inuit Qaujimajatuqangit) [traditional ecological knowledge] held by elders represents intergenerational wisdom that spans many spiritual, spatial, and temporal boundaries. Loss of this understanding would be detrimental to Inuit culture in general, and to the sustainable management of northern lands, resources, and wildlife in particular. (202)

A further pressure that is affecting access to traditional foods is the variability of wildlife populations and the resulting wildlife regulations in place that restrict access to animals that northerners rely on as food sources (Duhaime et al. 2008: 81). As shown in Chapter 2, these regulations do have an impact on the ability of northerners to access food from the land, and has implications for food security. Food security has not been given a lot of consideration by those creating wildlife regulations, but given the impacts that these regulations have on community food security, various levels of government (ie: local, regional, territorial and federal) should give some consideration to how wildlife regulations and quotas restricting access to certain species affect access to food in northern communities.

Pressures on food supplies, such as climate change, as well as other documented stressors like contaminants, the impacts of resource extraction, and wildlife population change and regulations threaten the security of traditional foods in the North (Cameron et al. 2005; Duhaime et al. 2008; Furgal and Seguin 2006; Guyot et al. 2006; Myers et al. 2005; Nelleman and Cameron 1998). Given the importance of traditional foods to the social and cultural continuity of northern peoples, traditional foods such as caribou represent an important nexus through which to examine the potential social impacts of climate change, resource extraction and wage employment on northern populations.

Any research that examines the influence of employment on the traditional economy must be cognizant of these other cumulative factors affecting life in

northern Canada.

3.4 Store-bought foods and Food Mail

There is widespread recognition of the high cost of food in Northern Canada in comparison to Southern Canada. The Government of Canada's "Northern Food Basket" (INAC 2008a) and "Revised Northern Food Basket" (INAC 2008b) measures developed to complement the Food Mail Program (INAC 2008a; 2008b) have consistently shown that store-bought or market foods cost far more in Northern Canada—which, for their purposes, includes the Yukon, Northwest Territories, Nunavut , Northern Quebec , Northern Ontario, Labrador and parts of northern Newfoundland, Northern Manitoba, Northern Saskatchewan and Northern Alberta--than in the rest of Canada (INAC 2008a). Communities that face the highest price burden for store-bought foods are those that are only accessible by air: Paulatuk, NT has some of the highest store-bought food prices in the Canadian Arctic with a Weekly Northern Food Basket measure of $347 in 2006, falling behind only Old Crow ($388) and Coral Harbour ($352) in 2006 (INAC 2008a). Meanwhile the values for Inuvik and Yellowknife had a Northern Food Basket Measure were $216 and $159 in 2006, respectively (INAC 2008a). The question raised by the high prices of store-bought foods in remote arctic communities is how does income influence the ability of residents to procure store-bought foods, particularly in light of different (or more plentiful) employment opportunities in more southern or accessible communities like Inuvik or Yellowknife?

One way that the Canadian government has tried to address the high cost of store-bought foods in the North is the Food Mail program—which provides a subsidized rate on the transportation of parcels of food from local 'entry points' to remote communities in the Canadian Arctic (INAC 2010a). The cost of transporting food through the Food Mail Program from Inuvik to Paulatuk is $0.30/kg plus a $0.75 charge per parcel shipped by air (INAC 2010a). There have been many criticisms waged at the program, particularly of the high cost of

running it (INAC 2010b; 2010c). In 2009 a interim review was conducted of the program which resulted in the phasing out of the current Food Mail Program and the introduction of a new program , "Nutrition North Canada" which aims to reduce the cost of store-bought foods in the North by passing on a subsidy directly to retailers (2010d. Even with programs such as the Food Mail program in place, the cost of foods in remote communities remains high, suggesting that food security remains an issue in these communities.

Another facet of store-bought food consumption in the North is the link between increasing intake of store-bought foods and negative heath impacts: numerous dietary intake studies have found that northerners are consuming more store-bought foods and fewer traditional foods (Sharma et al. 2009); there is evidence to suggest that this pattern may be contributing to increasing rates of Type II diabetes and cardiovascular disease (Guyot et al. 2006; Kuhnlein et al. 2004; Sharma et al. 2009) as a result of the increasing consumption of sugars and fats in store-bought foods (Kuhnlein et al. 2004).

The Inuit Health Survey found that in the Inuvialuit Settlement Region "the most commonly consumed market food was common pop" (Egeland 2010: 26), with "80% of adults reported drinking 2 -4 cans of soft drink per day in the month prior to the survey" (8). In addition, the survey found that 76.1% of Inuvialuit were overweight (22). This thesis does not address the health costs of increasing consumption of store-bought foods in Paulatuk, but does reveal some health benefits related to spending time on the land for harvesting purposes in Chapter 2. Other work in the Inuvialuit Settlement Region, such as the "Healthy Foods North" project makes the link between consumption of lower-quality store-bought foods and health in the region (Sharma et al. 2009), and provides tools to address these concerns (Healthy Foods North 2010). This thesis provides some information on how the wage economy influences the traditional economy and food security in the Inuvialuit Settlement Region, and could be used to help guide decision-making that acknowledges the complex ways that the wage economy is

involved in mediating access to foods in the North.

4. Methods

4.1 Methodology

The project employed a community based research approach and involved consultation and collaboration with local research partners to develop a project that met community research needs. A case study community was selected based on consultation with regional and community partners. The project stems from a constructionist epistemology, and employs both survey research and ethnographic methodologies (Crotty 1998: 5) through the use of qualitative and quantitative methods, including semi-directed interviews, participant observation and the use of quantitative survey questions alongside open-ended interview questions to gather information regarding employment, harvesting, dietary patterns and social networks in the Inuvialuit Settlement Region. The project aimed to gather participant's perceptions of their experiences of employment, harvesting, and food security in the Inuvialuit Settlement Region to better understand the relationships between the wage economy and the traditional economy. Quantitative data was collected to elucidate relationships between harvesting, employment, dietary patterns and social networks in the community. Qualitative data was collected to help understand the nuances of these relationships and to better illustrate how these components are related.

I was guided by community-based research methodology literature that argues that research projects conducted *with* (rather than just 'in') communities must be useful for the stakeholders involved and must be guided by community partners' needs (Marullo and Strand 2004). Through a process of community consultation described below I was able to determine that the overall theme of the project was something that various organizations and individuals in the community were interested in and could provide data that would be useful for community organizations, ie: one potential outcome of the project was the ability for the research data to facilitate community organizations in pursuing funding to support

existing on the land programs. This resonates with Marullo and Strand (2004), who indicate that the measure of value of such research is "usefulness for community partners/contribution to social change" (4), and the research question should stem from a "community identified problem or need for information" (4). This guided my approach to crafting a project that a) examined people's perceptions of how the wage economy influences the traditional economy and food security in the community, b) was guided by, and involved, the community in a meaningful way and c) would be of benefit to the community for their own advocacy and policy purposes. This also guided how I kept in touch with the community throughout the project as I felt it necessary to ensure that the community partners knew what I was working on and how it would be disseminated back to them (and also to receive feedback about the project as it progressed). I received positive feedback from staff at the Aurora Research Institute (ARI), which co-ordinates the research license process in the Inuvialuit Settlement Region, and directly from community partners about my communication with community stakeholders. To be fair, I was also challenged by some individuals who had questions about the project and did my best to engage in conversations about the project in a meaningful and respectful way in order to address concerns as they came up. Overall, though, the feedback I received was positive. This validated my decision to use a community-based research approach.

4.2 Research Process

4.2.1 Research Timeline: Table 1-1. Research Timeline

Research Timeline	
Scoping phase: July and August 2007	
	• Met with stakeholders in Inuvik in Paulatuk • Presented potential research idea to Paulatuk Community Corporation • Potential research questions presented to community stakeholders, received feedback on potential questionnaire questions
Development Phase: September 2007-March 2008	
	• Questionnaire developed and refined, letters of support received from community partners (September 2007-February 2008) • Ethics certificate obtained (February 2008) • Research license obtained through Aurora Research Institute (March 2008) • Traveled to Inuvik (March 2008) • Community liaison procured housing and a research assistant • Traveled to Paulatuk to begin first interviews
Interview Phase, Paulatuk: March 2008-May 2008	
	• Interviews (April-May) • Returned to Edmonton (May 12)
Interview Phase, Inuvik: June 2008-July 2008	
	• Returned to Inuvik (June) • Two interviews conducted in Inuvik
Data Analysis Phase: August 2008-June 2009	
	• Transcription of interviews • Coding of data • Planning of verification (food security) workshop • Research license obtained (March) • Ethics certificate applied for (March) and received (June)
Verification and Workshop Phase: July 2009-August 2009	
	• Traveled to Paulatuk • Verification of interviews from 2008 • Community presentation • Workshop carried out (July 29) • Returned home (August)
Writing Phase: September 2009-August 2010	

4.2.2 Project Development

In July 2007, I visited Inuvik to begin consulting with individuals to determine whether a project on employment, harvesting and time in the Inuvialuit Settlement Region would be useful. Through this process I met with employees of the Territorial Government as well as the Inuvialuit Regional Corporation and these meetings were invaluable in identifying which topics and approaches would be useful to research in the Inuvialuit Settlement Region, and also which communities may be the most appropriate to collaborate with. The scoping process occurred very much in a 'snowball' manner (Creswell 2007: 127), with each meeting producing names of other people in Inuvik with whom I should meet in order to ascertain how best to proceed with the project.

Paulatuk was identified by Bob Simpson with the Inuvialuit Regional Corporation as a community with high levels of traditional harvesting activity and an interest in identifying ways in which to support harvesting activity in the community and thus an ideal community in which to investigate the relationships between employment, harvesting, dietary patterns and social networks. Specifically, Paulatuk was identified as a community interested in strengthening and expanding current on the land programs in order to ensure that all community members could continue to develop the skills to harvest.

I was able to visit the community in early August 2007 and present a preliminary set of research questions to a the Community Development Facilitator with the Paulatuk Community Corporation, who in turn gave suggestions on what types of research would be of use to the community and reviewed the preliminary questions and offered suggestions on which questions made sense and which were not well-crafted. By going through the draft questions with him I was able to determine which questions were effective and which were problematic for potential interviewees. He also provided suggestions on topics to include, such as questions about how family relationships affect time on the land.

I met with the Senior Administrative Officer with the Hamlet as well and she

indicated that she would run the project idea past the Hamlet Council at their next meeting. While in Paulatuk I also spoke with the President of the Hunters and Trappers Committee (HTC), and although I was not able to attend their next meeting as it was taking place later in the month I was able to run my proposed project by the President of the HTC to get feedback and suggestions on the proposed project.

I presented a short proposal to the Community Corporation Board at their monthly meeting and through this process was able to identify that work on employment and harvesting would be of interest to the Community Corporation. During the meeting I was questioned about my research process—specifically one board member was concerned that I was beginning my research without a license. When I explained that I was in the community to consult about a potential project to determine what kind of research would be useful to the community and that I planned to return in the winter, the concerns of the board member were alleviated and this particular Board member was supportive in disseminating information regarding the project and recruitment of participants when I returned to conduct field research in the spring of 2008 as well as follow-up work in the summer of 2009.

I attended a meeting of the Inuvik Hunters and Trappers Committee (HTC) in August 2007 and presented my potential research topic; the project was met with interest and the HTC agreed to support the project. During my time in Inuvik I was able to develop relationships with members of the Aurora Research Institute, as well as identify resources at the Institute that were useful in the later execution of the project.

Through this process of consultation it was clear that the research project theme was of interest to the individuals and organizations in the community and that it would be possible to craft a project that would be useful to the community partners in future policy and advocacy work (ie: to justify the need for funding for on the land programs and food security policies). It was also suggested that

the questionnaire employed in the project could be adapted for region-wide use to collect data from all of the communities in the Inuvialuit Settlement Region.

Throughout the fall of 2007 I prepared my questionnaire and secured the appropriate ethics approval from the University of Alberta and research license from the Aurora Research Institute.

4.3 Small vs. Large Communities and Research Capacity

In March 2008 I returned to Inuvik and began to prepare for interviews in Inuvik and Paulatuk. I spent three weeks in Inuvik connecting with people I had met the previous summer, including Bob Simpson of the Inuvialuit Regional Corporation. I was able to update them on the status of the project, as well as provide them with an updated copy of the interview questionnaire.

While in Inuvik I also attempted to connect with the Inuvik Hunters and Trappers Committee in order to identify one or two potential participants that they could recommend for the project. I was ultimately unsuccessful in recruiting participants in Inuvik, and was only able to conduct two interviews in Inuvik when I returned in June 2008. These participants were identified through social networks I developed with other researchers in the community in an unrelated (natural sciences) field. In this sense, I found it a lot easier to work in a smaller community where it was possible to network with potential participants and communicate with collaborators relatively quickly. It was possible to ask for advice and guidance from members of the collaborating organizations by arranging quick meetings with them during the day and the project was also much more visible in Paulatuk than in Inuvik. I found that in Paulatuk many people would approach me or ask questions about the project throughout the course of the day when I was visiting community members or having coffee or tea with people at their place of work, which allowed me to share information about the project and recruit potential participants relatively quickly.

Debbie Gordon-Ruben with the Paulatuk Hamlet office was invaluable in

advertising for a research assistant in the community and also arranging housing for me. On April 9 I flew to Paulatuk and met the community research assistant who had responded to the advertisement to work for the project. After a few days of orienting myself in the community, we began interviewing participants. We pursued a 'snowball' sample (Creswell 2007: 127), attempting to capture a range of activity in the wage economy, including full-time, part-time, seasonal, rotational, unemployed or 'other'. Bill's knowledge of individuals' work histories was invaluable in capturing a broad range of participation in the wage economy in the sample. We interviewed 20 participants between the ages of 20 to 83, with 9 participants being female and 11 being male. Initially Bill arranged the interviews with participants, but as I became more comfortable in the community and began to know more people—and as more people learned about the project and approached me, I set up and conducted some interviews alone (n=5). Interviews conducted with elders were conducted with the community research assistant as he was able to reformulate the questions into wording that was more relevant for the elders. We interviewed some participants in their place of work, some at home, and other interviews were conducted in the Paulatuk Visitors Centre board room or in an office space provided by the Paulatuk Community Corporation free of charge.

4.4 Research Focus: Metrics and Method

The decision to assess 'number of days spent on the land' as a metric for determining how much time participants spend on the land was arrived at after an assessment of time allocation literature and an examination of how best to conduct a research project focusing on time use in the community. It became apparent that in the constraints of a Master's research project it would be difficult to conduct a long-term time diary project or spend an entire year in the community participating in seasonal harvesting activities in order to determine how much time participants spend in employment and harvesting activities.

Time allocation literature indicates that a detailed assessment of an entire year's

worth of time allocation data through the use of time diaries would be the most accurate way to determine exactly how many days a participant spends on the land relative to their employment activity throughout the year (Juster and Stafford 1991). However as this method is more costly to implement than surveys or interviews (Juster and Stafford 1991) and can be difficult to implement in communities with varying levels of literacy (Grossman 1984) time on the land was assessed through questions about how much time on the land participants spend on the land (see Appendix A), as well as through a detailed breakdown of participants' seasonal harvesting behaviours, in which I attempted to verify participants' assessments of how much time they spend on the land ('lots', 'some', 'very little', 'no time') with seasonal breakdowns of how many days are required to perform particular harvesting activities that they engage in. This seasonal breakdown was also important in order to improve recall and also to better capture the variety and complexity of activities that participants undertake throughout the year. The interview guide included questions about the location of harvesting activity, the type of transportation used and the type of activity engaged in in order to verify data provided with my own rough estimates of how much time such activities would take in given circumstances.

The interview guide (Appendix A) was developed with both qualitative and quantitative components in order to gather rich data about individuals' experiences with work, harvesting, food and sharing networks in the community, as well as numerical data to quantify trends in the interview responses.

4.5 Emerging Research Themes

While conducting interviews it became apparent that concerns about the cost and availability of store-bought foods, as well as the effects of wildlife regulations on the ability of harvesters to harvest enough food to meet their needs was a pressing issue for many in the community. In casual conversations with individuals in the community I was asked if the research project could help with how expensive food is in Paulatuk. In discussions with community partners it became apparent

that a focus on food security issues would be very useful for the community in approaching various levels of government in order to address the unique pressures that the community faces. I asked members of the Community Corporation as well as an employee of the Hamlet if it would be useful for me to conduct some further research on food security. They indicated that this would be useful for their agencies and for the community.

Thus I applied for the ACADRE Network Environments for Aboriginal Health Research (NEAHR) graduate student award while I was in Paulatuk. This funding requires researchers to work collaboratively with communities on health related research. The IRC and Hamlet provided letters of support and we mailed the application to the funders just in time to meet the deadline. I developed a plan with community partners to return to the community once again to conduct a workshop on food security. The funding was secured and I planned to return to Paulatuk in the fall of 2008. However, due to various delays I was unable to return to the community until July 2009.

4.6 Workshop

In the summer of 2009 I returned to the community to conduct the workshop on food security as well as to return transcripts to interviewees and to verify data. The delay in returning to the community contributed to some confusion about what exactly I was returning to do and made it difficult to set up a concrete date for the workshop ahead of time, and thus I was somewhat nervous about how well the workshop would go. However, within hours of announcing the workshop over the community radio station there were twelve interested participants, and through the help of a community assistant I was able to determine the suitability of the potential participants in order to obtain a sample that included a broad range of ages as well as a good gender balance to ensure that both men and women were well represented.

I also attempted to arrange a presentation about the project for community members, but found limited success in doing so. Initially, I planned a morning

presentation, which was not attended; the afternoon presentation I arranged for the next day conflicted with other events in the community. I determined that in the future I need to arrange presentations that are more relevant to the community, and also to advertise them well ahead of time. As I had arrived after many delays I had only a few days to advertise the presentation over the community radio and this may also have contributed to the low turn out for the presentation. I felt the keen sting of failure when the presentation was not highly attended, but I also acknowledge that my research project is one of many being carried out in the community, and community residents do not necessarily have time to attend every single meeting. Ultimately, I must admit that the sense of failure was as much about my ego and sense of doing a good job of communicating with the community as it was about wanting to find ways to better engage the community. It was suggested that I make future presentations more relevant to community by arranging an event such as a lunch or feast in which community members can come and learn about the project as well as socialize or by offering door prizes as an incentive. I plan to disseminate the final research findings of the project through a well advertised feast when I return to the community in 2011.

The workshop itself was effective in verifying data from the interviews, as I was able to pose questions to nine new participants in the workshop, and two more who were interviewed after the workshop (one participant in the workshop returned from the previous interview process). Questions (Appendix B) focused on what facilitates and hinders access to store-bought and traditional foods in the community, and generated new information about the historical experiences of food security in the community, as well as the history of access to store-bought food in the community. I was also able to gather information on suggestions from participants about how they felt access and availability to food in the community could be addressed.

4.7 Analysis

I transcribed the first five interviews and hired a transcriber to assist with the remaining fifteen, as well as the two interviews from Inuvik. Acknowledging that the process of listening and transcribing the interviews is essential in order to become intimate with the interview data I listened to the interviews repeatedly for a period of several weeks. This process was useful when coding the data in nVivo 8 as I would listen to an interview while I was coding data. I created an excel file to form a matrix of quantitative responses and key qualitative themes from each interview from the interview data. Acknowledging that it is difficult to determine statistical significance of particular relationships in such a small sample size, the quantitative data allows only a limited descriptive sense of patterns of work and food procurement. However, given that interest in expanding the survey component of the project for use in a region-wide study was expressed at the outset of the project, the quantitative components were useful for field testing the survey questions, as well as for describing general relationships in the data (ie: x% of respondents would like to spend more time on the land or x% of participants who work full time spend very little time on the land). The focus of the analysis thus centred on the qualitative data from the interviews and the meanings participants ascribed to work, harvesting, food and sharing in their lives.

4.8 On being an Aboriginal researcher

Throughout the research process I was extremely cognizant of my identity—both as a researcher and as a Metis woman working in an Aboriginal community. There were moments in the research process when I could catch myself identifying in different ways in certain situations--simultaneously or variously identifying as an Aboriginal woman (ie: when learning how to bead during a 2009 caribou workshop) and as a 'white woman'. In the spring of 2008 I received permission from community leaders to attend a community presentation in the Paulatuk Angik school gymnasium from the Darnley Bay Resources Ltd. representatives seeking approval of their exploration plans on Inuvialuit

private lands that surround Paulatuk. As I entered the gymnasium the Saturday morning of the meeting a project proponent stopped me to say:“you look Irish? Are you Irish?”. I responded that, yes, I was but I was also Cree/Metis/Irish. This left him puzzled and he asserted: “well, you look Irish”. This exchange sums up my experiences as an Aboriginal woman doing research in the Inuvialuit Settlement Region—I was at times the ‘white woman’ taking notes in the back of the room but also identified strongly with issues of land rights, historical injustices and Aboriginal identity based on my own family’s experience as Metis in Alberta, despite the fact that objectively I appeared to be no different than other non-Aboriginal researchers working in the region. I would be remiss to pretend that these relationships and identity conundrums have not influenced my research interests or how I have conducted my research.

4.9 A note on terminology

The term country foods and traditional foods were used interchangeably in the thesis as the literature reviewed uses both words to describe foods procured from the land, and both terms are generally understood to mean plants and animals (and fish and marine mammals) procured from the land and water. I personally prefer to use the term ‘country foods’ instead of ‘traditional foods’, as Wenzel (1991) notes that, in such contexts as the animal rights movements, tradition is used as a way of restricting or dictating the ‘authenticity’ of Aboriginal people today: “the word ‘tradition’ becomes a semantic telescope that is used the wrong way around. What is distant is good; what is contemporary is bad because it has been tainted by modernity” (5). However, both I and the interviewees used both terms during the course of the interviews; participants often referred to a specific animal or species when describing food procured from the land. Participants also used the term ‘native foods’ or ‘our foods’ to describe food procured from the land. In the literature store-bought foods and market foods are both terms used to describe food purchased from a store. I chose to use store-bought foods in this thesis.

5. Limitations of the Research

This research was conducted with a small sample of participants, so the quantitative data was only useful for generating general descriptive patterns between employment, harvesting, dietary patterns and social networks. Future research could expand upon this descriptive work in order to gather enough quantitative data for statistical analysis. However, the research does provide narrative information to illustrate how participants are negotiating the ways in which the wage economy influences the traditional economy, and also how this influences food security (or the ability of Paulatukmiut to access food from the land and from the store) in the community.

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Chapter 2

The Relationship between the Wage Economy and the Traditional Economy in Paulatuk, NT

1. Introduction

This paper investigates the influence of participation in the wage economy on traditional harvesting in the Inuvialuit Settlement Region (Paulatuk), with a view to understanding the implications for food security.

On the one hand are advocates who suggest the wage economy may indeed benefit traditional harvesting, as suggested by the Mackenzie Gas Project (MGP) Socio-economic Impact Assessment (SEIA) (2004). On the other are those more skeptical of the medium and long-term implications on traditional ways of life.

These issues have been studied in considerable depth by many scholars over the last four decades. The proposed Mackenzie Valley Pipeline first proposed in the 1970s, and more recently in 2005, has provided a catalyst for community concern, academic research and policy debate (Banta 2006; Paulatuk Community Corporation 2005). Among the key hypotheses that have always generated debate is the impact of the resource development on the traditional economy. A key issue of concern is the risk posed by mines, pipelines, transmission lines and hydroelectric projects to the health and integrity of ecosystems and resources valued as sources of traditional food. Even more divisive is the impact that increased business and wage employment opportunities may have in diminishing the value and participation of community members in the traditional economy.

It is possible that participation in the wage economy will indeed benefit traditional harvesting, as suggested by the Mackenzie Gas Project SEIA (2004). The Mackenzie Gas Project Socio-Economic Impact Assessment: Paulatuk Community Report (Mackenzie Gas Project 2005) nonetheless acknowledges that:

> Project policies and procedures—jointly with increased employment, Aboriginal and non-Aboriginal work-based associations, and the downward trend in traditional harvesting—can induce changes in motivation to engage in traditional harvesting and will determine project work schedules, including possible hunting leaves. (7-1)

The literature on the Northern mixed economy highlights the importance of considering the type of work that such a project will generate (full-time, part-time, seasonal, rotational), the flexibility of the employment opportunities, as well motivational factors that influence an individual's choice to pursue harvesting activities, as well as the effect of the time of year during which employment will take place when examining the interactions between the wage economy and traditional economy (Berman and Kofinas 2004; Condon et al. 1995; Hobart 1981; Kerkvliet and Nebesky 1997; Stabler 1990). Such a complex and nuanced relationship must be examined as holistically as possible, in order to fully understand individual experiences. This holistic approach is even more important when one considers other factors that influence harvesting activity, such as environmental impacts from resource extraction that may impact wildlife populations (Cameron et al. 2005; Nellemann and Cameron 1998) and pressures exerted on harvesting activities by environmental changes due to climate change (Nuttall et al. 2004).

This chapter focuses on four case-studies (full-time, part-time, unemployed and full-time harvester) that illustrate how working influences participation in the traditional economy in Paulatuk, and in turn how this influences the ability of Paulatukmiut to access food from the land. Women's involvement in the traditional economy, the links between health and time on the land are also explored, the importance of harvesting for monitoring of the land, and the effect of wildlife regulations on food security are also addressed. The overall focus, though, is on the influence of the wage economy on participation in the traditional economy and how this affects food security in Paulatuk. Questions of motivation are not addressed in depth in this chapter, although future work examining this

facet of the influence of the wage economy on the traditional economy in Paulatuk would be useful.

