# A SOCIAL AND CULTURAL CAPITAL APPROACH TO UNDERSTANDING TRADITIONAL ACTIVITIES ON THE LAND IN TWO NORTHERN DENE COMMUNITIES

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**Abstract / Résumé**

Considerable environmental change has occurred in Canada's North in recent years, in part due to mining and pipeline construction. Structured interviews with fifty people were administered by local community fieldworkers in 2005 to examine how people residing in the Yellowknives Dene First Nation communities of N'Dilo and Dettah engage in traditional harvesting activities. The responses revealed how traditional activities such as hunting, fishing and eating wild foods have changed throughout the past ten years. These results emphasize the need to account for the more intangible effects on social relations and cultural values when planning for further development activities in northern communities.

Les régions nordiques du Canada ont été témoins de modifications considérables de l'environnement au cours des dernières années en raison, en particulier, des activités minières et de la construction de pipelines. Des travailleurs communautaires sur place ont procédé à des entrevues dirigées de 50 personnes pour examiner comment les résidents des collectivités de la Première nation des Dénés Yellowknives de N'Dilo et de Dettah pratiquent les activités de récolte traditionnelles. Les réponses ont souligné comment des activités traditionnelles comme la chasse, la pêche et la consommation d'aliments sauvages ont changé considérablement au cours des dix dernières années. Les résultats des entrevues mettent l'accent sur la nécessité de tenir compte des effets plus intangibles sur les relations sociales et les valeurs culturelles de la planification des activités de développement futures dans les collectivités nordiques.

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## Introduction

In recent years a number of studies have addressed the changing traditional lifestyles of Indigenous peoples in northern Canada (see, for example, George et al., 1995; Usher et al., 2003). Fewer studies have examined the impacts of industries, such as mining, and how they may affect traditional land use. These latter studies are significant as northern Indigenous communities and economies are currently comprised of both non-traditional and traditional economic activities (Usher et al., 2003; Duhaime et al., 2004).

There has been a recent growth in activities such as mining and pipeline construction in the Northwest Territories. These changes have stirred debates on how new activities in the north may influence and potentially cause a decline in the practice of traditional subsistence activities. Some recent reports attempting to measure these influences include the *Arctic Climate Impact Assessment* (ACIA, 2005), the *Community and Diamonds Report* (GNWT, 2006), as well as *The Survey of Living Conditions in the Arctic* (SLiCA, 2007).

This study was undertaken to better understand current traditional practices in two Indigenous communities in Canada's North: the Yellowknives Dene First Nation communities of N'Dilo and Dettah in the Northwest Territories. Using the theories of cultural and social capital, the importance of changing traditional activities to Indigenous communities is explored. The need for communities to plan for not only economic sustainability, but also for cultural, social and ecological sustainability, is also discussed.

## Background

### Traditional Activities

Even though wage employment is now very familiar to northern Indigenous populations, subsistence harvesting continues to play an important role in the modern economy of many communities. In fact, most households effectively integrate hunting, fishing and gathering with participation in some form of wage-earning labor (Usher et al., 2003). Until the early 1900s, most northern Canadian Indigenous peoples lived together in self-sufficient bands to secure their material existence. These bands allowed families to work together to procure resources for food and shelter. These social relations still exist today even though non-traditional lifestyles have also emerged through cash economies and systems of government support (Usher et al., 2003). Traditional harvesting activities are very important for Indigenous peoples of the North (VanOostdam et al., 2005). Crabbe (1998 cited in Nelson et al., 2005)

states that many of the social problems facing Indigenous peoples, including physical abuse, alcoholism and the feeling of anomie, can be linked to the social vacuum that was created when harvesting ceased as the major focus of life. Crabbe argues that those who maintain strong ties to hunting and traditional harvesting are better able to adapt to the challenges of modern life.