The "duality" (Usher 1976: 106) of the Northern economy in the Inuvialuit Settlement Region was highlighted in the 1970s by Usher (1976), who argued that not enough attention was being paid to the relationship between the wage economy and the traditional economy in the Northwest Territories. Much attention has since been afforded to the 'mixed economy' in the Northwest Territories, highlighting the importance of both the wage economy and traditional economy in allowing Inuvialuit to meet day to day needs (Usher et al. 2003).

Traditional harvesting remains an important activity in many communities in the Canadian Arctic, including the Inuvialuit Settlement Region (Condon et al. 1995; Usher 2002). Furthermore, traditional foods obtained from traditional harvesting play an important role in many northern communities, providing an important source of nutritious food for northern residents (Duhaime et al. 2002; Wein et al. 1996). Traditional harvesting activities possess significant cultural value (Condon et al. 1995), and Wenzel (1995) considers "sociocultural products and their distribution to be fully as important a result of subsistence activities as the energy gains that may accrue from these pursuits" (44). Stern (2000) complicates the view of the 'mixed economy' and argues that the separation between the traditional and wage economy is an outdated method of viewing how individuals operate in the Northern economy, and further argues that a major component of harvesting that is overlooked in the literature is the value of harvesting as a leisure activity.

The relationship between employment and harvesting is complex and nuanced and local factors play a role in shaping the relationship between both activities (Berman and Kofinas 2004; Chabot 2003; Condon et al. 1995; Kerkvliet and Nebesky 1997; Kruse 1991; Mackenzie Gas Project 2004; Nadasdy 2003; Stabler 1990). Very little research has been done on the mixed economy in Paulatuk in a

contemporary setting.

The mixed economy is also characterized by a social dimension—forming a social economy that encompasses the social importance and roles of economic interactions in northern communities (Natcher 2008):

> a social economy framework can be used to account for the multiplicity of institutions within Aboriginal communities that perform a blend of commercial (wages) and non-commercial (subsistence) activities as well as involve monetary (public transfers) and non-monetary transactions (sharing subsistence resources with others) (2)

As noted above, there is evidence that harvesting is increasingly viewed as a leisure activity by younger generations in the Inuvialuit Settlement Region (Stern 2000), and Stern challenges the predominant focus on the economic benefits of harvesting in the region. Fleming (1989) also conducted research investigating the relationships between harvesting, leisure and work in the Belcher Islands, linking the recreative aspects of harvesting with the work and economic goals of procuring food from the land. However, even if harvesting is viewed as a leisure activity in some regards, this does not negate the fact that many individuals still rely on the traditional economy to meet needs for nutritious foods throughout the year (Usher 2002). Therefore, harvesting can have a plurality of uses and motivations for those who spend time on the land and is best viewed holistically in order to capture the complexity of its role in northern life. The traditional economy thus serves many simultaneous purposes and is an integral feature of life in Paulatuk. While this thesis acknowledges these simultaneous purposes of the traditional economy, one of the purposes that is examined most explicitly in this chapter is how the wage economy influences the traditional economy, and in turn how this shapes food security in the community.

2. Setting

2.1 Paulatuk

The community of Paulatuk, NT is an Inuvialuit community on the coast of the Beaufort Sea, situated approximately 400 kilometres from Inuvik (Parks Canada 2009), and is located just west of the calving grounds of the Bluenose West caribou herd (Government of the Northwest Territories 2010). There are currently 324 people residing in Paulatuk (NWT Bureau of Statistics 2007: 1).

2.2 History of the mixed economy in Paulatuk

The community was established as a permanent settlement in 1967 (Alunik et al. 2003: 213) following decades of movement in the region between posts at Cape Parry, Letty Harbour and other areas around the region in which trade had occurred, such as Stanton on the west coast of Cape Bathurst and Pearce Point east of Darnley Bay (Abrahamson 1969; McKay 1958).

Prior to European traders entering into the region, Inuvialuit followed trading routes that "extended from Cape Bathurst to Coronation Gulf" (Abrahamson 1962:7). The Hudson's Bay Company operated a post on the Anderson River, west of Paulatuk, from 1861 to 1866 to encourage fur trade with Inuvialuit harvesters (McDonnell 1983: 37). There was short-lived whaling activity in the Inuvialuit Settlement Region between 1890 and 1910, which had impacts on the economy of the region (Abrahamson 1969: 7; McDonnell 1983). In the 1920s families moved into the Paulatuk area to hunt and trap, and were served by an HBC post at Letty Harbour which opened in 1927 (Alunik et al. 2003: 213). This movement supported a local fur trade; although the trapping economy crashed regionally in the late 1940s (Alunik et al. 2003; McDonnell 1983). The building of the DEW Line site at Cape Parry, on the tip of the Parry Peninsula and situated north of the current site of Paulatuk, in the 1950s offered employment, and families moved to the DEW Line site at Cape Parry to take advantage of the project (Abrahamson 1969; Alunik et al. 2003; McDonnell 1983). In 1967, families settled in Paulatuk's current location (Alunik et al. 2003; McDonnell

1983), which afforded many opportunities for trapping throughout the 1960s and 1970s. According to discussions with local residents, the local trapping economy crashed in the 1980s. Oil and gas exploration in the 1970s and 1980s employed Paulatuk residents who chose to pursue wage jobs with companies working in the region (Tener and Beaufort Sea Environmental Assessment Panel 1983). Throughout the history of these wage opportunities, the traditional economy remained vital for meeting the day-to-day needs of Paulatuk residents (McDonell 1983).

Contemporarily, Paulatuk is the site of potential regional impacts from oil and gas activity with the proposed Mackenzie Gas Project (2004) and direct local impacts from mineral exploration and proposed nickel mining projects (Keeping 1998).

In the Socio-Economic Impact Assessment (SEIA) for the Mackenzie Gas Project (2004), the authors anticipate that "the well-being of individuals and groups can benefit because of employment opportunities and project spending that will provide increased income to spend on improving quality of life in the community or harvesting on the land." (Mackenzie Gas Project 2004:6-19).

The authors suggest that this benefit will accrue from the fact that "harvesting and seasonal employment are now symbiotic, because low incomes from trapping necessitate wage employment to pay for the expensive equipment now needed for efficient harvesting. The project will provide wage employment that will support harvesting-equipment requirements." (Mackenzie Gas Project 2004: 6-28). However, the authors also anticipate that there may be negative impacts from employment in the project on traditional harvesting:

> Project employment could jeopardize harvester lore and disciplines by bringing Aboriginal and non-Aboriginal workers together on the job, and by pre-empting harvesting activities, because of time needed for long-rotation employment cycles. Some Aboriginal people might experience the paid work more rewarding than harvesting, promoting interest in a

> southern lifestyle. (Mackenzie Gas Project 2004: 6-29).

The expense associated with harvesting today is a result of lifestyle changes that introduced skidoos, four-wheelers, boats and other equipment to harvesting activities over the course of the 20th century. As Myers et al. (2008) note:

> Traditional food harvesting and production systems continue to operate in Inuit communities, but they have been increasingly afflicted, since people moved into permanent settlements, with rising costs. These costs are driven in part by increasing capitalization: skidoos, boats, motors, gasoline and ammunition are expensive, but they are now the accepted tools of the trade for efficient harvesting. Exacerbating this trend in costs is the persistent high unemployment levels in Arctic communities, the lack of employment opportunities, and the relatively low cash incomes of residents. (110)

The authors of the Socio-Economic Impact Assessment raise the question of time and employment, which is in line with other research that has shown that the structure and availability of time is an important factor in determining harvesting activity (Berman and Kofinas 2004; Chabot 2003; Condon et al. 1995; Kerkvliet and Nebesky 1997; Kruse 1991; Nadasdy 2003; Usher et al. 2003). As McDonnell (1983) points out, wage employment associated with the DEW Line in the Paulatuk area was both beneficial and problematic:

> Although cash from employment helped purchase guns, ammunition and other supplies for hunting, restricted time and mobility limited the effectives of subsistence activities. (56)

This suggests that the relationship between contemporary employment associated with proposed oil and gas or mining activity in the Paulatuk area may be nuanced, with both benefits and drawbacks. On the one hand, the amount, structure and value of time as a determinant of participation in harvesting activities is acknowledged in the Paulatuk Community Report Socio-Economic Impact

Assessment (Mackenzie Gas Project 2005):

> The project will affect traditional harvesting through effects on the relevant time and resources available to Aboriginal people for harvesting, and on their motivation to do the harvesting work. Large project demands for workers, and a range of employment opportunities, will be found throughout the study area, including Paulatuk. (7-3)
>
> Measures that will be undertaken by the project proponents include: providing flexible work schedules to accommodate traditional harvesting and other Aboriginal cultural, family and community needs, where practical, recognizing that work flexibility will be limited in the peak winter construction seasons (7-5)

On the other hand, the links between the wage economy, the traditional economy and food security are not broadly investigated. While the importance of traditional harvesting to cultural continuity is broadly recognized (Mackenzie Gas Project 2004, 2005), the role of country foods in assuring food security is less broadly addressed, and the holistic relationship between both country foods and store-bought foods in influencing food security is not addressed. In particular, no attention is given to how store-bought foods play a role in shaping food security in Paulatuk, and how the project may influence the accessibility of store-bought foods in Paulatuk through inflationary pressures in the region.

Despite some concerns about negative impacts on harvesting resulting from participation in wage economy employment related to the Mackenzie Gas Project, the authors of the Socio-Economic Impact Assessment go on to propose that the project will be beneficial for harvesting, as "Aboriginal workers could also react negatively, strengthening their appreciation of the traditional relationships and the lifestyle they enjoy at home." (Mackenzie Gas Project 2004: 6-29).

Beyond the impact of the Mackenzie Gas Project, Paulatuk currently faces potential mineral development that would bring employment to the community

(Keeping 1998). In the face of regional projects like the MGP and local projects, like the Darnley Bay nickel mine, the influence of the wage economy on harvesting and food security takes on special significance, as the community and territorial and federal governments and have the opportunity to set guidelines that encourage project proponents to structure jobs in such a way as to acknowledge the relationships at play in the mixed economy of Paulatuk.

2. 3 Present Day Economy in Paulatuk: Statistics on employment

According to the Northwest Territories Bureau of Statistics (2007, 2010), Paulatuk features a lower percentage of individuals participating in the labour force than the Northwest Territories' average (2010: 3) and a higher unemployment rate (2010: 3). These figures are broken down as shown in Table 2-1:

Table 2-1. A Comparison of Employment Characteristics in Paulatuk and the Northwest Territories

	Paulatuk	NWT
Labour Force Participation Rate (2006)	58.1%	76.5%
Unemployment Rate (2006)	28%	10.4%
Employment Rate (2006)		
Females	36.8%	66.7%
Males	43.5%	70.1%
Aboriginal	37.8%	52.2%
Non-Aboriginal	60%	82.8%
Potential Labour Supply: number of unemployed (2006)	31	2,454
do rotational	87.1%	70.3%
Male	71%	64.4%
Employment Profile (2006) %		
Full-time*	72.4%	85.9%
Part-time*	19.4%	11.6%
Government, Health, Social Services, Education	48%	37.3%
Goods Producing	8%	17.2%
Other Industries	48%	43.9%
Annual Work Pattern		
Worked in 2005	62.8%	81.2%
Worked more than 26 weeks	51.9%	75.5%

*Source: NWT Bureau of Statistics 2010 (pages 3-4), except * (NWT Bureau of Statistics 2007:3)*

Of note, the majority of individuals employed in Paulatuk work full-time (72.4%) (NWT Bureau of Statistics 2007:3), which has implications for the amount of time that employed individuals may spend on the land, and should be taken into consideration by various levels of government (local, regional, territorial and federal) when setting guidelines for future employment opportunities which may be created in the community. While the employment statistics illustrate the shape of the wage economy in Paulatuk, these statistics do not reveal the full picture of the work that is performed in Paulatuk throughout the year, or of how individuals balance their involvement in the wage and the mixed economies. Qualitative data from this research complements these statistical indicators and gives a better sense of how Paulatuk residents balance their involvement in both on the land

activities and the wage economy.

Participation in the traditional economy through harvesting remains an important aspect of life in Paulatuk. In 2004, 49.5% of individuals in Paulatuk hunted and fished, 13.8% of residents trapped and 51.9% of households consumed country foods (defined as "most or all (75% or more) of the meat or fish consumed" in the household) (NWT Bureau of Statistics 2007: 2). These values are much higher than those in the Northwest Territories as a whole as shown in Table 2:

Table 2-2. A Comparison of Harvesting Activity and Consumption of Country Foods in Paulatuk and the Northwest Territories (2003)

	% Residents Hunted and Fished	% Households Consuming Country Foods
Paulatuk	49.5%	51.9%
Northwest Territories	36.7%	17.5%

Source: NWT Bureau of Statistics 2007:2

3. Methods

3.1 Methods

The project aimed to understand the relationship between participation in the wage economy, harvesting, dietary patterns and social networks in the Inuvialuit Settlement Region. As part of my Master of Science thesis work, a community-based project was developed in 2007, with input from community partners. The project employed a constructionist epistemology (Crotty 1998) and aimed to gather participant's perceptions of their experiences in the wage economy and traditional economy—and their experiences of food procurement and sharing of food --in the community to better understand the relationship between these facets of life in Paulatuk. In April and May of 2008 both participant-observation and semi-directed interviews were used to conduct interviews and gather data to better understand the relationships between the wage economy and the traditional economy in Paulatuk. The interview guide employed a mixture of quantitative and open-ended qualitative questions in order to assess how wage employment

impacts traditional harvesting, dietary patterns and social networks in the Inuvialuit Settlement Region. 20 interviewees ranging in age from 20 to 83 (see table 1) were interviewed. Both men (n=11) and women (n=9) were interviewed following a "snowball or chain" sampling method (Creswell 2007: 127). Education, gender, age and length of time residing in the community were accounted for in the selection of participants; however, given the small sample size it was not possible to control for all of these factors or to create a perfectly representative sample. In the summer of 2009 I conducted a follow-up workshop on food security with 11 separately recruited participants. This paper focuses on the findings from the interviews, while the second paper in this thesis includes the findings from the workshop and the interviews. A local community research assistant ensured that participants represented a range of levels and types of participation in the wage economy, including: full-time, part-time, seasonal, rotation, unemployed or other forms of employment.

3.1.2 Participants

In the interview portion of the project, I interviewed 20 participants who participate in the wage economy in a variety of ways. Table 2-3 presents the interview participants' name, gender, the amount of time they spend on the land, employment status and age.

Of the nine women interviewed, n=2 were retired, n=1 worked seasonally, n=2 worked part-time and n=4 worked full-time. No women were identified in the potential sample population who worked rotational work, as there is very little rotational work in the community at present. However, with growing interest in developing mining and oil and gas resources in the region (Keeping 1998), this may change in the future.

Of the eleven men interviewed, n=3 were unemployed, n=1 worked a rotational job outside of the community, n=3 worked seasonally, n=3 worked part-time and n=1 worked full-time. Figure 2-1 Illustrates the distribution of gender and types of

employment of the participants.

Figure 2-1. Gender and the Type of Employment of Psarticipants (n=20)

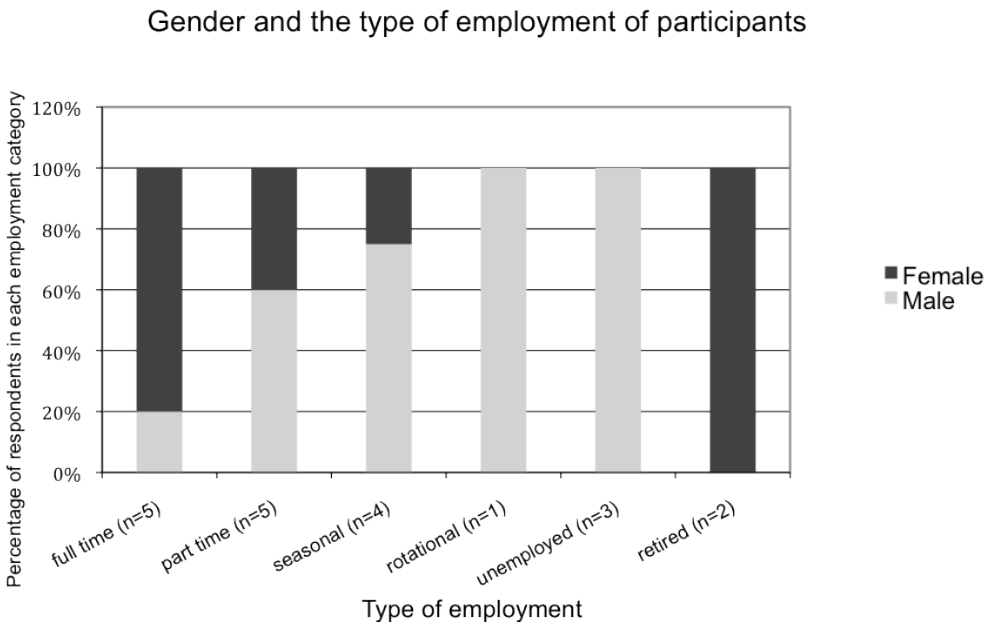


Table 2-3. Research Participants

Name	Gender	Amount of Time on the Land	Employment	Age
John	M	a lot of time	full-time harvester	61
Donald	M	a lot of time	Seasonal	45
Joseph	M	a lot of time	seasonal (November to April)	51
Max	M	a lot of time	self-employed 2-3 days a week	55
Dave	M	lots of time on the land outside of Paulatuk, very little time in Paulatuk harvesting	full-time rotation out of town	34
Samantha	F	some time	Other (retired)	70
Leonard	M	some time	part-time (on the land)	66
Rebecca	F	some time	part-time in town	20
Bob	M	some time	part-time in town	57
Christine	F	some time	Seasonal (10 months of year)	49
Simon	M	some time	Unemployed	38
Nick	M	some time	Unemployed	43
Hank	M	Some time (seasonally)	seasonal (10 months of year)	49
Janet	F	Some time on the land	full-time in town	53
Dorothy	F	Some time on the land	Other (retired)	83
Melanie	F	very little	full-time in town	26
Neve	F	very little time	full-time in town	51
Karen	F	very little time	part-time in town	38
Michael	M	very little time on the land	full-time in town	49
Amy	F	no time on the land	full-time in town	48

**all names have been changed to protect the identities of the participants*

3.2 Research Variables

3.2.1 Time spent on the land

The influence of employment on the traditional economy can be explained in a number of ways; among the variables of greatest relevance is "time spent on the land". Both the Survey on Living Conditions in the Arctic (SLiCA) (Kruse et al. 2008) and the Aboriginal People's Survey (Statistics Canada 2006; Wilson and Rosenberg 2002) investigated harvesting activity in Arctic Canada, using the amount of time spent on the land as a measure for harvesting activity.

SLiCA (Kruse et al. 2008) found that there was no relationship between wage work and subsistence activities (116). However, research in the Northern Slope of Alaska demonstrates how employment in the oil and gas sector and influences harvesting activity by increasing activity among those who have well-paying jobs (Kruse 1991).

In the Alaska North Slope, an area with a history of oil and gas activity, Kruse (1991) found that "forty-five percent of households with incomes of $60,000 or more in 1988 reported that over half their food came from subsistence, a higher proportion than that reported by any other income group." (320). This correlates with research from Canada, as Condon et al. (1995) found "the most active hunters in our sample population are also those who have regular (and in many cases, high-paying) jobs which provide enough income for the purchase of equipment and supplies" (37).

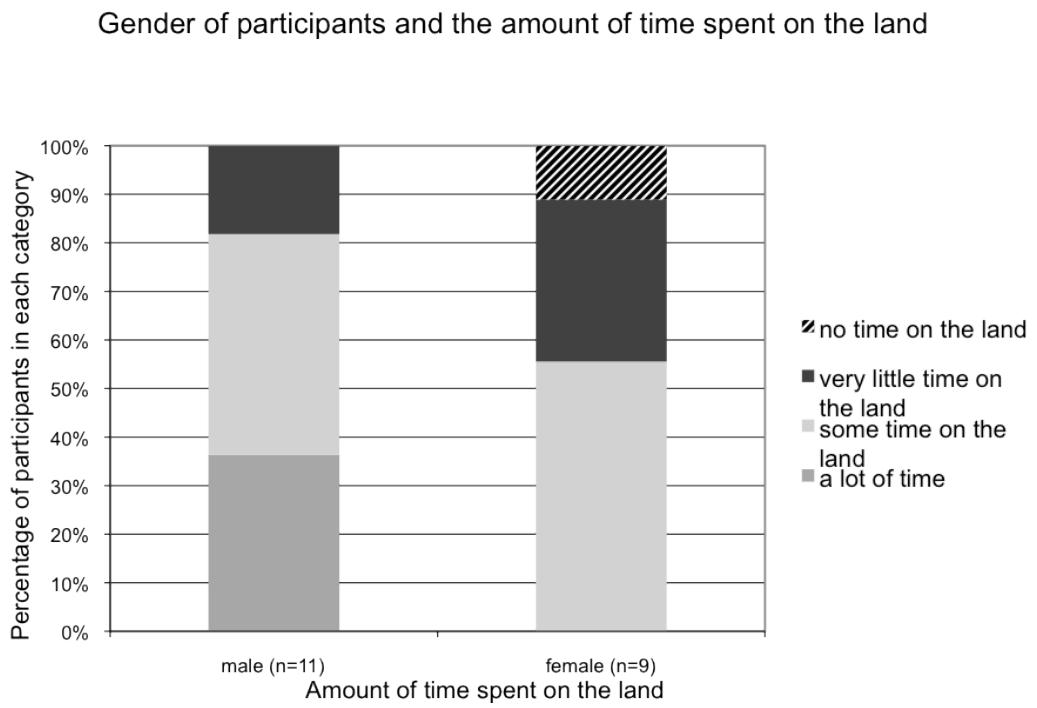
Kruse (1991) also found that subsistence activities increased for males between 1977 and 1988, even with oil and gas activity in the region. However the level of women's participation in certain subsistence activities, like caribou hunting and crafts, had decreased between 1977 and 1988, while their participation in other activities like fishing and hunting other game had increased (Kruse 1991: 320). Kruse goes on to indicate that while in 1977 women who worked throughout the year were more likely to participate in subsistence activities, in 1988 the correlation between work and subsistence activity for women was no longer apparent (Kruse 1991: 321). However, in 1988 women were more likely to pursue subsistence activities if other adults in the household were actively involved in subsistence activities (Kruse 1991: 321). Although negative impacts with a gendered aspect, such as potential impacts of increased substance abuse resulting from large-scale projects like the Mackenzie Gas Project are considered in the project SEIA (Mackenzie Gas Project 2004), the gendered impacts of employment in the wage economy on traditional harvesting are not considered in the Mackenzie Gas Project Socio-Economic Impact Assessment—this is something that would be important to understand in order to anticipate

potential changes to the social economy of the Inuvialuit Settlement Region. The role of women in Inupiat harvesting activities has been studied previously (Bodenhorn 1990), however women's roles in contemporary Inuvialuit harvesting activities have not been studied extensively.

The variable 'time spent on the land' is informed by a rich literature examining how much time harvesters spend on the land in northern Aboriginal communities (Berkes et al. 1995; Wilson and Rosenberg 2002). The research was guided by this literature on time spent on the land, as well as by studies of the relationships between the wage economy and the traditional economy in arctic regions affected by resource extraction (Hobart 1974).

Of note, time on the land has contracted—as spatial constraints were overcome with the incorporation of skidoos (and four-wheelers) in harvesting practices in the latter half of the 20th century (Condon et al. 1995: 35). This means that it is possible for individuals to split their time between wage employment and other activities and still participate in the traditional economy.

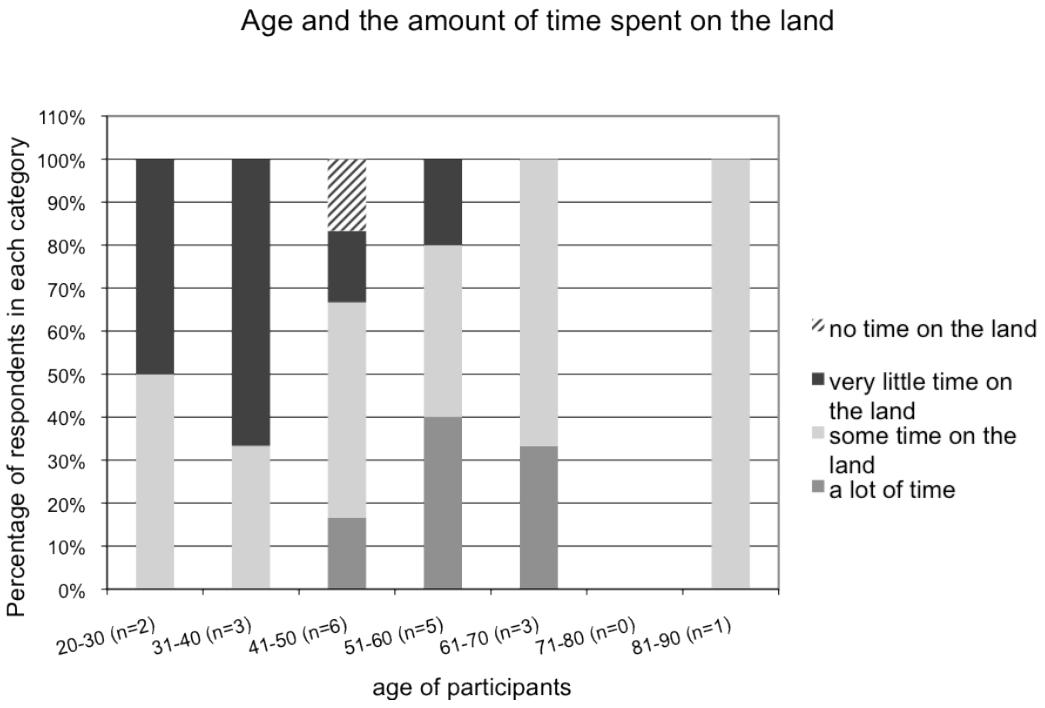
Figure 2-2. Gender and the Amount of Time Spent on the Land by Participants (n=20)



While the sample size is only large enough to suggest potential relationships between gender and the amount of time spent on the land, the data do suggest that men spend more time on the land than women, as illustrated in Figure 2-2. Future work with a larger sample would determine whether or not this relationship is statistically significant.

The age of participants and the amount of time spent on the land is shown in Figure 2-3.

Figure 2-3. Age of Participants and the Amount of Time Spent on the Land (n=20)



The bulk of the participants ranged between 31-70 years of age. The quantitative data suggest that there may be a relationship between age and harvesting activity. A larger sample size in future studies would help to determine the relationship between age and the amount of time spent on the land.

4. Results

4.1 "Going out on the land is what we love to do"

The traditional practices of hunting, fishing, berry picking and related on the land activities are a fundamental aspect of the way of life in Paulatuk: participant interview responses focused mostly on geese hunting, caribou hunting and fishing in the spring; fishing, caribou hunting and beluga hunting in the summer; fishing and caribou hunting in the fall. One participant, Neve, described how the year is spent as such:

> *And our time out on the land depends on our animals, mainly. Geese and other birds come in the spring, so we're out then. And for the men, the*

more brave ones, they go in May, spring hunt—June, mid to late, mid June, the men are out on the ice, doing their char fishing. July, caribou hunting. July, August, char and caribou hunting, September as well. Well, between, July and September, caribou, char, even go after seals, whales. August and September, we try to get out too. And, of course, if we have no holiday time, we're out in the weekends, the summer months, berry picking, caribou hunting, fishing.

There is, overall, limited activity in the winter months for most participants, although some participants indicated that they currently harvest in the winter and some indicated that they do go out on the land the winter if they absolutely have to. In the past, when the trapping economy was still strong, winter harvesting was a more common activity, as explained by Bob:

That was in the '70s. That was the good years. And wolves were some ranging between $250 to $300. [Pause] And people were always enjoying it out on the land. It didn't matter how cold it was. They were hardy people. [Pause] I remember one winter it was so cold when you travel with your skidoo you can see the smoke of it for miles, it just hanging there, but we didn't feel it. We were used to it. Nowadays, you hardly see people travel up inland to do any trapping or anything. You know. [Pause] There's a few hardy people, just a handful, but that go out during the month of January, February. Oh, we do polar bear hunts, also, during the winter. [Pause].

Although harvesting activity has changed over the years, it remains an important aspect of life in Paulatuk, and the traditional economy is vibrant and viable. In fact, a majority of participants (n=16) indicated that they would like to be able to spend more time on the land, but many indicated that employment and time were two of the biggest factors that impeded their ability to spend more time on the land, one of those people being Melanie:

Yeah. It would be, we'd be able to camp a few days on the land, and we'd be able to do more things, like learning how to pluck geese, or cut fish, or stuff like that, cut up caribou. And I'm glad I know how to do all that just from learning from my mom. And, well, it was more enjoyable to know that you don't have to rush back for work and stuff like that, but now, it's just I can't really get time off for going out on the land unless I take time off with pay, and that's something I can't really do with my family. But it's good, 'cause I have my sisters and brothers that do the hunting. [Pause]

Benefits of harvesting and participation in the traditional economy go beyond the utility of procuring food—it also plays an important social and cultural role, and is an important factor in well-being. For Bob, spending time on the land is a "family affair" that brings people together on the land that stretches the around "four corners of Paulatuk - north, south, east and west", as he explains:

The summer? It's another family affair. You, they go out. It's about ten miles from here, Argo Bay, Green's Island. They do their fishing there. Whenever caribou go passed by you get it. Basically, fishing and enjoying the July month. Also, there's beluga hunts during the month of July. [Pause] August, you have your char fishing. That's another family affair. You go out, camp at the river.

Not everybody is able to go out on the land with their families. However, those who cannot get out on the land still appreciate it when other family members can get out on the land. For example, Melanie is happy that her brothers, sisters and son are able to enjoy time on the land and provide country foods for the family, as she explains:

I mean, like, this land around Paulatuk is so beautiful, but I don't get to enjoy it as much as I used to. Like, I'll be lucky if I go out for a day trip and stuff like that, so—and I'm so glad that my son is going out geese hunting and caribou hunting and stuff. He's already getting ready to go

out this weekend for geese hunting. They're sighting geese coming, so they're excited. [Pause]

Harvesting also connects individuals to family members who have passed away; participants spoke about their connection to the land through memories of past harvesting trips and how harvesting also conjured memories of deceased family members or brought families together after someone had passed away, as Neve explains:

Mm-hmm. One spring hunt, my parents were both gone, both died, and that spring lot of, most of my family members were out, my brothers and my sisters. The whole family, and husbands and wives, were out fishing. It was a beautiful day, just enjoying ourselves, it was. And one of my brothers said that this is the life, that's what he said. So, that made it really special.

Participation in the traditional economy also offers individuals an opportunity to get out of town and take a holiday:

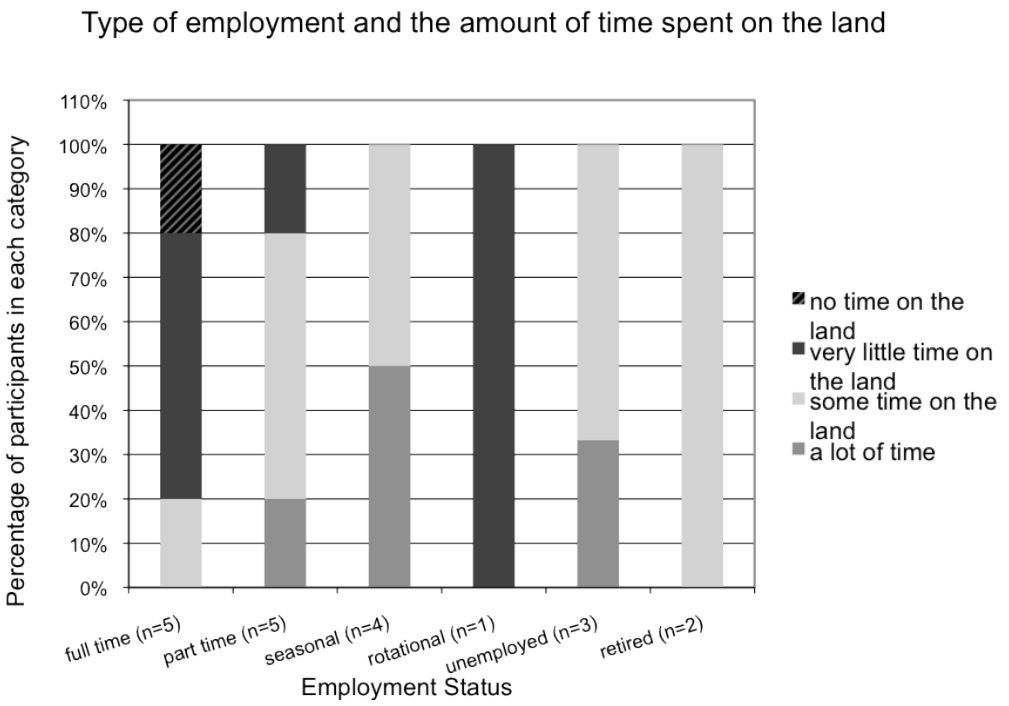
Mm-hmm. Because we like going out on the land so much, the free time I have, instead of going down south with the family—for one thing, it costs too much to go down there, and then not all of you go out, but with on the land travel, the whole family can go out. Everything is close by. It doesn't cost that much to go out. [Neve]

4.1 The Role of the Wage Economy in Traditional Harvesting

The results of the research presented in this section aim to address the research question "What is the relationship between participation in the wage economy and traditional harvesting, dietary patterns and social networks?". This paper focuses on the influence the wage economy on traditional harvesting while the third chapter in this thesis addresses how income influences the ability of Paulatukmiut to access food from the store.

Based on the results of the survey, we learned about how different forms of employment influence the amount and structure of time that individuals have to spend on the land. The quantitative data from the interviews suggest that there may be a relationship between the amount of time on the land and type of employment. Qualitative responses suggest that respondents working part-time or seasonally found it easier to spend time on the land than those who were unemployed or working full-time. The breakdown of how much time respondents in each employment category spent on the land is shown in Figure 2-4:

Figure 2-4. Type of Employment and the Amount of Time Spent on the Land (n=20)



The above figure presents the relationship between employment and the amount of time spent on the land among the participants. A larger sample size in future studies could examine whether one form of employment affects the amount of time that individuals spend on the land any more than other forms of employment.

The qualitative data from this study, however, are more illuminating of the

complexities of how employment influences the quality (structure, relationships, value) of being on the land. I share this qualitative data through four case studies organized around the opportunities and challenges facing individuals and families who are employed full-time (4.2.1), part-time (4.2.2), unemployed (4.2.3) and a full-time land user (4.2.4). As noted above, a majority of respondents (n=16) indicated that they would like to be able to spend more time on the land.

It is important to note that the case studies presented below were chosen in part because of the rich narrative that they provide about employment and harvesting in Paulatuk; it is possible that the case studies chosen contained a richer narrative about time on the land and harvesting because these four individuals are more interested in spending time on the land than the other participants interviewed. However, although these cases are not representative of *all* community members, they do provide some insight into some community member's lives, and the nuanced ways in which employment influences their involvement in the traditional economy.

4.2.1 Janet's Story - "Have mercy on us sometimes!": A Case Study on Full-Time Employment and Time Spent on the Land

Janet works a full-time office job in town five days a week (Monday to Friday) from 8:30 AM to 5:00 PM. Although she enjoys fishing and harvesting, her job limits the amount of time that she can spend on the land. Thus, while she acknowledges that employment has its benefits, she also expresses frustration about how it can affect her harvesting ability. Part of this limitation stems from the inflexibility of her full-time job; the bureaucratic work structure, and the highly regimented rules regarding holidays and time off, do not enable her to spend time on the land at crucial harvesting periods. Although the other participants who work full-time, year-round in town (n=4) indicated that they spend 'very little' or 'no' time on the land, Janet indicated that she spends 'some time' on the land.

When asked about how her full-time employment affects the amount of time that she can spend on the land, Janet stated that:

> *It has its pros and cons. We definitely have to be at work, but whatever time off—our vacation, our lieu times would be spent out on the land and sometimes the time comes and the time finishes and we never really could tell every year as to when the main run of the geese would be. Sometimes we would miss it and sometimes we would hit it right on. Our time off depends basically on what time the main run of the geese will happen. If it doesn't happen during the time we have our time off we suffer the consequences.*

Janet highlights the challenges that full-time workers like her face in the community when it comes to balancing harvesting and full-time employment in terms of the flexibility to harvest at crucial harvesting times:

> *You can't plan like non-Natives where you could look at your appointment book and say "Okay, that's where I'm going to take my holidays and we're going to Hawaii." With us—and this is what I've always told my employers…: "you cannot set a date one month ahead of time as to when the main run of the geese will happen. I'll be at work every possible day, but once I hear that the geese are beginning to really travel is when I'm going to ask you." This is what at first I needed to let them know a month ahead of time, when I was going to my time off it was critical sometimes to inform them about that, but I told them "I've worked too many years to have to put an exact date—you can never put an exact date on the main run of geese hunting. If he comes home with seventy-five geese then I have to put my pen down, phone all of you and tell you guys I'm getting my time off now.*
>
> *Every year up to this year I would save every single lieu time made, plus my special, plus my vacation time for the month of May to get every moment out camping on the land. And it's very critical that I do that*

because we have to begin our harvest to put away for the whole coming year.

As a full-time worker, Janet yearns for the freedom to spend time on the land like her Uncle used to be able to. For her the ability to get out when she wants to--and the ability to assert herself in a way that challenges the constraints of her bureaucratic work structure--is important:

there are times on my side that I look at the load [of] work and when it is so big I am thinking: "why am I not enjoying the rest of my life out on the land?" I used to envy one of my Uncles--always had the freedom of going out to live on the land for a month, two months or so…In his words he doesn't have a boss to tell him what to do, and I've always envied him because sometimes he would be at Deleese Lake, he would be in Fred Matthews, he would be wherever he wanted to harvest, just enjoying the last years of his life. Well, it always rung in my ears. I do have bosses that tell me what to do and that impacts a great deal on how I feel about not having time to spend out there. In fact, I think I'm getting on in my years, and my years are telling me to retire and go out and live out on the land. [laughs]

When asked what the biggest barrier to her harvesting activity, Janet replies unequivocally:

And that's basically employment. There has got to be a law to lobby the government or a way to lobby the government to outlaw working in the harvesting seasons. Have mercy on us sometimes!

Although her job affects her ability to get out on the land when she wants to, she still makes a point of getting out on the land when she can. As such, she concentrates her harvesting efforts on weekends and holidays, and the occasional evening, and makes an effort to schedule her time off during crucial harvesting times as best she can:

Definitely has to be on the weekend. We pack up the sled on Friday right after work and come back late Sunday. Every minute we spend out there is so valuable. I feel that I'm just trudging and forcing myself back into work when the weekend is over. However, we value these long weekends in the months so we have an additional day out, and lately I've been moving from the early May vacation out on the land to the end of May because it became more critical—especially when the geese were running. We'd be plucking twenty-five to fifty geese a day out there, and curing them and preserving them. It became a job in here and then going out camping to do another job, but that other job was more enjoyable even though it was physically challenging.

Other factors also shape her ability to harvest, which can compound the restriction that full-time employment places on the amount of time an individual spends on the land. The research participants pointed out in many of the interviews that a caribou quota was introduced in the community in 2007 and Janet points out that the amount of time one can spend caribou harvesting changed dramatically:

Now with two caribou it's no use camping anymore. It's not even worth it. But daytrips for caribou—you get two and you're back home all cut up and you look at the amount of meat we have and you just about start crying because it won't sustain us for the whole year.

Despite these challenges, Janet does point out the benefits of her employment to harvesting:

Yeah, but it also assists in buying the gas, in buying the oil, extra parts for the skidoo. It also benefits for buying food before you go out on the land. So that's the pros and cons of it. But even full-time employees—salaried workers—cannot depend on the store year-round; just because we are employed we are also living from paycheque to paycheque and I know that there are times that a paycheque would finish right on your payday and then you would have to struggle for the next two weeks because you

haven't got the harvest that you need to make up for the cost of food at the Northern.

This highlights the importance of the articulation between the wage economy and traditional economy in ensuring individuals can meet their needs throughout the year, and how participation in both the wage economy and the traditional economy mitigates the various factors that affect the cost of living in Paulatuk throughout year.

4.2.2 Bob's Story - Case Study on Part-Time Employment and Time Spent on the Land

Bob works part-time year-round in town. His job involves six to seven days of work in town and he is free the rest of the month. He responded that he spends "some time" on the land throughout the year, and he is *"out is during the spring geese hunt, the summer months, and the fall"(Bob)*. In the past Bob has worked rotation work and he offers a perspective on the benefits and challenges that these different forms of employment offer to harvesting activity in Paulatuk.

When asked what would help him spend more time on the land, Bob responded that money was the primal concern, not the availability of time as was the case with Janet:

More money. Costs a lot of money now to go out on the land. Your price of foods gone up, oh, skyrocketed. Did you go and visit our Northern[2]?

And now the main thing that limits you is the cost of everything. And your wages that, the wages that we make doesn't cover half of what you get,

---

[2] The community is served by a Northern Store which sells food and sundry household items, electronics, and also offers some basic financial services. There is also a small canteen in town that sells pop and junk food in the evenings.

and so you spend less time on the land 'cause you don't get enough of what you need to go out with.

This also highlights the importance of adequate income in ensuring a person's ability to spend time on the land; while the flexibility of a part-time or seasonal job allows an individual to harvest at specific, crucial harvesting times, adequate income ensures that an individual can afford the gasoline, supplies and equipment required to spend time on the land. Bob's responses highlight the tension between income (or access to money in order to procure gasoline, equipment and supplies for harvesting) and time in ensuring an individual's ability to spend time on the land. Different forms of employment (ie: full-time, part-time, seasonal, rotation or other) offer a corresponding balance between income and time in determining how much time individuals spend on the land.

With respect to his previous rotation employment:

Well, the way it helped me to spend time on the land was that you had money. You had money to buy all the stuff you need to go out.

Bob does go on to mention that his previous rotation work did have negative impacts on his personal life and fishing life:

It affected my fishing when I was out working with [a resource extractive company that operated in the region in the 1970s and 1980s]. It didn't affect my hunting 'cause we were done by October. [Pause] No, I don't see any other effects that my job had. [Pause] Oh, socially, it, it did affect me, you're away from your wife a lot.

The timing of employment throughout the year is thus important, as work during certain periods of time can impact specific harvesting activities. The flexibility of Bob's current part-time work is greater than his previous rotation work, and thus he is more able to capitalize on year-round harvesting activities. However, as he points out, the cost of living has risen considerably in the last few decades, which

places barriers on how much harvesting he can do.

> *Well, there you go. The cost of living is way, way out of whack. [Pause] If we had your prices up here, with the money we make now, we'd be laughing, dancing. [Pause] As it is now, you're grumbling when you go out of the store. Spend $100, you barely have a handful. [Pause] It change quite a bit. Back in the '70s, '80s, with $100 you can get a lot of stuff. Now, you barely get a handful and a little grumbling when you go out the store, eh.*

Nonetheless, during the spring goose harvest Bob is able to devote an extended amount of time to harvesting:

> *Oh, like I said, it's just about the whole month of May. You just make trips back and forth from camp to town to put away your geese in the freezers.*

This is much different than the responses provided by full-time employees like Janet who found it difficult to be able to spend such an extended period of time out on the land.

4.2.3 Nick's Story – Being unemployed means having time to spend time on the land but the cost of supplies is a concern

Nick was employed for several years in a full-time job in town, but is recently unemployed. He spends 'some time on the land', much like the other participant who was unemployed at the time of the study.

Nick points out that his job enabled him to spend time on the land because it allowed him to purchase gas, supplies and equipment for harvesting activity. However, he also points out that his job limited the amount of time he had available for harvesting.

> *Well, in a way, I got, when I'm, when I was working, it helped me because I had the money to buy the gas and the food and the oil. That was one of the good things about it, that it could help me, also, purchase, like, a four wheeler or a snow machine. But the other—the bad thing about*

working is you, you really can't spend too much time on the land 'cause you just have to come back and try and support your family for to keep your house running with the fuel and the power bill, the utility bills.

In the past Nick would schedule his annual holiday in May so that he could spend the month out at his camp during the geese hunt. He would take two or three weeks off without pay, in addition to his holiday time, in order to accomplish this. During this harvesting period his wife would join him out on the land. He and his wife would also do some fishing throughout the year for a couple of days at a time. He would also do some caribou hunting on the weekends at the end of August and into September. Again, his wife would join him on these trips, and she would prepare the animals that he harvested and would harvest berries.

In the fall time when we're doing our caribou hunt, in late August when [my wife] comes out, then we might pick a few berries. [Pause] It's mostly the aqpiqs…some cranberry, there's blueberries.

Much like the other participants who spoke about how their partners participated in harvesting activity, Nick's wife's ability to spare time to harvest with him is a crucial factor in his harvesting activity. Although this project focused on individual's harvesting and employment, it would be useful to investigate household and/or family level negotiations of time and financial resource sharing in order to understand how these negotiations shape harvesting activity in Paulatuk.

Nick makes a good point about how technology, in the form of four wheelers, allows him to harvest more easily, and maximizes the amount of time an individual spends out on the land harvesting:

It's so much easier than, than fifty years ago where you didn't have—back then, you didn't have no four wheelers to get out there or—you could travel all over with those, the four wheeler.

Currently, Nick finds the cost of supplies is one of the biggest barriers to

spending time on the land:

> *A lot of it has, is food and, like, like the groceries that you buy here. The rice and the all them other stuff, they're kind of expensive. Without having those to have enough of them, sometimes it's a big pain to, for [my wife] to try cook some big meals for my kids. That would be one of them. The other one is oil and gas. They're just so expensive.*

Despite these challenges, Nick still feels that he will be able to continue to spend time on the land now that he is unemployed. With regards to his annual plans to spend the month of May out on the land hunting geese:

> *Yeah, like, right now—well, it hasn't changed yet, but I don't think it'll change. I think we'll be staying out there for the month. So, even though I was working—or right now, unemployed— it won't change my days on the land.*

This highlights how the relationship between employment and harvesting is complex and definitely not black and white. As long as Nick has access to time and the financial resources to purchase gasoline, supplies and equipment to spend time on the land he is able to continue his harvesting activities. Social capital—access to social networks that help individuals access resources from others--can help mitigate the impact of reduced income from unemployment on harvesting activity (Duhaime et al. 2004).

4.2.4 John's Story - Life as a Full Time Hunter— "I'm not employed … I look for my money in the land. I live off the land."

John is a full-time hunter living in the community. In the past he has worked in a wage employment capacity, but he found that full-time harvesting allowed him to better keep up with his family's needs for country foods. His wife works a full-time seasonal job in town.

John has been hunting for most of his life, and has worked on and off the land

to meet his needs:

> *Yeah, since I turned sixteen…I started out one year first. On my own for a little while after that I worked for a while until I get what I wanted. I think three years before that after I quit again. From there, I start to want machines and stuff like that to get ahead. Now, I start getting my machines, so I could live on my own. I like living on the land.*

In the past employment has been a means for him to procure equipment to support his harvesting activity, but now he is able to focus his time on working on the land as a full-time harvester.

As he points out, wage employment prevented him from being able to keep up with his family's needs for food from the land:

> *Yeah. I used to buy a lot, but I couldn't keep up with it, so I had to quit, yeah. Couldn't keep up with my family, so I had to quit. With hunting…they eat better from outdoor food.*
>
> *That's why I quit working full time. '89, maybe, used to work for the Hamlet before. I couldn't keep up with my family, to feed them, so I had to quit.*
>
> *They mostly like wild meat. They don't like Northern and stores like that, so they were not happy with it, so I had to quit to make them what they like to eat. So now they happy when I don't work, yeah, 'cause I bring the food all the time.*

Being a full-time harvester thus allows John to ensure a healthy diet for his family, which contributes the overall health and well-being of his children. His full-time harvesting activity, combined with his wife's full-time seasonal work allows him to balance his family's needs for healthy, culturally relevant foods and provides a quality of life that was not possible when he worked full-time in the wage economy.

Although John is available to harvest throughout the year, some activities depend on his wife's ability to join him:

> *Yeah, caribous goes by. Make dry meat same time, and now we don't hardly do those anymore, 'cause my wife working now, so I only do it in summer now when she get off work.*

Furthermore, much like Nick, John's wife is also crucial to his time on the land:

> *Travels with me when I travel. I never travel alone. Everywheres I go, she goes. I leave her behind, I get an earful.*

John's experience illustrates the negotiations of time and income that he and his wife make at the household level in order to ensure that they can meet the needs for country foods of their family, as well as to allow both himself and his wife time to enjoy being out on the land.

4.3 A note on women and harvesting

A subset of the interviewees were male and female partners from the same household (n=6), while some female interviewees indicated that their work helped to support harvesting efforts in the household. This suggests that it would be important in the future to interview households and members of extended families to understand household and kinship-based strategies to balance time and income in harvesting activities. There is evidence from other Northern communities that households pursue strategies that have a gendered component, as "the successful harvesting household is often also the successful wage-earning household, as this cash income is used for purchasing harvesting equipment, and especially fast means of transport. This is the key means of resolving the time allocation problem, mainly for men, between wage work and harvesting." (Usher et al. 2003: 178) while "as people have access to a greater diversity of store-bought foods, there is less urgency to harvesting, and this probably also a key means of resolving the time allocation problem, mainly for women, between wage work and such activities as butchering, hide preparation, and making clothing,

although this has been less well documented." (Usher et al. 2003:178).

Women's roles in harvesting—as harvesters in their own right--have not been largely examined in the Northern literature. Some major exceptions (Bodenhorn 1990; Parlee et al. 2005) provide important information regarding women's roles as harvesters in Inupiat and Gwich'in communities, respectively.

Thus, while many studies investigate the role that men play in harvesting activities, few studies view women as harvesters in their own right. It became evident from interviews in Paulatuk that woman play an integral role in the harvesting life of the community. Whether as harvesters themselves, by harvesting with their partners, by supporting family members through the income they earn from employment, or by taking other family member's children out on the land, women are very clearly important in harvesting activities in the community.

Some examples of the ways that women were active in harvesting in Paulatuk broke down as such:

1) as harvesters in their own right

As Janet points out, harvesting is something that she learned as a child and remains an important part of her life:

> *It's just the way that we were raised up. The first thing that we had to learn was directions, and we needed to learn each and every area in order to learn how to go out on the land. And during the spring I practised that adamantly, where right after work I would start my skidoo: the tank is full and it's well-maintained. I would go beyond Thrasher Lake immediately up to Salmon Lake and Billy Lake and even as far as Biname Lake by myself. So long as I know where the people are—certain people—are camping to go fish, I would travel up to them and every minute up there is not wasted. Except to eat and have some tea, but every minute is not*

wasted on fishing time [laughs].

This also reveals how harvesting imbues a strong sense of the landscape and what is going on on the landscape—both in terms of the social landscape of people who are out on the land and the physical landscape and the animals on the land.

2) by harvesting with partners

As Neve pointed out, her husband's harvesting activity relies to some degree on her availability, and her employment has impacted this relationship:

> *Mm-hmm. My husband can't go out unless I go out... [Laughter] He has—well, he can go out hunting, but he doesn't spend all the time out there, 'cause I'm not there.*

As noted previously, John and Nick's wives are also important to their household harvesting activity. This highlights the ways in which household members must balance their available time and financial resources in order to spend time on the land.

3) by supporting family members who harvest

Christine pointed out that although she spends only 'some time' on the land, she is still involved in harvesting in her family as she provides financial support to her sons in order to enable them to get out on the land:

> *in order for my boys to go out, they don't have a job, and I do, and I make the money.*

> *The whole family participates. Even if they don't go actually out with them, they —I'm very involved through, anyway, my, money. Through my money. [Laughter]… Well, it's true for the cost of gas, and shells…*

4) By taking family member's children out when a family member cannot spend time on the land, which is also really important for ensuring that youth learn on the land skills.

As Melanie recalls:

> *It's important to me because, well, when I was younger, that's how I grew up. I, I---right up until I was about nine years old, I spent pretty much the whole year in the tree line with my mom and my brothers, at Tsoko Lake and Granite Lake. And there, we—that's where they did their—in the past, that's where they did their fox and marten and all whatever other fur they can catch there in Tsoko Lake and Granite Lake. Sometimes we'd stay up pretty much a good ten months... and then, after that, it's—when we quit going to the treeline, it was just close camps like Billy's Creek, Crout's Island, the river, that's what they call it.*

Melanie also spoke really fondly of her memories of spending time on the land with her mother, who has since passed away:

> *But climbing trees and being there with my mom and my brothers, like, when we were, you know, close, you know? That was before my mom passed away, so that's a really good memory for me. A lot of scrapes and bruises from climbing trees. [Laughter]*

Women's roles are not discrete; they may participate in many ways simultaneously; for example, Christine also helps with the preparation of meat her sons harvest:

> *Caribou hunt, everybody participates. They camp by days and weeks. And it's gonna be a different amount of caribou because, you know, we're limited now. [Pause] All we have to go, and through tags. It's two tags per person or household. [Pause] Usually, on the fall time, my crew of boys participates. We participate through cutting, and butchering, and storing.*

This also shows how the fluidity of involvement is illustrated through

adaptations to external factors, such as wildlife regulations.

The ability to spend time on the land is thus important for connections to the past, for the sharing and teaching of skills, and for young people to learn about the land that surrounds Paulatuk. Women play an important role in facilitating these connections between family, learning, and the land.

4.4 Working on the land and working off the land

In the past many Paulatuk residents, especially men, worked as trappers out on the land (McDonell 1983). However, with the crash of the trapping economy throughout the North in the 1980s (Wenzel 1991: 1), employment on the land shifted. Today many jobs are based in the community and are bureaucratically structured, based on 8:30-5:00, Monday-Friday schedules. There are, however, casual employment opportunities as wildlife monitors with exploration companies or scientific research outfits which do afford opportunities for Paulatuk residents to work a wage job on the land. Based on the responses of the full-time employees working year-round in town and those with more flexible work schedules, there is a distinct difference in the locus of control felt by some of those who work in an office job than those who work out on the land. For those working full-time office jobs, employment is a major barrier to harvesting, and this is expressed in fairly strong language in some cases. All five of the full-time employees interviewed indicated that their jobs were one of the barriers they faced to spending more time on the land.

As Amy pointed out, her job was a major barrier to her ability to get out in the spring, which is a crucial geese hunting period:

> *Oh, working 8:30 to 5:00—well, the managers I had always took the spring to go out on the land, and have to have someone at the office, so I had to stay in.*

And Melanie indicates that her job is a trade-off that ultimately benefits her

household, but prevents her individually from spending as much time on the land as she would like:

> *Well, it helped me by being able to support my family that are going out on the land. Like, I can purchase gas, and shells, and that, but I can't go out on the land. [Laughter]*

Meanwhile, employees with a flexible work schedule seem to view work less confrontationally or problematically.

Hank likes the balance between work and harvesting in his life:

> *I like it how it is right now because you've got to work. Long ago you used to live off the land, but when the prices of the fuel goes up--some years you get a few hundred foxes and wolverines, that's about one year's salary. I remember one year, my Father got over 300 foxes, he sell that for about $70, 000. Some years when you see an animal, you see dollar signs.*

One of the reasons that flexible employment is ideal for harvesting is because it allows individuals to harvest animals when they are available, as animals do not follow a regular, office schedule and thus harvesters must be able to adapt to animal migration patterns and habits. As Donald points out:

> *Sometimes when the animals are not there we go back home and wait for a certain day until they start to arrive. Like the geese and caribou. It's the same thing with the fall: we wait a certain time until they start arriving and then we start moving out to the camp to harvest the animals or the fish or geese or caribou.*

Beyond the structure of a job, the perception of how crucial a job is to the day-to-day functioning of the community can also impact the balance between work and harvesting. These types of pressures can motivate individuals to shift their harvesting activities closer to town in order to ensure that it is still possible to get out on the land. As Janet notes:

My job description states that I walk into my office at nine in the morning and faithfully put my pen down at go home at five o'clock in the evening. However, it doesn't work out like that, and once you gain the trust of the locals you no longer have a life. Therefore, my job—the phone calls, the emails--continue when I get home, so it is neverending. It's something good to do in the winter, but when spring comes there's got to be a stop to it, because at five o'clock I have a family life, and I have a fishing life. That's why we are moving our camp from Jacob Lakes to Thrasher Lake (our spring camp, the frame tents) and at five o'clock every day, when I am done here I'm going to be starting up my skidoo and going to Thrasher Lake.

4.5 Harvesting, Country Food and Wildlife Regulations: "*if they ever quota our geese, man, we're cooked"*

How the wage economy influences harvesting is important from a food security standpoint because it shapes how Paulatukmiut are able to procure food from the land. There are other factors that appear to be influencing access to food from the land. Of note, in 2007 a caribou quota—which restricted the number of caribou that each household could hunt to two per household per year—was adopted by the Hunters and Trappers Committee. This was in response to wildlife surveys that suggested that the Bluenose-West caribou herd, which the community relies on for its harvests, was in decline (NWT Environment and Natural Resources 2010). The herd's estimated non-calf population size had fallen from 98, 874 to 18,050 between 1987 and 2006 (NWT Environment and Natural Resources 2010). Interview responses, as well as discussion during the food security workshop, highlighted how restricted access to the herd is impacting access to nutritious and culturally appropriate food in the community.

As Michael, a full-time employee, pointed out, the quota and other wildlife regulations are impacting access to country foods in the community:

Make sure you put that in asterisks: 'historically', because now, with

the quota system on the caribou, you can't do what you could do at one time. We're allowed two caribou for the year, whether you get it in the spring or fall. So, you know, the effect to our ability to harvest is not only job related: it's also related to legislation, our new legislation and the quota system. And if they ever quota our geese, man, we're cooked, eh. We've got a quota on our char, we've now got a quota on our caribou.

Respondents indicated that they are trying to replace caribou meat with store-bought meats and other animals. However, there are challenges to this. As Dorothy illustrates:

Because they don't get caribou this year, eh? We have no meat. We buy lots of meat from the store now, but expensive. But we have to eat.

When, when there's lots of caribou, you don't have to buy that much.

Neve points out that the quota causes her to buy more store-bought meat:

This past year. Well, since I'm not sure how many months, but since the, limit on caribou went, I mean, came up, then we're buying more meat products.

There are opportunities to substitute caribou with other foods from the land, although as Michael pointed out these options are dwindling.

Yes, we harvest a lot of—in the springtime we try and get some caribou too. But now with our caribou we only get two tags per year, so now we have to wait until next year to get our two tags. So, that's kind of hard, so, we're going to start doing a lot of fishing. (Donald)

Oh, for now? Right now, our caribou is changed. We can't harvest as much as we want, but the geese never change. We can get as many as you like. As long as you don't run out of bullets, just keep going. After you've harvest, you always share, share it out [pause]. (Bob)

In addition to losing the product of the harvest, a quota also means that the process is changed:

> *Fall. I like fishing and caribou. Mostly, you know, freeze them and gather them up. Can't do that much now, so. There's so much limit now. Can't dry, can't do that now. So I got to do other things now to survive, so—fish and caribou and the ones that got no restriction on them. Polar bear, seals, and fish, and that's what I got to do now. Can't get much caribou. . (John)*

This quota is also impacting sharing of country foods in the community, as there is less food for harvesters to share. As John points out:

> *Oh, couple of years ago, about three years ago, I get a hundred and seventy five. That's just for my whole family, this whole, the whole bunch of us here. But they still don't last long, all winter. There's a whole -- there's a whole bunch of us, that's why. Barely made it to April, that time, even I get hundred and seventy-five now in September…*
>
> *Well, we're allowed two. That's it now. Can't do too much now.*

The quota is also affecting the shape of collective harvesting activity, as Christine illustrates:

> *Caribou hunt, everybody participates. They camp by days and weeks. And it's gonna be a different amount of caribou because, you know, we're limited now. [Pause] All we have to go, and through tags. It's two tags per person or household. [Pause] Usually, on the fall time, my crew of boys participates. We participate through cutting, and butchering, and storing. [Pause]*

The impacts of wildlife regulations on food security and health and well-being have not been examine broadly. Duhaime et al. (2008) point out that international declarations such as the Rovaniemi Declaration and Agenda 21 recognize that

"Aboriginal access to land and land resources is considered a key part of the food security strategy, a means of promoting cultural activities and traditional knowledge, and a sustainable development aim for the Arctic" (Duhaime et al. 2008: 79). However, while the right to harvest is protected through legal frameworks (Duhaime et al. 2008), Paulatuk's experiences demonstrate how wildlife regulations can still have an impact on access to animals that Inuviauit rely on for food. The views expressed by participants in this research illustrate that wildlife regulations should be examined in terms of their social and health impacts on a community as well as how they affect the wildlife in question.

Wildlife regulations add another dimension to food security concerns in Paulatuk. While this study shows that the wage economy influences harvesting activity, the cumulative impact of other factors, such as wildlife regulations also shape how Paulatukmiut are able to access food from the land.

5. Discussion

5.1 How the Wage Economy Influences Traditional Harvesting and Food Security in Paulatuk

The aim of this chapter is to understand how the wage economy influences traditional harvesting in Paulatuk, and in turn how this influences food security through the ability of Paulatukmiut to access food from the land. Employment status does not quantitatively affect the amount of time spent on the land but the situation is more complex. Depending on the type of employment and household resources, harvesters may have more or less capacity to spend time on the land. This is because employment affects:

1. inconsistencies between land-time and employment time
2. resources: being on the land historically was a self-sustaining livelihood. Today harvesters need money for fuel, supplies, and equipment.
3. Social relations necessary to work with others

Based on these three elements we recognize that those who work part-time or seasonal employment benefit from the fact that they have more opportunity to spend time on the land; this finding is consistent with Condon et al. (1995), Usher et al. (2003).

The tension between the availability of time and income is thus important in determining the amount of time an individual is able to spend on the land in Paulatuk. Flexible employment—such as part-time or seasonal employment--ensures more time for an individual to harvest, but an individual must also have access to adequate financial resources to purchase the equipment, gasoline and supplies necessary to get out on the land. Furthermore, part-time and seasonal employment must be scheduled in such a way as to allow an individual to get out on the land at crucial harvesting periods, like the spring geese hunt or the August char run.

Based on research conducted in the Inuvialuit Settlement Region in the 1990s, Condon et al. (1995) found that those with regular employment were the most likely to be active harvesters while those who "on social assistance or who work casual employment when available" (37) were the least active. Condon et al. (1995) thus propose that motivational factors are an important factor in determining how much time people spend on the land and "the same high motivation that contributes to a young person's success at a high-paying job may also contribute to his desire to be a productive hunter." (37). This is important to take into consideration alongside the structure of work when studying the relationship between employment and harvesting, although this research did not examine the role of motivation in detail; it would be useful to examine in future work.

Nonetheless, the findings from this research support the findings of Condon et al. (1995) who discovered that "a number of wage earners in our sample (both active and occasional hunters) expressed the desire to engage in more hunting and fishing, but they cited the constraints of work which limit them to weekends

and holidays, times when the weather may not necessarily cooperate." (38). As the region moves forward with plans for oil and gas extraction and mining, it is important that the impact of work structures on harvesting be taken into consideration; this can mitigate the negative impact of work structures associated with such development on harvesting activity and perceptions of individual control over ability to harvest.

5.2 Harvesting, Monitoring and Resilience

Supporting harvesting activity through implementation of flexible employment schedules has effects beyond the individual experience of spending time on the land. Flexibility is identified in the Arctic *Climate Impact Assessment* (ie: Huntington et al. 2004) and elsewhere (Berkes and Jolly 2001; Chapin et al. 2004) as necessary to adapt to climate change and cumulative pressure that arctic communities face today--but it must be flexibility for those who will experience the direct and indirect impacts of climate change and resource extraction.

"In contrast to the richness of traditional resource management systems, a major source of vulnerability is the low diversification of 'modern' economic options that have been developed in most northern countries." (Chapin et al. 2004: 345). One concern, which may exacerbate climate stressors on traditional harvesting is that as economic opportunities change, there may be fewer people available to practice traditional harvesting during periods of high employment in these economies, which may impede full transmission of traditional knowledge (Duhaime et al 2002; Guyot et al. 2006). This, in turn, may potentially impact the ability of communities to continue to harvest at the levels such as those in Paulatuk. Coupled with climate change induced changes to the land, as well as changes in caribou populations and behaviour, it is important to consider how other factors may impact the well-being of communities that rely on traditional harvesting.

Ford and Smit (2004) argue that "erosion of knowledge about the local environment and traditional skills among younger generations and an

increased dependence on outside assistance, have also modified community coping capacity." (395). While Paulatuk has demonstrated incredible resilience in light of massive economic changes, such as the crash of the trapping economy, there is the possibility that continued cumulative impacts from resource extraction and climate change will have implications for the continued harvesting of caribou and other fish and wildlife. However, despite concerns about knowledge transmission, evidence from other communities in the Inuvialuit Settlement Region shows that new skills, such as the use of global position systems, are being developed (Berkes and Jolly 2001), and, as some residents in Sachs Harbour pointed out, communities are now able to cope with change more readily than in the past, as it is possible obtain foods from alternate (ie: market) sources (Berkes and Jolly 2001). Paulatuk has recently completed a climate change adaptation plan to help address current and projected issues that the community faces (Pearce et al. 2010). As the report notes: "proactive adaptation is necessary to manage the full effects of a changing climate, and will require policy makers at local, regional, territorial, and federal levels to develop interventions" (Pearce et al. 2010: 5). Thus, climate change and wage employment induced shifts in traditional harvesting could be mitigated by the development of new skills and resources, which will need to occur at a variety of levels of government in order to capture the full spectrum the impacts.

It is vital for responses to the cumulative impacts of climate change, resource extraction and wildlife population change to be *local,* as the specific ecological changes brought about by climate change and resource extraction are unique to the geography, location, and local environmental characteristics of each community (Ford and Smit 2004; Huntington et al. 2004). For example, the scientific record indicates that communities in the Western Arctic have observed general warming trends while Eastern Arctic residents have in fact experienced no change or cooling trends (Huntington, Fox, et al. , 2004).

Berkes (1999) defines traditional ecological knowledge "a cumulative body of knowledge, practice and belief, evolving by adaptive processes and handed

down through generations by cultural transmission" (8).

One important tool for adapting to climate change induced changes in caribou populations is to incorporate traditional resource management practices, as "the cultural diversity in resource management traditions is a largely untapped source of resilience" (Chapin et al. 2004: 345).

Thus, it remains vital to employ methods that incorporate local knowledge into resource management, such as ensuring flexibility in wage employment schedules, as "traditional and local ecological knowledge and the institutions in which this knowledge is embedded are critical reservoirs of understanding about interactions between people and their environment and therefore a key source of resilience in northern systems." (Chapin et al. 2004: 346).

5.3 Health and well-being

Beyond the utility of harvesting, spending time on the land re-invigorates the quality of life of Paulatukmiut. In fact, SLiCA (Kruse et al. 2008) found "that productive activities, the presence of production opportunities (i.e. fish and game, jobs), and a sense of local control are associated with satisfaction with life as a whole." (123). Thus, examining how best to support harvesting activity through employment structures that enable individuals to spend time on the land is crucial to ensure that Paulatuk may continue to thrive.

The health and well-being benefits of spending time on the land cannot be ignored. Researchers such as Adelson (2000) have shown the connections between the health of the land and the health of Aboriginal peoples.

As Neve pointed out, spending time on the land affords important opportunities for individuals to relax and recharge:

> *You're not stuck in the house when you're out there. You're, you're hardly spend any time in a tent… You're out there, and you're busy. [Pause] And it's a good place for a retreat. If you're tired of day-to-day work here,*

then it's a good place for a retreat.

Furthermore, Neve points out that spending time on the land is important for health:

> *Because when you're out camping, you're, you're busy out there, you're being active, and you're getting fresh air. [Laughter]*

While it was not possible to determine the exact relationship between employment and the amount of time spent on the land from the quantitative data, the perception of how important spending time on the land is to a sense of health, well-being and control over one's life should not be discounted. This is supported by environmental psychological research that demonstrates the benefits of 'nature' or non-urban environments to one's well-being, as these 'restorative' environments (Kaplan and Kaplan 1989: 177-200; Ulrich et al. 1991) can help reduce stress in one's life. Cliff (2008) found a link between community health and land use in her research in the Inuvialuit Settlement Region. She attributes these links to cultural benefits, inputs of food and other valuable 'services' from the land (ie: air, water) , and a sense self-determination and of control over lands (Cliff 2008: iii).

As Joseph points out, harvesting is not just about leisure: it requires planning and co-ordination to ensure that everything is taken care of:

> *Well, I'm happy with the way things are going right now. I'm not looking to overextend anything. I think the month at a time is ample enough time for me in every different season to be able to do the things that we need to do and get done. Any time you want to extend it, well, that's on your own time after that. Either enjoying the weather, and so forth. Those, what you call extension times. Other than that, we're pretty well business oriented when we go out. Just one of those type of things [that is] the way that we operate. [Pause] Having to figure out how much gas we need, how much money, what's in the budget, what can we contribute to, who's picking up*

the gas, who's buying the shells, who's picking up the food, and so forth, and so on. Who's bringing their machines, who's doing what, so forth. So, all those type of things you have to figure out before you go out, eh? If you don't have things to go out with, well, you're not out there, eh?

Thus, in order to truly address the relationships between the wage economy and the traditional economy we must situate actions in these economies within a web of meanings, motivations and benefits that relate to an individual's involvement in either sphere. A holistic view of the wage economy and the traditional economy, and the benefits and challenges that each provides to Paulatukmiut better captures the ways that individuals balance their roles in both spheres.

6. Conclusion

While this research did not reveal any clear-cut relationships between wage employment and harvesting, it does illustrate the ways in which people operate within both these spheres, and suggests that the local community, territorial and federal governments should consider establishing guidelines for project proponents that address the wage economy and the traditional economy more holistically when planning employment opportunities in Paulatuk. Flexibility of employment, the importance of household relationships in shaping harvesting activity, the health and well-being benefits of harvesting, the gendered aspects of harvesting activity, the learning and knowledge of the land around Paulatuk that is gained through harvesting, and the role that the traditional economy plays in food security should all be considered when weighing how employment from a project such as a mine may impact the community.

7. Future Directions

There is no clear-cut answer to how participation in the wage economy influences traditional harvesting activities in arctic communities. However, previous studies seem to indicate that the type work, the flexibility of employment opportunities to accommodate harvesting activities and the time of year during which employment opportunities will occur are all important when considering how participation

in the wage economy influences traditional harvesting activities (Berman and Kofinas 2004; Condon et al. 1995; Hobart 1981; Kerkvliet and Nebesky 1997; Stabler 1990).

Furthermore, examination of household economic strategies (Usher et al. 2003) and women's roles in harvesting can inform future decisions regarding resource extraction projects—and their related employment opportunities--that may impact traditional harvesting activities in the Inuvialuit Settlement Region. This becomes even more important when other pressures, such as the impacts of resource extraction on wildlife (Cameron et al. 2005) , the effects of climate change on traditional harvesting activities in the Arctic (Nuttall et al. 2004), and wildlife regulation regimes are considered.

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Chapter 3

Income and Store-bought Foods in Paulatuk

1. Introduction

In 1973, Thomas Berger recommended that a Mackenzie pipeline should not be constructed unless it was clear that local communities would benefit (CBC 2009). Since that time concerns about the relationship between resource development and the health and well-being of northern Aboriginal communities have arisen. The development of gas fields and a pipeline west of the community (Mackenzie Gas Project 2004, 2005) and mining exploration on Inuvialuit private lands (7(1)a lands) in Paulatuk (Appendix C) and elsewhere in the Inuvialuit Settlement Region (Keeping 1998), herald the possibility of increased employment and business development for the region. While the associated increase in individual and household income has the potential to contribute positively to well-being for some individuals and families, there are also many challenges facing more vulnerable populations.

The relationship between income and food security is among the most complex. Much of this literature has focused on the impact of employment and income on the traditional economy with less consideration given to local food systems that incorporate store-bought foods. At a regional or macro scale, income and food security are seen as being positively correlated; it is assumed that as income increases, the capacity of individuals to access nutritious foods also increases. In northern communities the relationship is confounded by a number of factors; as discussed in Chapter 2, food from the land, seen to be the healthiest and culturally appropriate source of food, cannot be secured through income alone. Time, knowledge, skills and social networks associated with the traditional economy are equally or more important to income in this context. In this chapter, I consider the role of store bought food in the local food system based on the perceptions of local community members of food cost and availability in the local store (Northern Store) and through the federally sponsored Food Mail program. Specifically, this chapter aims to answer the question "what role does

individual / household income play in offsetting the high cost of food and limited availability of food in this remote Inuvialuit community?". Regardless of income level, community members perceive the high cost and poor availability of store-bought foods as a stress in their day-to-day lives. (For many community members, particularly full-time harvesters, store-bought is thus perceived as a non-alternative to more preferred sources of food from the land).

1.1 Background

Resource development and its associated wage employment is seen as a benefit to the North. Research in Kugluktuk in the 1970s illustrated the benefits of employment associated with oil and gas activity outside of the community, specifically increased income for workers employed with the project, and work opportunities for individuals who were unable to find employment in existing industries in the community (Kupfer and Hobart 1978: 60). Kupfer and Hobart (1978) estimated that the amount of cash available in the community increased by as much as seventy five percent when employees were working for the project (60). Abrahamson (1969) believed that a "diversified economy" (69) and "wage employment, private enterprise and the development of local specialities" (69) would provide Inuvialuit in the Paulatuk region with choices that would combat the spectre of failure that some envisioned for communities in the region:

> the future of the people in the Tuktoyaktuk, Cape Parry region need not be the bleak and hopeless existence predicted by those who see no alternative but ever increasing payments of social assistance to a growing Eskimo alienated from a land depleted of the resources that once sustained it. (69)

This discourse promotes employment and income as a panacea for community struggles, and characterizes them as powerful determinants of well-being by allowing for higher levels of education, citizenship, and health (Abrahamson 1969: 69). This discourse was supported by the Royal Commission on Aboriginal Peoples with its heavy focus on economic development as a key to addressing disparities between Aboriginal and non-Aboriginal peoples in Canada

(Newhouse 2000: 145). In fact, “economic development has become the Holy Grail of the Aboriginal community” (Newhouse 2000: 145)

Some researchers argue development and employment are not necessarily the solution to these issues (Newhouse 2000) or entirely of benefit to northern communities (Gibson and Klinck 2005). Employment in extractive industries such as mining carry negative impacts, including variable periods of unemployment, forced mobility of the workforce, mental stress, addictions and substance abuse, gambling, as well impacts on family life and gender relations and overall health and well-being (Gibson and Klinck 2005: 117-131). However, there are ways to mitigate these impacts, including grass-roots planning and training to ensure that communities retain control over their involvement in these industries (Abele 1989; Ross and Usher 1987).

Most of the literature focuses on the benefits of wage economy to traditional economy and security of foods procured from the land. However, there exist gaps in our understanding of the relationships between the Northern wage economy and security of store-bought foods.

This paper investigates the concept of two aspects of food security—cost and availability of store-bought foods--in northern Canada; more specifically we examine the historical and contemporary challenges of the Inuvialuit community of Paulatuk to achieve food security within the context of significant socio-economic and ecological change. Myers et al. (2008) identify availability as “sufficient supplies of food for all people at all times” (105) and in this chapter cost is the relative amount of money charged for store-bought food items in the community, and could also be considered a measure of the affordability of store-bought food for Paulatuk residents. Exact values of store-bought foods were not measured, but the perceived cost of foods by participants was used to assess whether or not residents felt that they could afford to purchase the foods from the store. Store-bought foods are those that residents purchase either at the local store, canteen or through the Food Mail program (ie: which is delivered from the

Stanton's food store in Inuvik). Historically, food security of Paulatukmiut depended solely upon the security of healthy and abundant natural resource base (Alunik et al. 2003). Today, individuals and households negotiate between a more complex mixed economy which is comprised of elements of both the traditional and wage economies (Usher 1976). The mixed economy model is social and culturally complex; each individual and household must negotiate the complexities of social relationships, cultural values, knowledge and skills, economic constraints and opportunities and ecological realities; together these frame the availability of food in their community.

The United Nations Food and Agriculture Organization (2009) defines food security as existing "when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life". The Dietitians of Canada (2007) define community food security as existing when "all community residents obtain a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes healthy choices, community self-reliance, and equal access for everyone" (1). Chabot (2008) goes on to describe food security as a process and an experience:

> food security is an objective to be achieved but it is also a *situation lived through.* Food insecurity is also a lived experience that encompasses a number of essential aspects where the unavailability of food or money to acquire it, or lack or limited access to food supply, are key components. (143)

Currently, food security is a pressing issue for many communities throughout the Arctic (Boult 2004; Caulfield 2000; Duhaime 2002; Duhaime et al. 2002; Lambden et al. 2006; Lawn and Harvey 2001; Rasmussen 2002; Willows et al. 2005). Concerns over the affordability and availability of both store-bought and traditional foods will only become more urgent as other cumulative pressures, including contaminants in traditional foods (CACAR II 2003), changes accruing from climate change (Nuttall 2007), increasing resource development in the

Arctic (Byers and Lalonde 2006), and arctic sovereignty initiatives (Griffiths 2009; Loukacheva 2007) strain resources and capacity of northern communities. The focus of this paper, however, remains on income and food security in the Inuvialuit Settlement Region.

Preliminary findings from the Inuit Health Survey (Egeland 2010) suggest that "food insecurity was a problem in homes in ISR communities. Unemployment, low income and high food costs were the main reasons for food insecurity" (6). However, research findings from Paulatuk challenge this conclusion and suggest that high food costs are having the biggest impact on food insecurity, as participants in a variety of types of employment (full-time, part-time, seasonal, rotation, other) expressed concerns about the high cost and poor availability of nutritious foods in the community.

The Mackenzie Gas Project Socio-Economic Impact Assessment (SEIA) for Paulatuk (2005) recognizes the impact that project employment may have on traditional harvesting; however the impacts of the project on another aspect of food security, the cost and availability of nutritious store-bought foods in the community—or more specifically the effect of the project on individuals' perceptions of, and ability to deal with, the cost and availability of nutritious foods in the community-- is not broadly discussed in the SEIA.

The SEIA does note that "some individuals might experience such heavy gambling losses that insufficient money remains to pay for food, clothes, utilities, rent and other important financial obligations. This situation could be exacerbated when construction is complete." (6-4). However, the SEIA does not anticipate how various impacts of the project, such as inflation, may affect the tensions between income and ability of Paulatukmiut to address the cost and availability of store-bought foods in the community.

This lack of attention to the influence of the wage economy on the cost and availability of nutritious store-bought foods is disconcerting, given the role that

store-bought foods play in northern diets: throughout Northern Canada, nutrition researchers have noted a shift from diets composed mainly of 'traditional' or 'country' foods harvested off the land to store-bought or market foods in northern Aboriginal communities over several decades (Duhaime et al. 2002; Kuhnlein and Receveur 1996; Kuhnlein et al. 2004).

Despite this shift towards greater consumption of store-bought foods, traditional harvesting and traditional foods remain important in Indigenous communities in Canada's Arctic (Condon et al. 1995; Minister of Industry 2006; Usher 2002; Wein et al. 1996). In fact, according to Statistics Canada's "2001 Aboriginal Peoples Survey - Survey of Living Conditions in the Arctic" (Minister of Industry 2006), "at least 80% of Inuit households in Nunavut, Nunavik and Labrador had at least one member that was involved in harvesting activities" (11) and the share was 66% for households in the Inuvialuit Region (11). This is not only a concern with respect to the persistence and continuity of cultural practices such as hunting, fishing and berry harvesting but also has implications for health. Numerous dietary intake studies have found that a shift towards greater consumption of store-bought foods and fewer traditional foods in Northern communities in Canada has been linked to a greater rate of chronic diseases, such as cardiovascular disease and Type II Diabetes (Guyot et al. 2006; Kuhnlein et al. 2004), which are linked to the higher proportion of fat, sugar and carbohydrate consumed in place of traditional foods (Kuhnlein et al. 2004).

One of the key factors influencing access to traditional food is the how the wage economy influences the traditional economy. A growing body of research indicates that many food choices in northern communities are shaped by socio-economic factors that constrain the access to nutritious foods (Duhaime et al. 2002; Lambden et al. 2006; Willows et al. 2005). Thus food (in)security in northern Aboriginal communities remains an important—and yet unresolved—issue that individuals, communities and regional, territorial, provincial, and federal governments are struggling to address (Boult 2004; Chan et al. 2006;

Duhaime et al. 2002; Willows et al. 2005).

As discussed in Chapter 2, the relationship between wage employment and traditional harvesting is complex; while there are some benefits, wage employment, particularly full time employment, influences significantly the availability and structure of time available for harvesting

The second theory underlying arguments about the wage economy and food security is that with increased income, individuals are able to buy more nutritious foods which in northern communities are typically more expensive.
The Government of Canada's "Northern Food Basket" (INAC 2008a) and "Revised Northern Food Basket" (INAC 2008b) measures developed in conjunction with the Food Mail Program (INAC 2008a; 2008b) in Northern Canada—which, for their purposes, includes the Yukon, Northwest Territories, Nunavut , Northern Quebec , Northern Ontario, Labrador and parts of northern Newfoundland, Northern Manitoba, Northern Saskatchewan and Northern Alberta--than in the rest of Canada (INAC 2008a). Remote, fly-in communities with no road access such as Paulatuk, NT or Old Crow, YT, face an even higher price burden for market foods than other Northern communities with other points of access (INAC 2008a). In fact, according to the 2006 Northern Food Basket measure for the "Weekly Cost of the Northern Food Basket for a Family of Four (INAC 2008a), Old Crow had the highest food costs of all communities measured at $388, followed by Coral Harbour at $352 and Paulatuk at $347 (INAC 2008a). In comparison, in 2006 the measure was $159 in Yellowknife, a community with road access to Southern markets, and, although the 2006 figures are unavailable for Whitehorse, the value was $163 in Whitehorse in 2005 (INAC 2008a). To compare these values to a southern market, in 2005 the value was $155 for Montreal[1] (INAC 2008a). Income from wage employment provides the necessary means to address these higher costs of food, however, little research has explored whether nutritional status and associated health indicators improve with increased wage employment.

The 2005 “Cost of living differential” between Edmonton and Paulatuk was 167.5% (NWT Bureau of Statistics 2010: 5) and the 2004 Food Price Index placed the difference in the cost of food between Yellowknife and Paulatuk at 221.7% (NWT Bureau of Statistics 2010:5). The Interim Food Mail Review (INAC 2010c) showed that in pilot communities where a revised Food Mail Program was run “without the Food Mail Program it is estimated that 12 of the 16 communities would have the majority of the population spending more than 55% of their income on shelter and food. Of these communities, four were expected to have the majority of the population spending over 80% of their income on shelter and food” (20). In Paulatuk, in both 2005 and 2006, 42.9% of families earned less than $30,000 while only 28.6% of families earned more than $75,000 in 2005 (NWT Bureau of Statistics 2010a:5). This means that, with the very high cost of food in the community, a large proportion of the population faces potential challenges in procuring adequate nutritious foods.

Paulatuk has only one grocery store (a Northern Store that is located in the centrally located Paulatuk Visitors Centre) and a small canteen that sells junk food, pop, and some convenience foods. Inuvik, on the other hand, has three grocery stores (Cliff 2008: 133), as well as a number of convenience stores that sell a variety of foods. At the time of the study, Paulatuk and Sachs Harbour were the only two communities in the Inuvialuit Settlement Region with only one grocery store (Cliff 2008: 133).

2. Paulatuk: a Case Study

Paulatuk, in the North West Territories of Canada, is an Inuvialuit community of 324 people (NWT Bureau of Statistics 2007:1) situated on the coast of the Beaufort Sea. Traditional harvesting and the consumption of traditional foods remain very important in Paulatuk (NWT Bureau of Statistics 2007; Todd and the Community of Paulatuk 2008). As illustrated in Table 3-1, according to data from 2003, 49.5% of residents of Paulatuk harvest regularly and 51.9% of households consume traditional foods, (which was defined as “all or most meat consumed”

for the sake of the survey) (NWT Bureau of Statistics 2007:3); in contrast only 36.7% of residents of the Northwest Territories harvest regularly and only 17.5% households consume traditional foods (NWT Bureau of Statistics 2007:3).

Table 3-1. A Comparison of Traditional Harvesting activity and consumption of Traditional Foods in Paulatuk and the Northwest Territories

	% Residents Hunted and Fished	% Households Consuming Country Foods
Paulatuk	49.5%	51.9%
Northwest Territories	36.7%	17.5%

(Source: NWT Bureau of Statistics 2007:3)

3. Methods

This project employed a constructionist epistemology, using both ethnographic and survey techniques (Crotty 1998:5) to examine people's perceptions of their experiences of the relationship between traditional and wage economies in contemporary Paulatuk, NT. Both qualitative and quantitative data was collected in order to illustrate the relationships between employment, harvesting, food security and social networks in the community. Throughout 2007 and 2008, a project was developed in collaboration with the Hamlet Council of Paulatuk, the Paulatuk Community Corporation, the Paulatuk Hunters and Trappers Committee and the Inuvialuit Regional Corporation. The project focuses on "The Impact of Participation in the Wage Economy on Traditional Harvesting, Dietary Patterns and Social Networks in the Inuvialuit Settlement Region". In April and May of 2008, a community Research Assistant and myself conducted 20 interviews with residents of the community between the ages of 20 to 83. Participants were selected in a snow-ball sampling method (Creswell 2007) based on their experience in the wage economy, and we aimed to capture a range of types of involvement in the wage economy (including full-time, part-time, rotational, seasonal, or other). Participants were both male (n=11) and female (n=9). Attempts were made to control for education and length of time living in the community. The interviews were semi-guided and followed a three part

survey which attempted to capture information that investigated the relationship between employment, harvesting, social networks and dietary patterns in the community. The third part of the survey contained questions regarding store-bought foods.

The findings from the survey prompted the development of a half-day food security workshop carried out in July 2009 to further examine food security concerns in the community and to develop ways to address the issue of availability and affordability of both store-bought and traditional foods in Paulatuk. Nine participants ranging in age from 20 to 84 participated in the workshop; two participants (one male and one female) were interviewed regarding food security issues following the workshop. The workshop was made of up men (n=4) and women (n=5).

Table 3-2. Research Participants

Name	Gender	Amount of Time on the Land	Employment	Age
John	M	a lot of time	full-time harvester	61
Donald	M	a lot of time	Seasonal	45
Joseph	M	a lot of time	seasonal (November to April)	51
Max	M	a lot of time	self-employed 2-3 days a week	55
Dave	M	lots of time on the land outside of Paulatuk, very little time in Paulatuk harvesting	full-time rotation out of town	34
Samantha	F	some time	Other (retired)	70
Leonard	M	some time	part-time (on the land)	66
Rebecca	F	some time	part-time in town	20
Bob	M	some time	part-time in town	57
Christine	F	some time	Seasonal (10 months of year)	49
Simon	M	some time	Unemployed	38
Nick	M	some time	Unemployed	43
Hank	M	Some time (seasonally)	seasonal (10 months of year)	49
Janet	F	Some time on the land	full-time in town	53
Dorothy	F	Some time on the land	Other (retired)	83
Melanie	F	very little	full-time in town	26
Neve	F	very little time	full-time in town	51
Karen	F	very little time	part-time in town	38
Michael	M	Very little time on the land	full-time in town	49
Amy	F	No time on the land	full-time in town	48

**all names have been changed to protect the identities of the participants*

4.1 Wage Employment and Food Security

With 42.9% of families in Paulatuk earning less than $30,000, the 2006 Northern Food Basket Measure of $347 (INAC 2008a) would mean that a significant number of families in the community would spend 56% or more of their income on food if they purchased the foods used to measure the cost of food in the North. The Inuit Health Survey found that the average household in the Inuvialuit Settlement Region spent $1,317 on food and $1,471 on shelter per month (Egeland 2010: 13), which works out to $33,456 per year. Based on data from the NWT Bureau of Statistics (2010a; 2010b) , this would mean that the average

family in Paulatuk would have to spend 71.6% of their income on food and shelter while the average family in Inuvik would only have to spend 35.1% on food and shelter in 2006 (the last year for which income data is available). While public housing is cheaper than private housing, those living in public housing still spent, on average, between $463 (homes with no children) and $907 (homes with children) on housing per month (Egeland 2010:13).

Given these very high regional costs, and the even higher costs in Paulatuk, in many cases individuals must choose cheaper, less nutritious foods to make up the difference between the cost of nutritious foods and the cost of shelter in the community and current income levels. This is consistent with research that shows that lower income households do indeed spend less money on food, and that lower income households buy less of certain foods groups, particularly milk products and fruits and vegetables (Kirkpatrick and Tarasuk 2003; Ricciuto et al 2006).

There is an important relationship between store-bought foods and country foods: country foods enable individuals to supplement the high cost of nutritious store-bought foods , and 60.7% of households interviewed in the Inuit Health Survey in the Inuvialuit Settlement Region felt that country foods are cheaper than store-bought foods (Egeland 2010: 13).

The Inuit Health Survey preliminary results show that 13% of houses in the Inuvialuit Settlement Region experience severe food insecurity and 33% experience moderate food security (Egeland 2010:11). In Paulatuk, where average incomes are lower than other communities in the region and the cost of food is higher (see Table 3-3 and Figure 3-1) access to adequate and nutritious store-bought food becomes an even bigger concern.

Tables 3-3, 3-4, 3-5, 3-6 and Figures 3-1 and 3-2 illustrate the difference in income and cost of food between Paulatuk and other communities.

Table 3-3. A Comparison of Income and the Northern Food Basket Measure in the Inuvialuit Settlement Region in 2006

Community	Average Personal Income ($)†	Average Family Income ($)†	Weekly Northern Food Basket Measure ($)‡	Ratio of Average Family Income to the cost of Food (using the Northern Food Basket Measure)
Paulatuk	$22,347	$46,757	$347	0.39
Sachs Harbour*	n/a	n/a	$343	n/a
Ulukhaktok	$27,474	$56,770	$301	0.28
Aklavik	$27,372	$55,813	n/a	n/a
Tuktoyaktuk	$28,902	$56,724	$282	0.26
Inuvik	$47,665	$95,392	$216	0.12

*Data for Sachs Harbour suppressed†(NWT Bureau of Statistics 2010a: 5, 2010b: 5, 2010c: 5, 2010d:5; 2010e: 5; 2010f) ‡(INAC 2008a)

Figure 3-1. A Comparison of the Proportion of Average Family Income Spent on Food in Six Inuvialuit Communities in 2006 Using the Northern Food Basket Measure

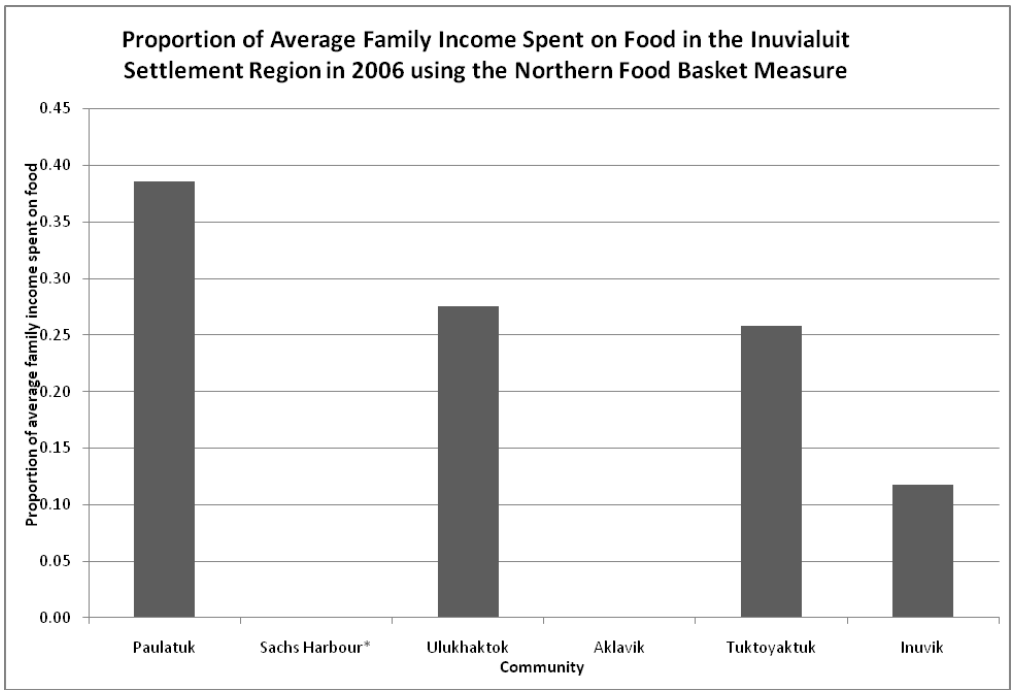


Table 3-4. Proportion of Family Income Spent on Food In Paulatuk 1996-2006

Year	Average Family Income ($)†	Weekly Northern Food Basket Measure($) ‡	Ratio of Average Family Income to the cost of Food (using the Northern Food Basket Measure)
1996	n/a	$276	n/a
1997	n/a	n/a	n/a
1998	n/a	n/a	n/a
1999	n/a	n/a	n/a
2000	$42,183	$286	0.35
2001	$48,267	$286	0.31
2002	n/a	$302	n/a
2003	$42,957	n/a	n/a
2004	$47,513	$343	0.38
2005	$50,371	$315	0.33
2006	$46,757	$347	0.39

† (NWT Bureau of Statistics 2010a:5) ‡ (INAC 2008a)

Table 3-5. Proportion of Family Income Spent on Food in Inuvik, 1996-2006

	Average Family Income($)†	Weekly Northern Food Basket Measure ($) ‡	Ratio of Average Family Income to the cost of Food (using the Northern Food Basket Measure)
1996	n/a	$189	n/a
1997	$60,043	n/a	n/a
1998	$64,908	n/a	n/a
1999	$67,094	n/a	n/a
2000	$67,644	$194	0.15
2001	$77,417	$204	0.14
2002	$85,280	$199	n/a
2003	$87,461	n/a	n/a
2004	$87,750	$198	0.12
2005	$89,233	$192	0.11
2006	$95,391	$216	0.12

† (NWT Bureau of Statistics 2010b:5) ‡ (INAC 2008a)

Table 3-6. Proportion of Median Family Income Spent on Food in Edmonton 2000-2006

Year	Median Family Income†	Northern Food Basket Measure‡	Ratio of Average Family Income to the cost of Food (using the Northern Food Basket Measure)
2000	$56,400	$154	0.14
2001	$61,200	$161	0.14
2002	$63,400	$161	0.13
2003	$64,800	$138	0.11
2004	$68,100	$152	0.12
2005	$72,600	$153	0.11
2006	$79,300	$173	0.11

† (Statistics Canada 2010) ‡(INAC 2008a)

Figure 3-2. A Comparison of the Proportion of Average Family Income Spent on Food in Paulatuk, Inuvik and Edmonton from 2000-2006 Using the Northern Food Basket Measure

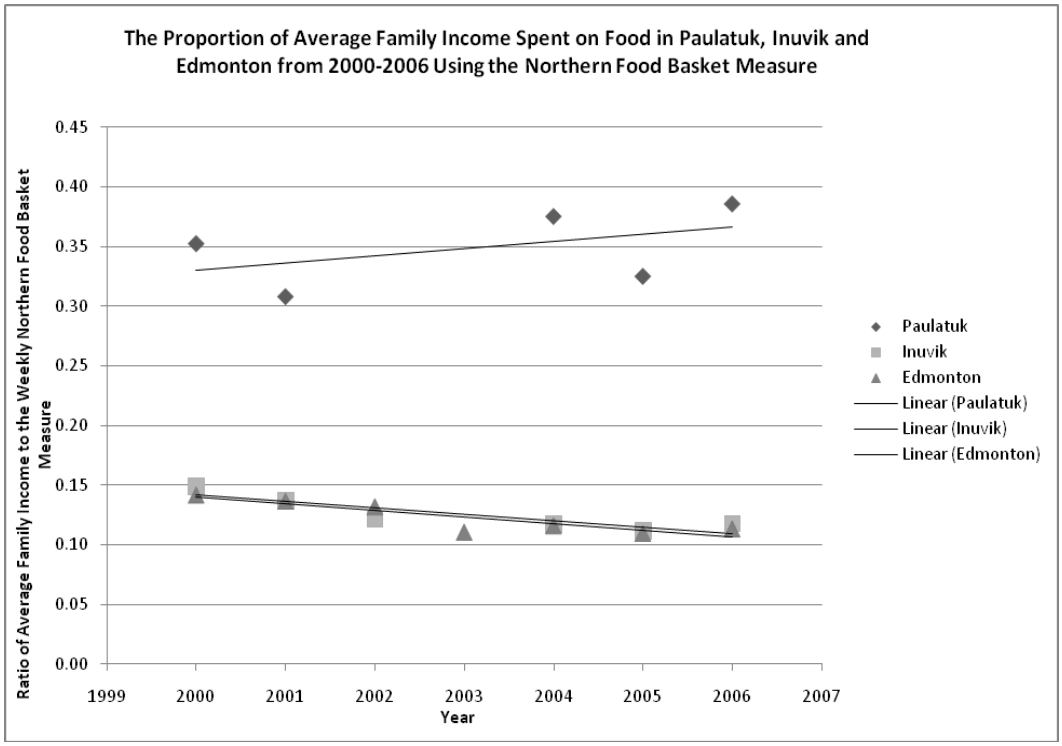


Figure 3-2 illustrates how the proportion of average family income spent on food using the Northern Food Basket Measure is significantly higher in Paulatuk

than in Inuvik or Edmonton. It also illustrates that the proportion is increasing over time in Paulatuk whereas the proportion is decreasing in Edmonton and Inuvik. In order for the average family in Paulatuk to approach the proportion of money spent on food as the average family in Inuvik in 2006, the average family income would have to increase to $150,366 or by 3.2 fold (using the 2006 average family income values and Northern Food Basket measure).

The cost of living and the employment situation in Paulatuk is similar to other arctic communities, creating similar imbalances in the proportion of income spent on food. Chabot et al. 2008 noted that "on average, food accounts for half the Inuit household budget in this region [Nunavik], whereas other Canadians allocate only about 12% of their household budget for food" (141) and that "in 1993, it was estimated that a four member household receiving employment assistance had to spend up to 93% if its disposable income (after rent) on groceries" (141). An analysis of the influence of the wage economy on food security in Paulatuk is thus useful for other communities facing similar concerns regarding the cost and availability of store-bought foods.

4.2.1 Addressing Cost

The results from this study explored the hypothesis that wage employment would lead to improved access to costly foods in the local store.

Figure 3-3. What Food Would Participants Buy if the Cost Were Lower? (n=20)

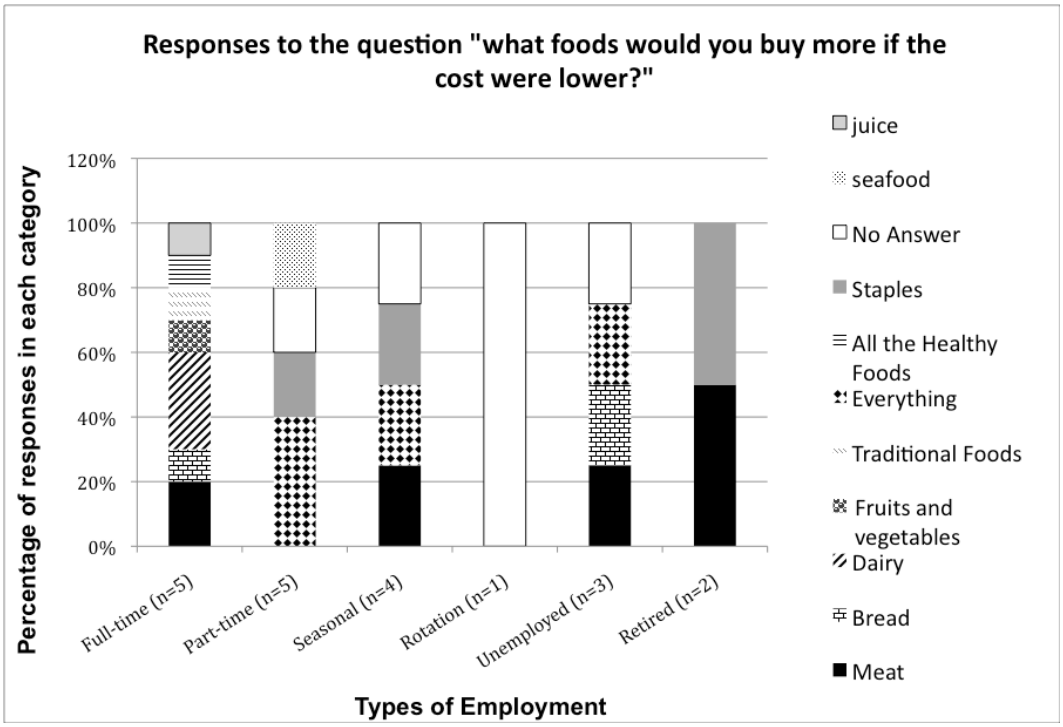


Figure 3-3 illustrates that cost was of concern to participants in each employment category as indicated in their responses to the quantitative portion of the interview regarding meat; dairy; bread; fruits and vegetables; staples such as lard, butter, flour, coffee, tea and sugar; "everything" and "all the healthy foods". The cost of seafoods was also mentioned as a concern. Full-time workers seemed to desire the greatest variety of foods that they would purchase if the cost were lower (including traditional foods, which no other employment category mentioned) while participants in other employment categories were mostly concerned with more basic types of foods, including staples, 'everything', bread and meat. Full-time employees were the only ones who mentioned 'all the healthy foods', dairy, and traditional foods as foods they would buy if the cost were lower. As Chabot (2003: 24) found in Nunavik, households that produce food also purchase significant amounts of groceries in order to harvest food from the land (Chabot 2003: 24), indicating a connection between store-bought foods and the procurement of traditional foods. The emphasis on concerns about the cost of

staples such as lard, butter, flour, coffee, tea and sugar in the interview responses is thus interesting, as these foods may also play a role in food production in some households.

Karen, who works part-time, expressed her frustration with the cost of store-bought produce and the corresponding waste she witnessed because many residents could not afford these items:

> *The only thing is the prices. The prices get so high you can't afford to get all your nutrients from fresh vegetables. [Pause] They sell their fresh so expensive, and next thing they're all going to garbage because they're too expensive for most people to buy.*

In addition to these concerns about cost, several participants mentioned concerns about the availability of nutritious foods like fresh fruits, vegetables and dairy products at the local store. As Karen notes, there is a concern about fruits and vegetables being thrown out at the store—a concern that was also mentioned in the workshop. It would be interesting to follow up on this with interviews with the store managers to gauge to what degree they are forced the throw out unsold or spoiled produce. Another theme that emerged was a desire to be able to purchase wild game and fish at the local store. This hints both at the desire many residents have to eat traditional foods and also reveals some of the trade-offs those who work full-time must make between the ability to get out on the land to harvest and the time they must spend at work. While it is possible for individuals to access caribou, char, geese and other foods from others in the community, it is still interesting to note the desire to be able to purchase 'land food' at the store. As Melanie pointed out:

> *I know you can't sell that, but I'm just saying, if it was there I'd get it all the time. Like, vegetables. They try and get as much as they could through Northern, but then sometimes it freezes up and ruins and, well, it's mostly vegetables that was hard to get. I mean, there is so much processed food too, it's hard to not buy it. I mean, for a bag of breaded chicken is $43.*

A can of pop is, like, close to $5. For a case of coke, it's like $58. [Laughter]

Country foods present an important source of healthy foods and also allow Paulatuk residents to balance their needs for affordable, high quality foods. Traditional foods are also viewed as being more substantial that store bought foods available in the community as they last longer.

As Melanie pointed out:

But as long as they're bringing in the native food, then I'm happy, 'cause it's just a big important part of being healthy. I mean, you hear that all the time: native food is healthy, but you have to live in small communities to know how important that food is. Like, there's maybe some families that don't work, and they'll get money, they do, but then there's only so much that money can do in a high cost, isolated community. And, with the caribous and the geese that everybody's getting, that will help them. You can buy main foods like flour, rice, and such like that to go with your meals, and then it feeds a whole family, and that's really important, and, in big places—not really big places, but, you know, where people get food easily, and it don't cost that much—I mean, you know, there's roads and everything. They isolate communities. Like, one T-bone steak here is $14, $15. And if we go out on the land, it will cost us a box of shells and some gas, but then that food lasts longer than one T. [Laughter]

We can try and get as much meat as we could, but then there's just so much that you can get when there's this restriction on right now. People—two caribou a year is unbelievable, unbelievably crazy. I mean, when you depend on that food and you only can get two. I know it's, I guess it's good for something that they're doing that, but when you're trying to survive by wildlife, it's hard. I mean, if you get a caribou, you can last for a month or so, maybe more if you cut it up and all good and stuff like that. It can last you a long time, but with the Northern foods, you pretty

much have to buy it every day and just, like, people aren't made of money. [Laughter]

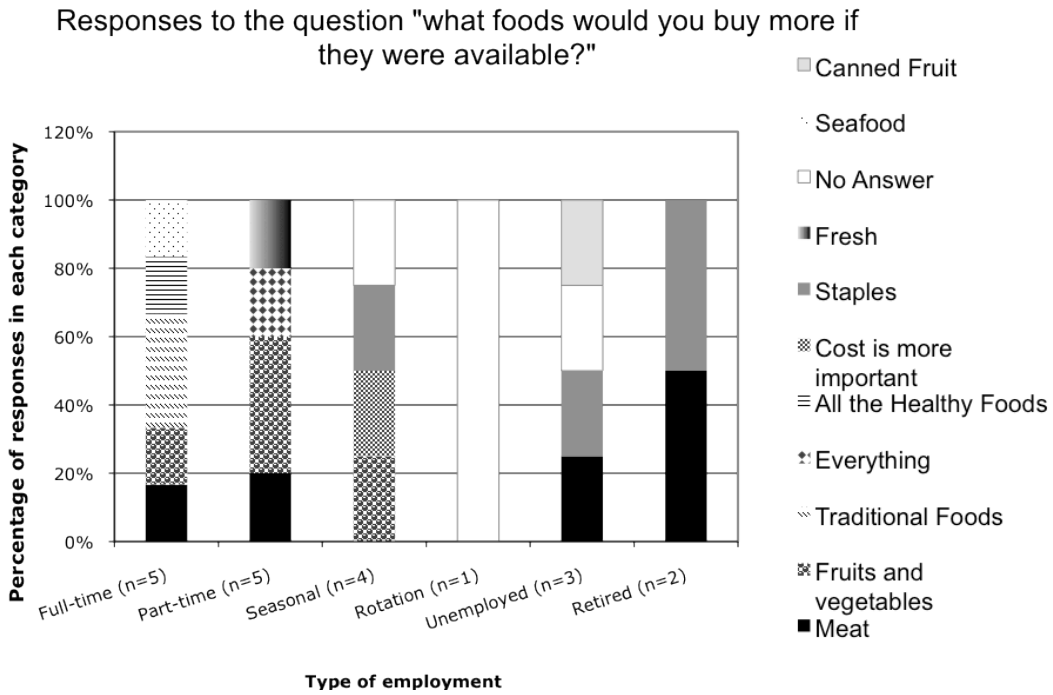
There are other healthy foods that participants stressed they would like to be able to access more readily. As Janet, a full-time employee, pointed out:

> *Boy, I'd have milk in my fridge every day if the costs were lower. Milk is essential. If they had caribou meat in their freezer shelves, that would be a big sale. If they had arctic char, guaranteed—from our own river--at the shelves, that would be guaranteed.*

4.2.2 Addressing Availability

Even with increased income, many nutritious foods are unavailable. Participant responses to the question "What foods would you buy more if they were available?" are summarized in Figure 3-4. This figure illustrates that in the course of the interviews, respondents from all employment backgrounds expressed concern over the availability of meat, fresh produce, the ability to procure staples such as rice and flour in large quantities, seafood and dairy (although when responding to the quantitative question regarding the availability of certain foods from the store no one chose dairy as a response, concerns about the availability of fresh dairy products were mentioned during the course of the interviews). Important to note is that no respondents expressed concern about the availability of pop and chips or prepared frozen foods which tend to be found in abundance in most northern stores.

Figure 3-4. Participant Responses to the Question "What foods would you buy more if they were available?" (n=20)



During the workshop participants indicated that availability in the Northern was limited by the foods that the managers chose to order in. Participants noted that:

- a lot of the food at the store is outdated
- no variety (could improve)
- it would be good to fly in the basics

This suggests a structural issue that affects the availability of nutritious foods in the community, as managers must make rational choices about which foods to sell. Figure 3-4 also illustrates that full-time employees had a broader variety of foods that they would like to be more available while other employment categories were again concerned mainly with a few basic foods, including: 'everything', fruits and vegetables, staples, meat, and 'fresh'. One seasonal employee suggested that 'cost is more important' than availability.

There is also tension between the availability of traditional foods and the cost of replacing these foods with store-bought options. Dorothy indicated that it is

difficult for some individuals to ensure household food security:

> *Because they don't get caribou this year, eh? We have no meat. We buy lots of meat from the store now, but expensive. But we have to eat.*

These responses hint at the difficulties Paulatuk residents face in procuring healthy foods.

Cost is not restricted to money, however. Time is also a currency that figures prominently in food security issues. Interviewee responses illustrate that individuals must balance their available time with available capital (both monetary and social) in order to satisfy household food requirements. Interestingly, one full-time hunter, John, indicated that he quit his job several years ago in order to hunt full-time for his family because he could not meet his household's needs when his harvesting time was restricted by wage employment:

> *I used to work before, but I couldn't keep up with my family, so had to quit. I couldn't feed them enough, what, what they go through.*

It quickly became clear that many factors interact in shaping household food security. Throughout the course of the interviews and the workshop the tension between employment, time, harvesting, store-bought foods and other household needs became evident. As Melanie, a full-time employee, pointed out:

> *Yeah, it's, like, my boyfriend, he works, and it's a full time job too, but with the way things cost in this town—like, we have a home, own a house, so we pay the fuel, power, utilities, whatever, and then we buy the groceries, and then there's other bills too that have to be paid. And then, when we think of taking time off without pay, then we think, we try balance things out, and we don't think we can do that, so it's harder to go out on the land, so we have to go and ask someone in the community for the traditional foods and stuff like that. It's—we can't go out and for it ourselves, and that's—for us, it's a big loss, but there's only so much you*

can do when you're trying to support a family.

Beyond the cost and availability of food itself, other supplies that aid in the procurement of food are also expensive and difficult for some residents to access. As Michael, a seasonal employee who hunts regularly, pointed out: *"nowadays, some people is finding it hard because the gas costs so much--and the groceries.*" These constraints are making it hard for individuals and households across the board to balance their needs for healthy foods.

Ultimately the division between store-bought foods and country foods is not clear-cut, and responses to questions posed during the interviews and the follow-up workshop reveal that food security is best viewed holistically; in other words, the division between 'store-bought food' and 'country food' is a somewhat artificial as ultimately individuals are balancing their needs for accessible, affordable, high quality and culturally appropriate foods through various means and relationships.

4.3 Addressing the Issues: The Role of Food Mail

Food Mail is viewed as one means of addressing both the high cost and poor availability of store bought healthy foods in the Arctic. Food mail is a program administered by Canada Post, Indian and Northern Affairs Canada (INAC) and Health Canada (INAC 2010a) and subsidizes the cost of air transport of a predetermined list of nutritious foods to remote (ie: not accessible by year-round roads, trains or boats) communities in the Canadian Arctic from a number of regional 'entry points' (INAC 2010b; 2010c). The cost of transporting nutritious foods from Inuvik to Paulatuk is $0.30/kg and a charge of $0.75 is added per parcel, while communities outside of the Beaufort Delta Region pay a rate of $0.80/kg (and $0.75 per parcel) (INAC 2010a). This subsidized rate is quite a bit lower than the regular shipping rate would be: as noted in the Food Mail Interim Report (INAC 2010c), "without the program, shipping rates for perishable foods could be as low as $1.24 or as high as $11.51 in the most remote isolated communities" (20). Currently roughly 70,000 people in 80 communities

access the Food Mail Program (INAC 2010a) and 135 communities are currently eligible to use the program (Dargo 2008:7). While the bulk of the program is accessed by retailers, personal orders are allowed for individuals who have the means to pay for orders to be delivered directly to them (INAC 2010c:26).

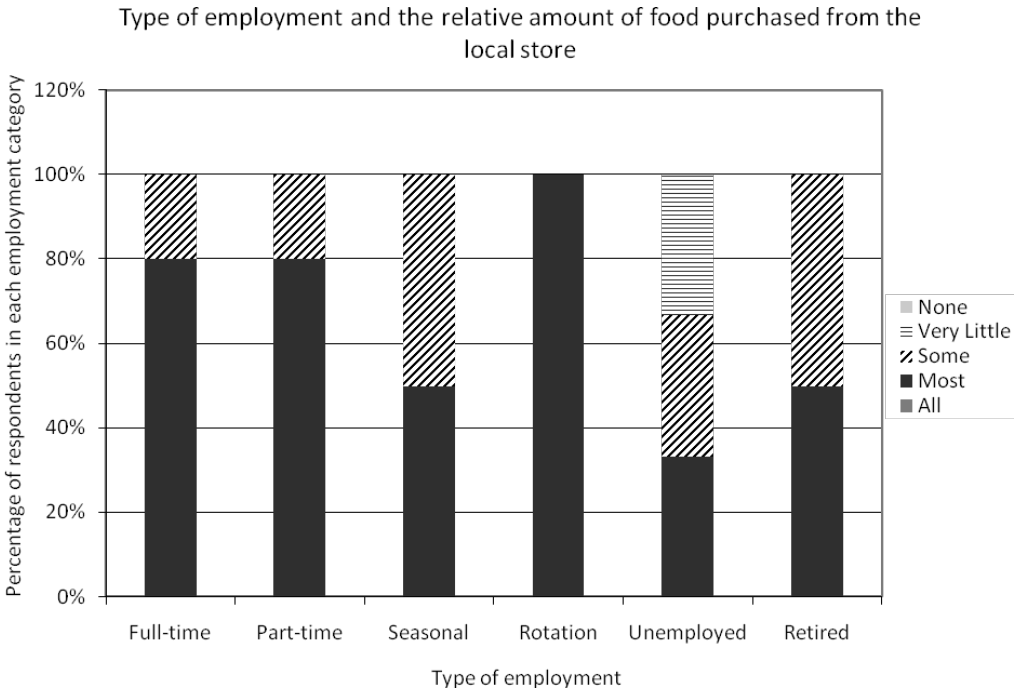
Food Mail is meant to ensure that northern residents have access to affordable and nutritious foods (INAC 2010a) and recognizes that the cost of nutritious foods in northern communities can be prohibitively expensive for many northerners.

Food Mail is being phased out and will be replaced with a "Nutrition North Canada" food subsidy that will focus on providing subsidies to retailers (INAC 2010d). An independent review was conducted in 2008 (Dargo 2008) and found that increasing costs were making the program unsustainable (Dargo 2008: 4), and significant structural and program issues meant that money was not being used in the most efficient or effective manner: "although the Program is needed and has met with some success it is burdened with design, logistical, administrative, accountability, negative resident perception and application issues" (Dargo 2008:21). While the program has received core funding of $27.6 million every year since 2002, costs have escalated so much that it was projected to cost $56.1 million to run the program in 2008-2009 (INAC 2010c: 18). A further interim report in 2009 by INAC (2010c) proposed several changes, which focused on problems with the claims process for addressing damaged goods (23), increased transparency to ensure savings are passed on to consumers (24), changes in the entry points to improve the efficiency of the program and decrease shipping costs (25), and eliminating personal orders (26).

The majority of participants indicated that they buy 'most' or 'some' of their food from the store, with no participants indicating that they buy 'all' or 'none' of their food from the store. This reaffirms the fact that residents in Paulatuk rely on both food from the store and food from the land to meet their needs. Figure 3-5 illustrates how participants in each employment category responded to the

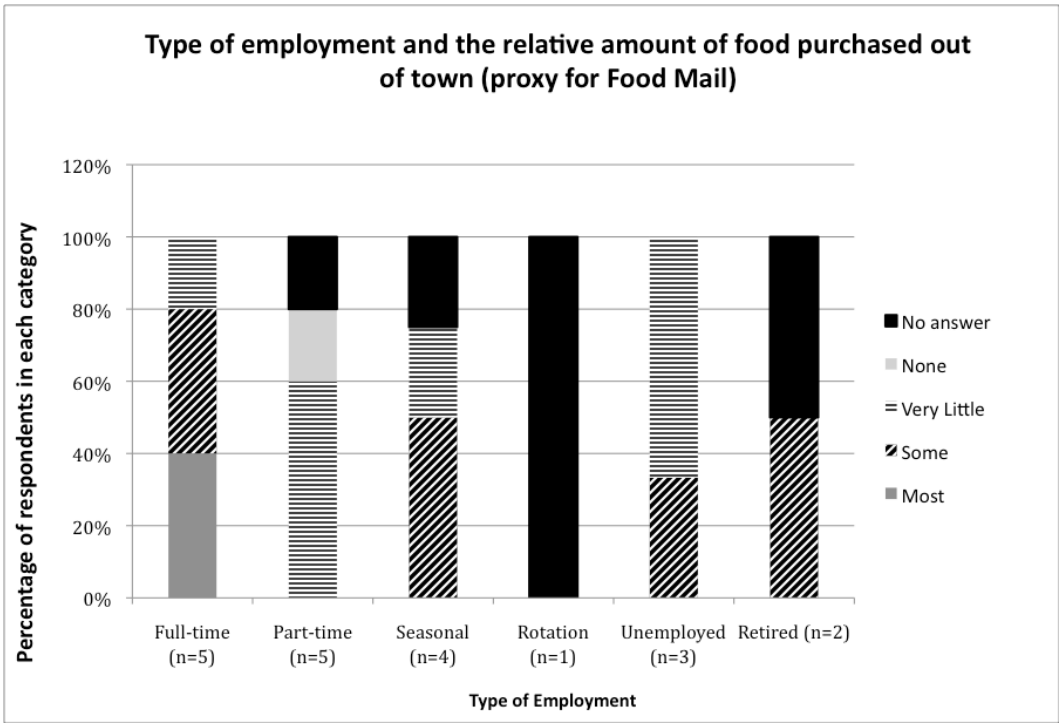
question “how much food do you buy from the store?”.

Figure 3-5. Type of Employment and the Relative Amount of Food Purchased From the Store by Participants (n=20)



Of those who did answer the question, the majority of participants indicated that they buy some or very little of their food via Food Mail, according to their responses to the question “how much food do you buy from out of town (ie: Stanton’s)?”. No respondents indicated that they buy ‘all’ of their food from out of town and n=4 did not answer this question. This question can be used as a proxy to measure relatively how much food respondents buy through Food Mail. As shown in Figure 3-6, the relative amount of food purchased out of town varied for each employment category, with only full-time employees indicating they buy ‘most’ of their food from out of town. Nobody indicated they buy all of their food from out of town, but one part-time worker indicated that they buy none of their food from out of town.

Figure 3-6. Type of Employment and the Relative Amount of Food Purchased From Out of Town by Participants (n=20)



During the workshop there was some concern about proposed changes to the Food Mail Program, as some participants were aware of the proposals raised in the Interim Report, especially the recommendation to remove the personal order option and focus on partnerships with retailers with the view that these savings will be passed on more effectively to the consumer if stores can consolidate their buying power (INAC 2010c: 26). Participants felt this would not help the cost or availability of healthy foods in the community, which is in line with one of the sections of the Interim Report, which acknowledges that removing the personal order from the program may decrease competition in communities (INAC 2010c: 26). The report goes on to suggest that by consolidating the savings in the hands of the retailers, consumers should benefit, and as such the removal of the personal order is a small price to pay in the overall redirection of the program (INAC 2010c: 26). As noted earlier, there was a sense that availability of foods is strongly influenced by the choices that the managers of the Northern store make

and several concerns about this were raised. During the food security workshop participants noted that:

- many families use Food Mail to get cheaper and fresher food than is available at the Northern
- a lot of people do use Food Mail
- it is cheaper and fresher
- it would be good to have one other option in town to compete with the Northern (to get fresher food)

Personal orders from Stanton's, a food store in Inuvik, using the Food Mail program are used in the community as a means of addressing some of the concerns regarding cost and availability.

> *Sometimes you don't have the right food we need, so we have to order it from Stanton's in Inuvik. (Donald)*

> *Yeah, sometimes I order from Stanton's. For my summer break. Gotta go end of the month in the summer. Mostly what we use, rice and stuff like that, and coffee an sugar, and get it by the cases, eh? (John)*

It seems that Food Mail is more effective for addressing availability of certain foods in the community than it is for addressing the cost of foods:

> *Cheaper, than, you know, cheaper than here, eh? Be the same amount, when you pay freight, though. It's about the same, pretty well the same price just about (John)*

In terms of ensuring access to country foods in the community, Paulatuk used to have a community freezer for the storage of meat and fish by community members that was run free of charge by the Hamlet. However, participants indicated that this was viewed as costing too much for the Hamlet to run, so it was closed and personal freezers were distributed throughout the community so that individuals could store country foods in their homes. The Hamlet opted for a one-

time expense to address storage needs in Paulatuk instead of the ongoing financial burden of operating the central community freezer. There was sentiment among workshop participants that this has reduced, to some extent, the capacity of harvesters to store their meat, and has shifted the nature of food sharing as it has delocalized it to individual households instead of a central, communal location Interestingly, one proposal in the Food Interim Report was to subsidize country foods to address concerns about access to country foods, and the need to ensure access to nutritious foods, in the North (INAC 2010c: 28).

5. Discussion

There was a sense that broader governing powers do not have a strong sense of how the wage economy influences food security in the community, or how unlikely it is that income alone will be able to address concerns about the cost and availability of store-bought foods in the community. Participants do not feel like their concerns about the cost, availability, or quality of food are being addressed adequately. Furthermore, these issues are apparent across the board, expressed by a variety of participants with different employment statuses, which challenges the idea that income improves food security. The data from Paulatuk suggest that a number of factors are influencing the ability of individuals to access affordable and nutritious foods from the land and the store, and that income alone is not the sole determinant of food security in the community. Even with the potential for increased income from employment opportunities expected to take place in the community (Mackenzie Gas Project 2005; Keeping 1998), it is unlikely that the income generated from these jobs will be sufficient to address the very high cost of food in the community or improve the ability of Paulatukmiut to procure food from the store. Thus it is important for all levels of government (local, territorial, federal) and for local individuals to take steps to address the problem of the cost and availability of store-bought food in the community

These findings echo findings from other communities that indicate that food security remains a major issue in the Canadian Arctic (Boult 2004; Chan et al.

2006; Duhaime et al. 2002; Lambden et al. 2006; Lawn and Harvey 2001; Willows et al. 2005). Furthermore, the literature reveals that certain individuals are at greater risk of experiencing food insecurity in arctic communities, particularly single mothers (Duhaime et al. 2002; Lawn and Harvey 2001) and individuals with lower incomes (Boult 2004), indicating that particular attention must be paid to those who are especially vulnerable to food insecurity; this also provides guidance for future research on food security in Paulatuk to ensure that whatever strategies are adopted are flexible and adaptive enough to address varying and shifting degrees of food insecurity within the community.

As noted above, numerous studies indicate that, despite a shift towards greater consumption of store-bought or market foods, traditional foods remain important for peoples in the Canadian Arctic (Collings et al. 1998; Condon et al. 1995; Minister of Industry 2006; Usher 2002; Wein et al. 1996). Thus it is important to assess food security from a holistic perspective, one which acknowledges the importance of both traditional foods and store-bought foods (Duhaime et al. 2008; Myers et al. 2008).

It is evident that certain populations, including communities within Canada (Dietitians of Canada 2005), are more severely impacted by food insecurity than others populations, indicating that governments must address the social, political and economic factors that shape this current disparity—and must also be aware of future factors, such as climate change that could further widen the current disparity in food insecurity experienced by populations in Canada. This also prompts a need to develop policies and approaches that address the unique circumstances of these populations, rather than trying a 'one size fits all' policy approach to solving food security concerns in communities, including arctic communities (Power 2008).

5.1 Local Issues: Food Security

With individuals and households facing so many cumulative pressures that affect livelihood strategies and food security, the spectre of yet more grand, large-

scale activity in the Arctic impacting the physical and social environment becomes disconcerting. Paulatuk itself faces regional impacts from the Mackenzie Gas Project and also faces direct local impacts from mining interests in the area (Keeping 1998). If the government cannot address the pressures northerners currently face in meeting their needs for healthy, nutritious foods, further government intervention that focuses energy on international security issues and draws attention away from pressing local issues is of grave concern.

Paulatuk has expressed a desire for a 'mini-Stanton's' in the community to help address the high cost of foods in the lone grocery store (Inuvialuit Regional Corporation Newsletter 2008: 14). This would be an Inuvialuit owned operation, and would be part of the chain of Stanton's outlets that now operate in the Inuvialuit Settlement Region, including one in Inuvik, Tuktoyaktuk and Aklavik (Inuvialuit Development Corporation 2010). However, the Inuvialuit Regional Corporation asserts that: "the population base of smaller communities makes it difficult to support a Stanton" (IRC 2008: 14). This being said, the IRC has expanded the operation of Stanton Distributing into one of the smaller communities in the region: in May 2009 a Stanton was opened in Aklavik (IRC 2009: 14), and it has had positive impacts on the availability and cost of store-bought foods in Aklavik: "Stanton came into Aklavik to make a difference for the residents. As a result, competition has driven prices down at Northern. There are also more choices." (IRC 2009: 14)

Resource development does not necessarily translate into economic opportunities for northern communities, particularly small ones like Paulatuk (Banta 2006): "resource development often does not benefit communities in resource-rich regions if the economy is not already strong" (81). Furthermore, there are disparities between communities that are benefitting from economic opportunities and those that are not. As Duhaime et al. (2008) note:

> there is an observed decrease of economic growth in communities in the Canadian Arctic, and a growing imbalance between communities

> experiencing an economic boom as a result of large-scale development projects, and others with nothing (89)

Paulatuk itself has expressed concerns about the likelihood of Paulatukmiut obtaining jobs in the Mackenzie Gas Project as there still many barriers to workers being able to capitalize on such jobs, including education needs and the need for upgrading of skills (Paulatuk 2005). "Some of the challenges our community now faces are low education levels and low literacy levels. Any proposal to limit pipeline employees to high school graduates will unfairly limit our community [*ie: the number of people in the community who can work for the project*] to a small number of people." (Paulatuk Community Corporation 2005: 5, clarification added). In order for incomes in Paulatuk to increase on par with the cost of food, the average family income would need to increase three-fold, as demonstrated above. With significant barriers to capitalizing on employment opportunities associated with the main economic activity in the region (ie: resource development), it is unlikely that Paulatuk will be able to increase income enough to keep up with the rising costs of foods. However, the Inuvialuit Regional Corporation did respond to the need for education and training in response to potential activity by Darnley Bay Resources Ltd in Paulatuk by offering a community-specific Environmental Monitoring Training Program in the spring of 2010 (IRC 2010: 11).

Another concern that the community expressed in a submission to the Mackenzie Gas Project (MGP) Joint Review Panel was a perceived threat of inflationary pressure from the project, which might cause the cost of food to increase even more than current levels:

> A major concern of our community in regards to the potential impact of the MGP on our local economy is the potential for the MGP to cause substantial inflationary increases across a wide rage of basic supplies and services we depend upon. These include possible increases in the cost of food, fuel, airfares as well as increased competition for critical

> government services such as social and mental health services provided by Inuvik and Tuktoyaktuk. (Paulatuk Community Corporation 2005: 6)

The issue of inflation and how it will impact food security in the community of Paulatuk is not addressed in the Mackenzie Gas Project Community Socio-Economic Impact Assessment.

5.2 How to address food security in the Canadian Arctic

A 2004 position paper published by the National Aboriginal Health Organization (NAHO) suggests that in order to truly tackle disparities in food security between North and South in Canada, attention must be paid to consumer protection (Boult 2004). Issues such as monopolies in remote communities (Boult 2004), gaps in the Food Mail program (Boult 2004; Chan et al. 2006), gaps in income support programs (Chan et al. 2006) and improving hunter support programs[1] (Boult 2004; Chan et al. 2006) are all vital if food security in the Arctic is to be addressed.

Although the Food Mail Program does help to address some of the difficulties in shipping nutritious food to northern communities, "the amount of paperwork and the need for a credit card limits [(sic)] the number of people who can access the program." (Boult 2004:3). Furthermore, one way that inadequate income in the Northewest Territories has been tackled is through changes to the Income Support program. Income Support is a welfare program in the Northwest Territories: "payments are designed to help individuals and compensate for low income. In 2007, an average of 2, 034 beneficiaries, or five per cent of the population, relied on Income Support benefits each month" (Wilson 2009: 10). The program was revamped in 2007 to try to ensure that recipients received more money to allocate

[1] Harvester support programs (such as the Inuvialuit Harvester Assistance Program in the Inuvialuit Settlement Region) provide funds that enable harvesters to purchase equipment for harvesting (Pearce et al. 2010)

towards food (CBC 2007), but in the development phase of this research project it was noted that this increase is still not adequate to meet the needs of many recipients in Paulatuk. Furthermore, these changes to Income Support do not address the underlying economic and structural issues that impact the cost or availability of foods in Arctic communities, and may even normalize the price pressures that Indigenous communities currently face. Chan et al (2006) and Boult (2004) also found that in Nunavut, improvements to Harvester Support programs must be made to address the expenses associated with harvesting—including the purchase and maintenance of harvesting equipment.

One key to addressing food security in the Arctic is a) developing policies that are suitable to communities rather than trying to import programs from elsewhere (Power 2008) and b) utilizing fiscal relationships that increase community autonomy rather than decreasing it (Brunet-Jailly 2009). All too often communities are forced to adopt complex, "top-down" (Brunet-Jailly 2009:2) funding regimes that diminish the ability of the community to develop its own sustainable solutions to issues such as food security. In reality, the cost and availability of store-bought foods in Paulatuk must be addressed through a combination of individual, community, regional, territorial and federal actions, of which employment opportunities play one part, but cannot be relied upon to alleviate all of the concerns regarding the high cost and poor availability of foods in the community.

Local responses: Paulatuk currently offers a hot breakfast program at the local school during the school year to help ensure that young people have access to nutritious foods on a regular basis during the school year (IRC 2010b: 8). Community members also organize community harvests to distribute country foods to elders and single mothers in the community. The community holds summer 'on the land programs' which take youth out onto the land to teach them about harvesting and other cultural skills. The old community freezer was one way that individuals could access food when they needed it, but as noted above, with the replacement of the community freezer with individual freezers this

has altered access to traditional foods somewhat.

The territorial and regional Inuvialuit governments support a comprehensive dietary intervention program, *Healthy Foods North*, which has been launched in the Inuvialuit Settlement Region to educate residents about healthy food choices, including promoting the use of healthy store-bought and traditional foods (Healthy Foods North 2009). The program also tackles the links between individual's unhealthy food choices and health problems stemming from consumption of unhealthy store-bought foods in the region, which is a significant issue (Egeland 2010; Sharma et al. 2009). However, interview responses from Paulatuk indicate that participants are aware of which food choices they *should* be making, but the affordability and availability of foods were significant obstacles to making healthier food choices. Thus, in addition to education programs to address the impact of personal food choices on health in the region, it is crucial for all levels of government to address the economic and structural issues impacting the availability and affordability of nutritious foods in the Canadian Arctic.

Regionally, the Inuvialuit Regional Corporation has the ability to address concerns about the cost of store-bought in Paulatuk by investigating the feasibility of building a small Stanton's in the community.

At the Territorial level there have been steps to address food security recently, including a motion to subsidize dairy products for young children that was put forth in the Northwest Territories Legislature in the fall of 2008 (CBC 2008). However, a more widespread look at the overall food security landscape for all residents of the region, not just children, must be utilized in order to truly mitigate current food security concerns in the longer term.

At the federal level, it is possible that Canada can look to Greenland for examples of methods that were employed to try and diminish the higher cost of living in remote communities, such as the "principle of equal prices" (Rasmussen 1999:

173), which was enacted in the past to help diminish the disparities in the cost of living in remote communities in Greenland, although is currently suspended.

6. Conclusion

It is vital to examine responses to food insecurity in Northern Canada, and to identify gaps where governmental policy and action, and individual and community responses can be directed to address current threats to food security in communities in the Canadian Arctic. An examination of past economic policies in Greenland that supported remote communities (Rasmussen 1999), as well as investigations into the "Frontier Economy" (McDonnell and Martin 2002:3) in Australian Aboriginal communities may provide insight into potential economic responses to food insecurity in the Canadian Arctic to complement and strengthen current programs, policies and research in place to address food insecurity in the Canadian Arctic, in line with the findings of nutrition research that has indicated a need for increased economic support to address food insecurity in Canada's Arctic (Chan et al. 2006; Lawn and Harvey 2001; Willows et al. 2005), and thus improve the quality of life in Northern Indigenous communities.

Food security remains a serious and pressing concern in the Canadian Arctic and other jurisdictions in the Arctic (Boult 2004; Caulfield 2000; Duhaime 2002; Duhaime et al. 2002; Lambden et al. 2006; Lawn and Harvey 2001; Rasmussen 2002; Willows et al. 2005), and must be addressed at a variety of levels: individual, local, regional, territorial and federal. Some current concerns that must be addressed in order to mitigate the cost and availability of store-bought foods in the community is consumer protection (Boult 2004), gaps in the current Food Mail Program (Boult 2004; Chan et al. 2006), (Boult 2004; Chan et al. 2006), and the overall ability of communities to determine their own food security agendas through funding regimes that strengthen community autonomy (Brunet-Jailly 2009), which will allow communities like Paulatuk to address unique local experiences—such as the incredibly high cost of food and relatively low income compared to other communities in the region.

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Chapter 4

Conclusion

1. Summary of Findings

Based on the results this study, my conclusions is that food security in Paulatuk is limited by a variety of factors:

a) food preference and individual dietary history

b) local socio-economic factors

c) changing environmental conditions and regulations (ie: caribou regulations)

d) limited or weak government involvement in food policy (ie: problems with the Food Mail program)

e) broader issues of power

It is vital to view how the wage economy influences traditional economy and food security from a holistic viewpoint, moving beyond a merely economic analysis of how involvement in the wage economy and traditional economy influence and shape life in the North. An emphasis on the myriad and simultaneous benefits of participation in the traditional economy, including health and well-being benefits, the practice of and involvement in cultural activities, learning on the land, monitoring and knowledge of the landscape and the people on the landscape, leisure, connections to the past and to deceased family members should be considered. Regional, territorial and federal governments can set guidelines for project proponents hoping to develop resource extraction projects in the region that acknowledge the intricate ways in which wage employment influences the traditional economy and food security in communities like Paulatuk. In addition, both food from the land and food from the store shape food security in Paulatuk, and this must be considered when addressing food security concerns. With regards to food from the store, it cannot be assumed that income alone will be

able to alleviate the cost and availability of foods in the community. Steps must be taken at the individual, community, regional, territorial and federals levels to address the ability of Paulatukmiut to procure food from the store and from the land.

1.1 Food Preferences and Individual Dietary History

The Inuit Healthy Survey (Egeland 2010) and the Healthy Foods North program (Sharma et al. 2009) have both shown that food preferences and individual dietary history play a significant role in what types of foods are consumed in the Inuvialuit Settlement Region; while many Inuvialuit consume country foods (Egeland 2010; Sharma et al. 2009), there is a growing concern about very high consumption of less nutritious foods like pop and other junk foods (Egeland 2010; Sharma et al. 2009). Any attempts to address food security in Paulatuk must recognize individual food preferences, especially the very strong preference for pop, shapes what foods people will realistically eat. While individuals and communities can take steps to address the cost and availability of store-bought foods and food from the land through community harvests, on the land programs, hot breakfast programs, advocating for specific food security policies at the regional, territorial and federal levels, one thing that must be immediately acknowledged is that people's individual food preferences do shape what foods will be consumed. Thus, even the best attempts to encourage the consumption of healthier foods by addressing economic and structural barriers must also acknowledge that, while food consumption is shaped by a myriad of socio-economic and political factors, people also make their own choices about which foods they want to eat and may not necessarily choose the healthier choices even if they become more accessible.

1.2 Local Socio-Economic Factors

1.2.1 Wage Employment and Food Security

The research reveals that the wage economy influences the traditional economy and food security. The wage economy thus shapes how Paulatukmiut access

food from the land and from the store. By acknowledging how the wage economy influences the traditional economy it is possible to take steps to better secure access to food from the land in the community.

The cost and availability of store-bought foods in Paulatuk is a concern for many of the participants in the interviews and the workshop. Income levels in the community are such that even those with full-time jobs expressed concerns about the cost and availability of foods in Paulatuk. These issues must be examined and taken into account at the individual, community, regional, territorial and federal levels, as the impact on the quality of life and health and well-being of Paulatuk residents is palpable from the interview responses.

1.2.2 Gender

In addition, the research findings regarding the involvement of women in harvesting activity in Paulatuk is an important addition to the literature on the 'mixed economy' (Usher 1976) in the North. The ways in which women are engaged in the traditional economy and the wage economy deserves closer attention, given the important ways that women contribute to the wage economy and to harvesting activity. This gendered analysis provides a more nuanced picture of how individuals, households, and the community balance their needs for foods from the land and from the store; how women facilitate learning of on-the-land skills and cultural knowledge and it also provides a better sense of how employment impacts the social economy.

1.2.3 Relationships and household negotiations

It became quickly evident that an individual level analysis of involvement in the wage economy and traditional economy in Paulatuk did not provide a full picture of the negotiations that enable harvesting activity throughout the community. From interview responses and from interviews with a subset of participants from the same household I was able to gather some information to illustrate the ways in which individuals negotiate time, money and social capital in order to harvest or support harvesting activity in the community. This affirms research conducted

by others (Condon et al. 1995; Duhaime et al. 2004).

1.3 Changing Environmental Conditions and Regulations

Paulatuk currently faces environmental and social impacts from climate change (Pearce et al. 2010) as well as potential environmental changes from regional and local resource extraction projects (Mackenzie Gas Project 2004). These cumulative changes will very likely impact the ability of Paulatukmiut to access food from the land and must be considered when examining how the wage economy influences food security in the community.

The impact of wildlife regulations, such as the current caribou quota in place in Paulatuk should be considered from a food security perspective. Given the high cost of store-bought meats in the community (INAC 2008) and the in-kind value of meat harvested in the region (Usher 2002), it is crucial that the health and social impacts of wildlife regulations on animals considered a staple food be considered when crafting such policies.

1.4 Limited or Weak Governmental Involvement in Food Policy

As shown in Chapter 3, there are a number of policies and programs in place at various levels (ie: local, regional, territorial and federal) to address food security concerns in the Arctic. However, participant responses to questions about their ability to procure food from the land and from the store suggest that there is an immediate and pressing sense that the day-to-day experience of food security in Paulatuk could be better addressed. Steps can be taken at the local, regional, territorial and federal government level to address current community concerns about how the wage economy influences the traditional economy, and about how income shapes the ability of Paulatukmiut to procure food from the store. In particular, concerns about the Food Mail program resonate with other national findings that critique how well the program is meeting the needs of Northernerss (Dargo 2008). It is vital that all stakeholders take current issues in Paulatuk into consideration in order to initiate specific approaches that fit the local experiences

of Paulatukmiut in procuring food from the land and from the store.

1.5 Power

1.5.1 Resource extraction and wage employment in the Arctic: the broader context

In order to understand the broader context in which a study of wage employment, the traditional economy and food security fits, one must take a broader look at the resource extraction activities currently taking place in the North—as well as those that are proposed to take place in the next decade. While this study examines one aspect of employment in the North that can be applied to examinations of how resource extraction influences the traditional economy and food security, it does not examine the larger, fundamental picture of how resource extraction shapes northern life. In order to make fully informed decisions about economic opportunities in the North, it is important to understand the power dynamics at play in an economy that relies heavily on resource extractive activities. One major project proposed for the Canadian Arctic is the sixteen billion dollar Mackenzie Gas Project (MGP), which promises to move as much as 1.2 Billion cubic feet of natural gas from the Beaufort Sea south towards Alberta (Mackenzie Gas Project 2010). The project also promises to deliver a "northern benefits plans that address education, training, employment and business opportunities" (Mackenzie Gas Project 2007). Given the large scale of this project, and the fact it will be developed while the North experiences the impacts of climate change, this is an important area to study the intersections of northern interests and corporate interests, and how these interactions create realities for northern residents.

While some accept that economic development that relies heavily on resource extraction is inevitable for the North (Abrahamson 1969; Hobart 1981), the huge impact that resource extraction is having upon wildlife, water quality and levels (Berkes et al. 2005; Bielawski 2003), and social cohesion (Duhaime et al. 2004) is not a *fait accompli*.

From a power standpoint, there must be room to fight some of the developments—to oppose oil and gas incursions into northern ecosystems, or to ensure that full, careful and real consideration is truly given to the cumulative impacts that factors like climate change and resource extraction will have upon ecological, social, and cultural continuity of Northern communities. For example, it has been shown that the cumulative effect of increased road density as a result of oil and gas field development in Prudhoe Bay, Alaska has a negative effect upon caribou density (Nelleman and Cameron 1998). Framing the question of development as simply an either/or dichotomy, without allowing room for questions regarding long-term implications that these cumulative effects will have, charts dangerously in the territory of Lukes' (2005) third dimension of power. This removes the possibility of even questioning the validity of or need for volatile single-resource based economies in the North to satisfy unrelenting global demands. Berkes et al. (2005) are careful to state that a "shift from an historical emphasis on subsistence resource use toward economic growth opportunities, individualized income development opportunities, and the increased commercialization of resource appropriation strategies" (233) is not necessarily a bad thing, and the "motives or rights of Inuit hunters to engage in diversified livelihood strategies" (233) must be respected. This is echoed by Duhaime et al. (2004), who stress the benefits of resource projects for Northern residents. This is important to keep in mind, especially to avoid essentializing or creating a static stereotype of how Inuit and Northern Aboriginal populations should be living, denying the rights of northerners to pursue economic opportunities and to self-determination. However, it is equally dangerous to state that "northern residents must be prepared to learn, cope and adapt" (Chapin et al. 2004: 346) to external, global factors that are dramatically altering the Northern environment, without questioning the market forces that are pressuring industries to pursue intensive resource extractive projects in the North, especially given the disproportionality of benefits and risks (and negative impacts for communities) associated with such projects (Gibson and Klinck 2005).

A further concern is the erasure of the lived experience of people on the lands from which primary resources are extracted from the broader discourse of resource procurement; with interest in mining on the land surrounding Paulatuk increasing (Keeping 1998), it is important to fight the "operation of a discursive dialectic [which] facilitates the reductive reimagination of heterogenous, socially produced landscapes as ahistorical resource cornucopias" (Bridge 2001: 2155). It is crucial to remember the social, health, economic, political, cultural and environmental impacts of changes to the landscape caused by primary resource extraction. This can be a difficult prospect in a nation that has served as a "resource cornucopia" (Bridge 2001: 2155) arguably since colonization; through the operation of the Hudson's Bay Company, Canadian lands served as a source of resources for the colonial world and today Canada continues to, in many ways, serve as a semi-periphery to larger markets (Buy USA 2009; Clarkson 2001).

To deny the agency of Indigenous peoples in the economic negotiations and relationships that have shaped Canada is to deny their important role in Canadian economic history (Ray 1998: xvii) and reinforces a romantic, paternalistic, and ultimately damaging view of Aboriginal peoples as merely people who have been acted *upon* and diminishes their role in Canada. Ironically, a further point of oppression can result from 'detached outsiders' or activists who impose their views of how Indigenous economic development should proceed (Yakabuski 2008), in effect re-colonizing spaces that Indigenous peoples have worked so hard to reclaim. The negotiations between those living on the lands affected by resource extraction and those who take an active interest in the physical and symbolic role of said spaces must also be taken into account when examining power relations of extractive industries in Canada.

Given the deleterious effects that resource extraction has been shown to have upon the land, it is important to be able to question the need for such disruptive projects in the North, and also to rigorously examine the power dynamics employed in such situations. Large multi-national corporations have much to gain from development in the North, and can mobilize formidable operations to

secure access to these resources (Bielawski 2003). In the area around Lutsel K'e, the diamond mines profit from the large-scale operations that were negotiated with the surrounding First Nations, while the surrounding land "is no longer the land and the life that the Dene signed their treaties to preserve" (Bielawski, 2003, 247). With Paulatuk facing potential impacts from mining interests on Inuvialuit lands surrounding the community (Keeping 1998), these dynamics should be kept in mind when considering the influence of the wage economy on the traditional economy and food security in the community.

2. Ways to Address Food Security in Paulatuk

2.1 Flexibility of employment

The research highlights the importance of flexible employment in ensuring that individuals are able to arrange their lives in a way that supports harvesting. The work builds upon and confirms previous research that shows the importance of wage employment to supporting harvesting activity (Condon et al. 1995; Kruse 1991; Kerkvliet and Nebesky 1997; Stern 2000; Usher et al. 2003), but also provides a particular viewpoint unique to Paulatuk and its specific employment history and contemporary employment issues.

As Paulatuk moves forward with plans for mining development on Inuvialuit lands (Keeping 1998), there will be opportunity to create guidelines for project proponents to encourage employment that facilitates and supports current harvesting activity. Given the links between the traditional economy and food security in the community, as well as the many other benefits that accrue from spending time on the land it is crucial that the community be able to assert its needs in negotiating and establishing beneficial work relationships with companies operating in the region.

Recommendations include scheduling part-time and seasonal employment around crucial harvesting periods, such as the spring geese run; fall caribou harvest; and August char run in order to ensure that harvesting activity, and access to food

from the land, continues to flourish in Paulatuk.

The impact of these proposed mining activities on the land should also be considered, particularly in light of the cumulative impacts that issues such as climate change (Huntington et al. 2004), wildlife regulations (Usher 2004), and regional economic development through resource extraction (Mackenzie Gas Project 2004) have had and continue to have on traditional harvesting and food security in the North.

The incorporation of flexibility into work life in Paulatuk to support the traditional economy is important not only from a food security perspective, but is also important in terms of resilience, as the traditional economy plays a vital role in building resilience in communities (Berkes and Folke 1994; Berkes and Folke 1998; Kuhnlein and Receveur 1996; Usher et al. 2003). This in turn can help mitigate the cumulative impacts of climate change, wildlife regulations, shifting employment and economic realities in the community.

2.2 Addressing the Complexities of the Influence of Income on the ability of Paulatukmiut to access food from the store

As shown in Chapter 3, the influence of income on the ability of Paulatukmiut to access food from the store is complex. It should be noted that the overall cost of store-bought foods in the community is very high, relative to other communities in the region and to larger, more accessible communities like Edmonton. At the same time, the average income in Paulatuk is lower than other communities in the region. While the ratio of the average family income to the cost of food (as measured by the Weekly Northern Food Basket value) is decreasing in Edmonton and Inuvik, this value is increasing in Paulatuk. Given that the average family income in Paulatuk would have to more than triple in order for the cost of food relative to income to approach values similar to Edmonton or Inuvik, and that current barriers such as education levels and training mean that it will be harder for Paulatukmiut to benefit from projected resource extraction employment in the region, steps must be taken at various levels (individual, community, regional,

territorial, and federal) to address the cost and availability of store-bought foods in the community.

2.3 A Holistic Approach

In order to understand how the wage economy influences the traditional economy and food security in Paulatuk, a holistic approach must be taken to individual involvement in the traditional and wage economies; similarly, a holistic approach must be taken to the two components of food security in the community—food from the land and food from the store. By examining and acknowledging that these factors play an integrated role in shaping how Paulatukmiut are able to procure food from the land and food from the store, future policy and action can be tailored to fit the day-to-day realities of Paulatuk life.

3. Future Areas of Research

This research focused on the relationship between the wage economy and traditional economy at the individual level in Paulatuk. However, it became quickly evident that relationships between members of the same household (ie: parents, partners, siblings) and relationships between individuals in the community at large are very crucial to shaping how individuals are involved in the wage economy and the traditional economy.

Future research should apply household level analysis to better understand the negotiations that individuals make in order to meet their needs for food (both from the land and from the store) as well as how they balance the other benefits that accrue from time on the land.

This project was initially planned as a comparative study between Paulatuk and Inuvik. However, time constraints and research opportunities led to the study focusing on Paulatuk. It would be beneficial to expand this study, or to replicate it, in order to understand the ways in which individuals and households balance their time in the wage economy and time on the land in different wage economy contexts, such as the community of Inuvik—which has greater resource

extraction activity (Mackenzie Gas Project 2004) and also has a higher employment rate (NWT Bureau of Statistics 2010).

Future work should examine how men and women are impacted differently by wage employment opportunities; I plan to conduct future research to determine how the crash of the trapping economy shaped men and women's employment and harvesting experiences in Paulatuk, with the hope that this will assist communities, governments and resource extractive companies operating in the Inuvialuit Settlement Region.

Paulatuk is facing increasing mining interests (Keeping 1998). This research provides preliminary information regarding the relationship between the wage economy and the traditional economy in the community; as mining activity continues it will be useful for community partners to examine these relationships and the ways in which they change as resource activity shifts on the lands around the community. A longitudinal study of the social and health impacts of mining activity in the region, as well as baseline data to compare future conditions to, will allow the community to monitor the impacts of resource extraction on the day-to-day life of Paulatukmiut and will enable the community to develop policy to address these effects.

4. Next Steps

This research encompasses a broad swath of life in Paulatuk and asked many quantitative questions regarding harvesting activities throughout the year; there are many results that have not been included in the two papers included in this paper-based thesis. However, as noted in the methodology section, there is the possibility of adapting the survey and interview instrument employed in the research project into a survey instrument to be applied throughout the region to investigate the relationships between employment and harvesting.

One book chapter on Food Security and Arctic Security has been submitted to the IPSSAS publication *Humanizing Security in the Arctic* (2010) and a second book

chapter to be submitted to a book on caribou population change will investigate the relationships between caribou population change, wildlife regulations and perceptions of food security in Paulatuk.

The second chapter of this thesis will be adapted into a paper for submission to *Northern Review.* I also plan to develop a paper for submission to *Native Studies Review* on my experiences as an Aboriginal researcher and the ethics process of community-based research in an era of broadening University governance and corporatization.

Most importantly, I will return to Paulatuk to present the research results and share in a community feast to mark the transfer of the findings to community partners. I will prepare a community report that summarizes the results for community partners to use in policy development and for community members to refer to.

5. Concluding Remarks

This study examined the relationships between work and harvesting in the community of Paulatuk. Work and harvesting are interrelated, and household and community level negotiations of time and income and access to supplies and equipment ensure that harvesting in Paulatuk continues to flourish.

Flexibility of employment ensures individuals are able to react to a variety of pressures affecting harvesting, including: wildlife migration patterns, weather, climate change, school schedules, and wildlife regulationsand thus contributes to community resilience. Women play an important role in harvesting, and gendered impacts of employment and harvesting policies should be considered for both men and women.

As Paulatuk moves forward with potential mining development it will be important for various levels of government to develop guidelines for stakeholders to ensure flexibility is incorporated into work structures and schedules to ensure community resilience in light of the cumulative pressures the community

faces.

Local self-government, regional, territorial and federal governments should examine the food security issues Paulatuk faces and future policies should acknowledge the challenges to accessing affordable, available and culturally appropriate foods, and the gaps between available income and the cost of living (specifically the high cost of store-bought foods in the community). These local impacts must be considered in the broader context of the political economy in Canada and how it impacts the Indigenous peoples who lay claim to the lands that make up the North.

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APPENDIX A

"Working on the Land, Working off the Land"

Zoe Todd, MSc Student
(Dr. Brenda Parlee – Supervisor), University of Alberta

A. Employment

1. Can you tell me a little bit about your <u>current work</u>?

a) What would be the best way to describe your work in the last year?
Circle One

• I spend a lot of time on the land (1)
• I spend some time the land (2)
• I spend very little time on the land (3)
• I don't spend any time on the land (4)

Circle One

• I am employed in town (Fulltime / Part-time / Seasonal) (1/2/4)
• I am employed but work out of town on rotation (Fulltime / Part-time) (4/5)
• I am currently out of work (6)
• (Don't know)

b) What job(s) have you held in the last year?
I was a _____ for _____ months in _____ (year)

c) What is it like working for _____ ?

d) Did you work more than one job at once? What other jobs did you have?

e) What jobs have you had in the last five years? (CHECK FOR SAME DETAILS AS ABOVE)

_____
_____
_____
_____
_____
_____
_____

f) Why did you have more than one job?

_____
_____
_____

_____
_____
_____

g) Can you tell me a bit about your working week and days?

- What days (seasons), hours do you work?
- (For rotational work: how long does it take to travel to your rotation?)
- Where do you spend most of your time?
- What kinds of activities (things) do you do?

_____
_____
_____
_____
_____

2. Time Spent on the Land

a) Why is going out on the land important to you? Do you have a special memory of a place or trip on the land that you could share?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

b) Can you tell me about your experiences going out on the land? (SEE TABLE)

- Tell me about the places where you hunt? fish? trap? Gather berries?

- Who goes hunting (or fishing/trapping/gathering berries) with you?
- What do you hunt? (What have you harvested in the last six months?)
- Tell me about how meat (or fish, or berries) is shared in your family/community)

_____
_____
_____
_____
_____

c) Can you tell me about your land-based activities in the spring, summer, fall, winter?

(e.g. Do you hunt in the spring? Where do you go? What do you hunt? Who else participate in the hunting, cutting of meat, sharing of meat?)

Season	Place (General Location)	Activities	Days/ Nights Spent	What/Amount harvested (number of animals, fish, how many bags/buckets of berries)	Who else participates in the trips, preparation of harvest, sharing of the harvest?
Spring					
Summer					

Fall					
Winter					

d) Barriers/Opportunities to spending time on the land?

Would you like to spend more time on the land?

- What kinds of things would help you?
- What kinds of 'roadblocks' limit the amount of time you spend on the land?

_____
_____
_____
_____
_____
_____
_____
_____
_____

e) How has wage employment impacted the amount of time you spend on the land?

- How has working helped you spend time on the land?
- How has working prevented you from spending time on the land?

_____
_____
_____
_____
_____
_____
_____
_____

f) Has the time you spent on the land changed because of your wage employment?

(THIS QUESTION IS ONLY FOR THOSE CURRENTLY EMPLOYED)

- Have you changed <u>when</u> you hunt, fish, trap or harvest berries? (e.g. seasons, weekends)

_____
_____
_____

_____
_____

- Have you been able to purchase any equipment that helps you on the land?

_____
_____
_____

- Have you changed where you harvest?

_____
_____
_____

- Have the people who participate or share in the harvest changed since you have become employed?

_____
_____
_____
_____

3. Food from the Land, Food from the Store

What kinds of country foods do you eat?

- What country foods do you eat regularly? (MARK WITH "R")
- What country foods do you eat sometimes? (MARK WITH "S")
- What are the main foods that you are able harvest from the land yourself? (MARK WITH "I")
- What kinds of foods from the land do you get from other people? (MARK WITH "O")

Species			
Caribou	Bull	Cow	Calf
Bluenose			
Cape Bathurst			
Porcupine			
Reindeer			
Arctic Char			

Lake trout	
Salmon	
Ringed Seal	
Bearded Seal	
White-Fronted Goose	
Canada Goose	
Snow Goose	
Brant	
Muskox	
Beluga	

b) What percentage of your food do you get from the local store?

All Most Some Very Little None

c) What percentage of your food do you get from out of town (e.g Stantons in Inuvik)

All Most Some Very Little None

d) What are the main foods you get from the store?

- How often would you say you buy these items?

  (**D**aily, **W**eekly, **M**onthly, **R**arely)

	Frequency (D, W, M, R)	More/Less than before
Meat		
Bread		
Dairy products		
Vegetables		
Fruit		
Snacks (pop, chips)		
Prepared frozen foods		

- Has your diet changed since you have become employed? Do you eat more or less meat from the store now that you are employed?

_____
_____
_____

e) What foods would you buy more if they were available?

_____
_____
_____
_____

e) What foods would you buy if the cost were lower?

_____
_____
_____
_____

g) What foods would you buy if you had more information about how to prepare them?

_____
_____
_____
_____

h) What foods do you not buy because they take too long to prepare? What foods would you buy/prepare if you had more time?

_____
_____
_____
_____

What year were you born?

Gender

THANK YOU!

APPENDIX B

Guiding Questions: Food Security Workshop

1-It seems like the cost, variety and freshness of store-bought foods in Paulatuk are a concern (based on interviews in the community last year

- Are there other issues with store-bought foods in Paulatuk?
- What helps you with the cost of store-bought food in Paulatuk?
- Do you use Food Mail? What would make Food Mail more accessible to you?
- What can the Hamlet Council, Paulatuk Community Corporation, Inuvialuit Regional Corporation, Territorial and Federal government do about
    - Cost
    - Variety
    - Freshness of store-bought food in Paulatuk
- What can you do at the community level?

2. It seems like the cost of equipment, cost of supplies, cost of gas, work schedules, kids being in school, wildlife quotas, weather and changes in ice conditions all impact harvesting activity in Paulatuk

- Are there other issues that affect harvesting activity?
- What can the Hamlet Council, Paulatuk Community Corporation, Inuvialuit Regional Corporation, Territorial and Federal government do about issues affecting harvesting activity?
- What can you do at the community level to address access to traditional foods (i.e. community harvests)

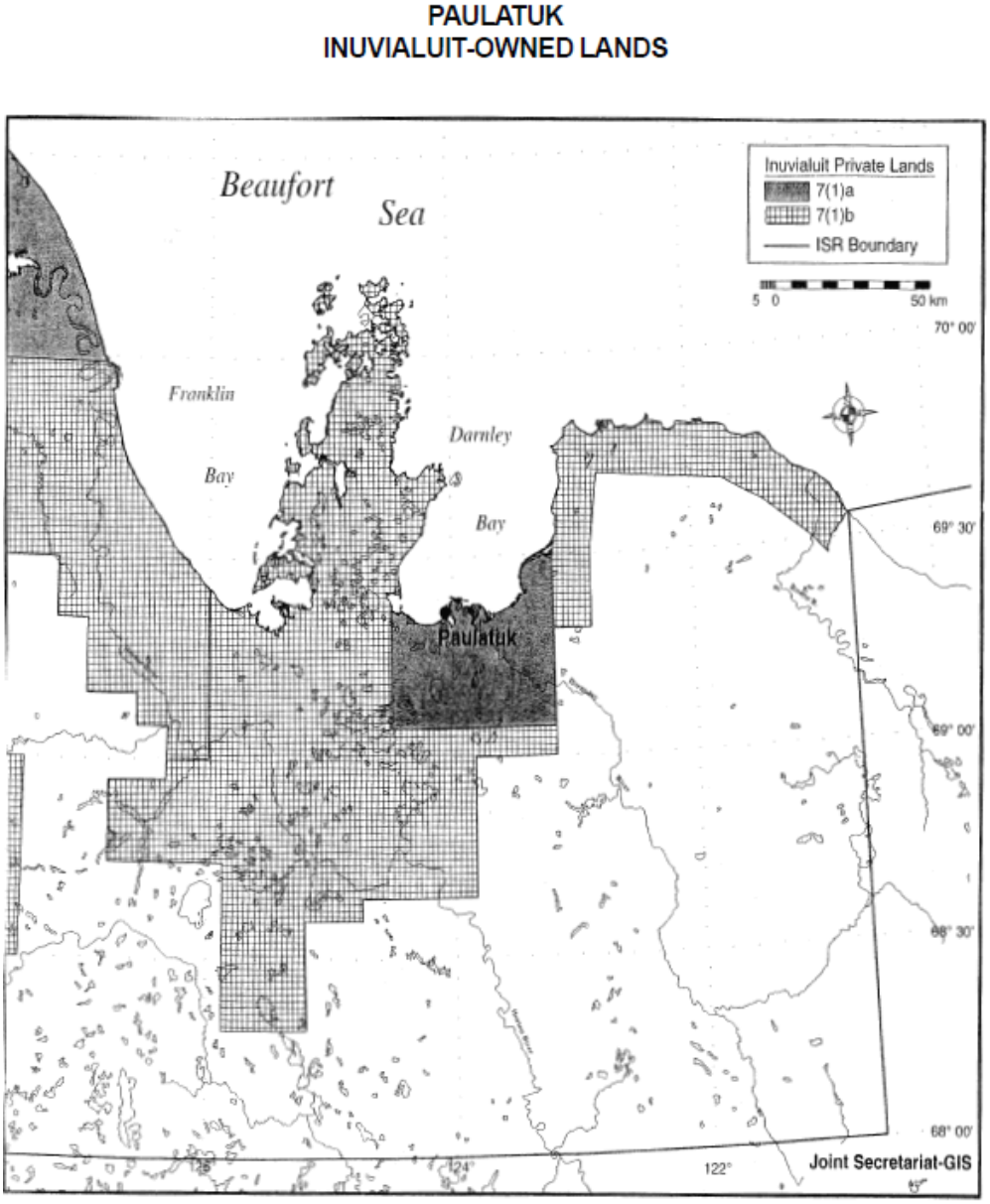
3. It seems like there are certain times of the year when it is harder to get food

i.e. when the ice roads close and the price of food, supplies and gas go up; when waiting for the barge to come; before the geese arrive

- Are certain time of year tougher than others?
- What has your experience with the caribou quota been this year?

APPENDIX C

Location of Inuvialuit 71(a) lands (surface and subsurface rights) near Paulatuk



(Source: Mining North undated: 9)

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APPENDIX D
Research Consent Form - Interviews

Researcher: Zoe Todd (Supervisor – Brenda Parlee)

Affiliation: University of Alberta. This research project is part of the requirement for a MSc in the Department of Rural Economy University of Alberta.

Funding:

Purpose: The research is a collaboration with the Inuvialuit Regional Corporation, the Hamlet of Paulatuk, the Inuvik Hunters and Trappers Committee and the University of Alberta. The purpose of the research is to understand more about the impacts of resource development in the Inuvialuit Settlement Region on traditional harvesting, dietary patterns and social networks.

Timeline: Interviews will be carried out in 2008.

1. I would like to carry out an interview with you for our project. Have you seen the attached project summary?

Yes ____

No ____

The interview will last about 1-2 hours. Information will be recorded in hand-written notes and on audio-recording equipment. Information shared by interviewees may be summarized in the final report. At no time will any specific comments be attributed to any individual unless specific agreement has been obtained beforehand.

The research has been approved by the Inuvialuit Regional Corporation, the Hamlet of Paulatuk and the Inuvik Hunters and Trappers Committee with Zoe Todd/Brenda Parlee, University of Alberta.

2. Have all of your questions about the interview or research project been answered by the researcher?

Yes ____

No ____

3. Consent to Interview: I understand and agree to participate in this research project as outlined above. I understand that I am not compelled to participate in this research project. I can choose not to answer questions that are asked and can stop the interviews or withdraw (quit) the project at any time without prejudice or consequence.

Understand and Agree_____

Disagree _____

4. Consent to Use your Name in Public Documents: I would like to use the results of this research in my Master's Thesis and any related publications such as journal articles. These will all be public documents. A copy of the final report will be housed at the University of Alberta. The Inuvialuit Regional Corporation, the Inuvik Hunters and Trappers Committee and the Hamlet of Paulatuk will also receive a copy of the final report and other deliverables as defined in the ethics application. Interview data will not be used in any public exhibition without your permission.

I would like to acknowledge you by name in all research documents and materials, or if you prefer the results of your interview can be coded to Person A or 001 etc. so that the public does not know who shared the information. If there is any information that you would not like to share publicly, please let me know.

I DO ___ want my name to be shared in public documents/ presentations.

I DO NOT ___ want my name to be shared in public documents/ presentations.

I DO ___ want my photo to be shared in public documents/ presentations.

I DO NOT ___ want my photo to be shared in public documents/ presentations.

5. Consent for Storage of your Interview Results

I will share a copy of your interview transcript with you. I will also keep a copy of any audio recordings and / or transcriptions for the purposes of reporting and publication. To ensure that your information is valued over the long term, we would also like to store copies with the research partners. Only those employed by the respective partners (Inuvialuit Regional Corporation, Inuvik Hunters and Trappers Committee and the Hamlet of Paulatuk) will have access to that information.

I DO ___ want my information stored with the above organization(s).

I DO NOT ___ want my information stored and would prefer that it be destroyed once the research project is completed.

By signing below I am acknowledging that I have read, understand and agree to the above terms and conditions for this interview.
Interviewee _____ Date: _____

If you require additional information or have any concerns about this project, please contact:

Zoe Todd/ Brenda Parlee
Department of Rural Economy
Faculty of Agriculture, Life and Environmental Sciences
507 General Services Building.
University of Alberta, Edmonton Alberta T6G 2H1
Tel: (780) 492-6825
Fax: (780) 492-0268
www.re.ualberta.ca
brenda.parlee@ualberta.ca

"If you have concerns about this research, please contact the ALES Research Ethics Board Administrator, at 492-2131.".

APPENDIX E
Project Information Sheet--Interviews

Impact of Participation in the Wage Economy on Traditional Harvesting, Dietary Patterns and Social Networks in the Inuvialuit Settlement Region

Project Summary: The research project will examine social impacts of resource development in the Inuvialuit Settlement Region. The objectives of the project are to better understand what impact resource development has on the amount, value, and structure of time spent on the land; dietary patterns; and social networks utilized for the sharing and distribution of traditional foods (e.g. locally harvested animals or plants).

The project is taking place in 2008. It is anticipated that the research will provide useful documentation about the effects of resource development that may help the partners in land use and regional planning and management initiatives. More specific needs and benefits will accrue from:

a) day to day knowledge transfer between the researcher and a local researcher / trainee;

b) creation of plain language reports and/or educational materials for the community;

c) creation of policy and planning tools and materials.

Scope: The interview will last about one-two hours. The interview questions will focus on your participation in the wage economy, the amount of time you spend on the land, your consumption of country foods and the distribution of country foods in your community. These are some of the questions I would like to ask you:

Does participation in the wage economy:

- increase / reduce the amount of time people are able to spend on the land?
- alter the structure or how people spend time on the land (e.g when, where, how, with whom);
- alter the value that people give to time spent on the land

Does participation in the wage economy influence dietary patterns:

- Increase/decrease the availability of traditional food (e.g. locally harvested animals or plants) in the household (directly or indirectly through sharing networks);
- Increase/decrease the amount of 'healthy foods' (e.g. traditional and store-bought foods outlined in the Northern Food Guide) available in the households;

What are the impacts of participation in the wage economy on social networks?

Participation, Time Requirement and Honoraria: We would like to interview you. The interview will take place in the community and will take from 1-2 hours to complete.

You will receive an honorarium of $100 for each interview in which you participate.

Risks: The interviews and workshops focuses on your relationship to the land and your experience in the community. You are not required to participate in the interview and can choose not to answer questions that are asked and can withdraw (quit) from the interview or workshop at any time without prejudice or consequence. You will be asked to sign a consent form to confirm your willingness to participate in the interview and/or workshop, your consent to the use of the interview and/or workshop data in public documents (e.g. Master's Thesis) and consent to the storage and ownership of the transcript by the research partners (the Inuvialuit Regional Corporation, the Hamlet of Paulatuk and the Inuvik Hunters and Trappers Committee). If there are questions or aspects of the discussion which make you feel uncomfortable or distressed during or after the interview or workshop, we recommend that you seek support from the local health and social services staff in your community.

Recording, Transcripts and Storage of Transcripts: Your information will be recorded in hand-written notes and using audio-recording equipment.

The audio-recordings will be transcribed and you will receive a copy. After you receive the transcript by mail, I will contact you after 30 days to determine if you have any questions or concerns or wish to have any or the entire transcript data edited or removed.

All results from interviews will be owned and held by the research partners (the Inuvialuit Regional Corporation, the Hamlet of Paulatuk and the Inuvik Hunters and Trappers Committee) and will be stored by the corresponding partner in your community. Employees would have access to data from participants who have given consent to the use of their name and also agreed to sharing and storage of results with the partners.

If you have questions or require additional information, please contact:

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If you have concerns about this research, please contact the ALES Research Ethics Board Administrator, at 492-2131.

APPENDIX F
Research Consent Form –Workshop

Researcher: Zoe Todd **(Supervisor – Dr. Brenda Parlee)**

Affiliation: University of Alberta. This research project is part of the requirement for a MSc in the Department of Rural Economy University of Alberta.

Funding: Canadian Circumpolar Institute C/BAR Grant, ARI Research Assistant Fellowship, ARI Research Fellowship

Purpose: The research was set up the help of the Inuvialuit Regional Corporation, the Hamlet of Paulatuk and the University of Alberta. The purpose of the research is to understand more about the how resource development (ie: oil and gas activity, mining) in the Inuvialuit Settlement Region affects traditional harvesting, dietary patterns and social networks.

Timeline: A half day workshop will be conducted in 2009.

1. I would like to carry out a workshop with you for our project. Have you seen the attached project summary?

Yes ____

No ____

The workshop will last 3-4 hours. Information will be recorded in hand-written notes and on audio-recording equipment. Information shared by interviewees may be used in the final report. I will not use your name unless you give me permission to do so.

The research has been approved by the Inuvialuit Regional Corporation and the Hamlet of Paulatuk with Zoe Todd/Brenda Parlee, University of Alberta.

2. Have all of your questions about the interview or research project been answered by the researcher?

Yes ____

No ____

3. Consent to Interview: I understand and agree to participate in this research project as outlined above. I understand that I do not have to participate in this research project. I can choose not to answer questions that are asked and can stop the interviews or quit the project at any time.

Understand and Agree_____

Disagree _____

4. Consent to Use your Name in Public Documents: I would like to use the results of this research in my Master's Thesis and also in other publications, such as journal articles. These will all be public documents. A copy of the final report will be kept at the University of Alberta. The Inuvialuit Regional Corporation and the Hamlet of Paulatuk will also receive a copy of the final report and other papers outlined in the ethics application. I will not use any of your information or answers in public without your permission.

I would like to acknowledge you by name in all research documents and materials, or if you prefer the results of your interview can be coded to Person A or 001 etc. so that the public does not know who shared the information. If there is any information that you would not like to share publicly, please let me know.

I DO ___ want my name to be shared in public documents/ presentations.

I DO NOT ___ want my name to be shared in public documents/ presentations.

I DO ___ want my photo to be shared in public documents/ presentations.

I DO NOT ___ want my photo to be shared in public documents/ presentations.

5. Consent to receive a copy of your transcript.

Your information will be recorded in hand-written notes and using audio-recording equipment.

The audio-recordings will be transcribed and if you consent to receiving a copy of your individual transcript, you will receive a copy of this written transcription containing a record of your participation in the workshop (i.e: only your information will be included). After you receive the transcript, I will contact you after 30 to 40 days to see if you have any questions or concerns or wish to have any or the entire transcript data edited or removed. If I am unable to reach you after three attempts I will assume that you are okay with the content of your transcript.

I DO__ want to receive a copy of my transcript.

I DO NOT___want to receive a copy of my transcript.

6.Consent for Storage of your Interview Results

I will share a copy of your interview transcript with you. I will also keep a copy of any audio recordings and / or transcriptions for the purposes of reporting and publication. To ensure that your information is valued over the long term, we would also like to store

copies with the research partners. Only those employed by the partners (Inuvialuit Regional Corporation and the Hamlet of Paulatuk) will have access to that information.

I DO ___ want my information stored with the above organization(s).

I DO NOT ___ want my information stored and would prefer that it be destroyed once the research project is completed.

By signing below I am acknowledging that I have read, understand and agree to the above terms and conditions for this workshop.

Participant _____ Date: _____

If you require additional information or have any concerns about this project, please contact:

If you have questions or require additional information, please contact:

Zoe Todd (ztodd@ualberta) (Student)

Brenda Parlee (brenda.parlee@ualberta.ca) (Supervisor)

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If you have concerns about this study, you may contact Dr. Wendy Rodgers, Chair of the Faculty Research Ethics Board, at (780) 492-8126. Dr. Rodgers has no direct involvement with this project.

APPENDIX G
Project Information Sheet--WORKSHOP

Impact of Participation in the Wage Economy on Traditional Harvesting, Dietary Patterns and Social Networks in the Inuvialuit Settlement Region

Researcher: Zoe Todd (Supervisor: Dr. Brenda Parlee)

Project Summary: The research project will look at social impacts of resource development in the Inuvialuit Settlement Region. In other words, how does oil and gas activity or mining affect communities in the Inuvialuit Settlement Region? The project will look at how resource development (ie: oil and gas development and/or mining) affects how much time harvesters have to go out on the land, what kind of food people are eating in your community, and social networks used for the sharing traditional foods (e.g. locally harvested animals or plants).

The project is taking place in 2008 and 2009. The research will help us understand how resource development affects communities in the region and may help with future planning.

Participation, Time Requirement and Honoraria: We would like to invite you to participate in a workshop on food security. The workshop will take place in the community and will take from 3-4 hours.

You will receive an honorarium of $100 for taking part in the workshop. Food and beverages will be provided.

Scope: To participate in the research, we will ask you to attend a workshop discussing these issues. The workshop will last about three to four hours. The workshop will look at food security in your community. The questions I would like to ask you are:

a) what helps you get store-bought foods in the community? What makes it hard to get store-bought foods in the community?

b) What can be done to make it easier to get store-bought food in the community?

c) What helps you get traditional foods (e.g.: locally harvested plants and animals) in the community? What makes it hard to get traditional foods in the community?

d) what can be done to make it easier to get traditional foods in the community?

Risks: The workshop will focus on food security. You do not have to take part in the interview and can choose not to answer questions that are asked and can quit the workshop at any time without any problems.

You will be asked to sign a consent form to show:

a) that you are willing to participate in the workshop,

b) that you are willing to let me to use information from the workshop in public documents (e.g. in my Master's Thesis)

c) That you would like to receive a copy of your transcript.

d) that you are willing to let your transcript be stored and owned by the research partners (the Inuvialuit Regional Corporation, the Hamlet of Paulatuk).

If there are questions or parts of the discussion which make you feel uncomfortable or upset during or after the interview or workshop, we recommend that talk to someone from the local health and social services staff in your community.

Recording, Transcripts and Storage of Transcripts: Your information will be recorded in hand-written notes and using audio-recording equipment.

The audio-recordings will be transcribed and if you consent to receiving a copy of your transcript, you will receive a copy of this written transcription containing a record of your participation in the workshop (i.e: only your information will be included). After you receive the transcript, I will contact you after 30 to 40 days to see if you have any questions or concerns or wish to have any or the entire transcript data edited or removed. If I am unable to reach you after three attempts I will assume that you are okay with the content of your transcript.

All results from interviews will be owned and held by the research partners (the Inuvialuit Regional Corporation and the Hamlet of Paulatuk). Employees will only have access to data for those participants who have consented to store their transcript with the research partners.

A local Research Assistant, Mr. Bill Ruben, will help with the workshop by helping to recruit participants and will also help with asking questions during the workshop. For participants that consent to receive a transcript, he will also help with sharing your transcript with you after the workshop and will make sure that you are comfortable with which portions of the transcript I plan to use in my Master's Thesis and in any of the reports or articles I write about this project . The local Research Assistant will also help with sharing the research findings in the community by putting up posters about the project results and he will help with a presentation to the community once the project is done to share the research findings.

If you have questions or require additional information, please contact:

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