Harvesting is very important to the diet of northern peoples. Foods normally harvested in the Northwest Territories are very high in protein and trace minerals. Furthermore, commercial food products can be very expensive in the North (Berkes et al., 1994). Therefore, a diminished harvest would definitely have economic impacts on the population (Nelson et al., 2005). Even though activities such as hunting and fishing continue to be important for northern populations, the monetary value of these activities tends to be underestimated in large part due to the fact that country foods are rarely sold and bought in the market sector in the Canadian Arctic (Usher et al., 2003). Harvesting activities are important for both social well-being and cultural value (Berkes et al., 1994; VanOostdam et al., 2005), therefore, it is argued that it is inappropriate or inadequate to measure these activities solely in terms of their economic worth.

## Social Capital

The theory of social capital has gained wide acceptance in helping understand the norms and social relations embedded in the social structures of society (Narayan & Cassidy, 2001). It is a concept that has been defined in various ways (Morrow, 1999). However, it generally refers to the degree of connectivity and the quality and quantity of social relations possessed by a population (Harpham et al., 2002). Portes (2000) states that the original theoretical orientation was developed by French sociologist Pierre Bourdieu and American sociologist James Coleman. Bourdieu (1983) defines social capital as a situation where "the network of relationships are the investment strategies, individual or collective, consciously or unconsciously aimed at establishing or reproducing social relationships that are directly usable in the short or long term" (p. 249). Coleman differs in defining social capital through function: "It is not a single entity, but a variety of different entities having two characteristics in common: they all consist of some aspect of social structure and they facilitate certain actions of individuals who are within the structure" (Coleman, 1998). For this paper, Portes' (1998) use of social capital as a relational characteristic is most beneficial when explaining the advantage of traditional harvesting:

> Whereas economic capital is in people's bank accounts and

> human capital is inside their heads, social capital inheres in the structure of their relationships. To possess social capital, a person must be related to others, and it is those others, not himself, who are the actual source of his or her advantage. (Portes, 1998: 7)

Many studies have effectively used social indicators as a measure for quality of life (see Loomis, 2000; Portes, 2000; Duhaime et al., 2004; Karjala et al., 2004).[1] Therefore, the value of Indigenous social relations, built and maintained, may be seen through an analysis of social capital. Literature on the relationship between Indigenous people and traditional harvesting activities has shown that spending time in the bush together creates a sacred worldview and strengthens relationships between humans, animals and the land (Nelson et al., 2005). Activities on the land bind people together on a different level than other activities such as crafting or playing games, perhaps because family units have traditionally been defined through roles and relationships associated with hunting and gathering practices (Nelson et al., 2005). Although wage employment now exists throughout the North, solidarity remains strong in many communities. This is evident from the high participation rates of households that consume, produce and share subsistence resources (Usher et al., 2003). Harvesting has been defined as an important indicator of social capital (Mackenzie Valley Environmental Impact Review Board, 2005).

Kin relationships are strengthened not only through the bonds of harvesting, but also through the bonds of sharing country food with one another (Nelson et al., 2005), ultimately reinforcing social capital. Sharing increases the equitable distribution of products from the land (Berkes et al., 1994). In subsistence based societies, security and well-being are often achieved through a collective system rather than individually. Therefore, there is tremendous incentive to maintain the system through sharing, feasting, ritual observance and associated norms (Usher et al., 2003). Usher states, "Both subsistence activities and subsistence outputs are essential for the maintenance of the social system" (2003:180).

To measure social capital within a population there are a number of elements that must be considered. The Mackenzie Valley Environmental Impact Review Board (2005) put forth a set of guidelines for these measurements. A component described in these guidelines involves measuring sustainable wildlife harvesting and land-use access. To measure this component an assessment must be made of the traditional economy, especially hunting, trapping and gathering. Also, access to the land for traditional activities must be measured, as well as understanding the value of alternative land uses.

It should be noted that social bonds can be created during participation in non-traditional activities as well. Durkheim (1973, as cited in Best, 2003) states that social solidarity is the cohesion that people have within a group. Through this group solidarity and cohesion, social capital is built. However, he further states that there are two forms of solidarity: "mechanical solidarity" and "organic solidarity." Duhaime (2004) builds on these concepts to describe social cohesion in northern populations. He states that in organic solidarity, cohesion is produced and reproduced through participation in wage labor, political activities and community sponsored activities such as schools or employment insurance. He further affirms that in mechanical solidarity:

> …social ties [are] produced and reproduced by participation in family and community-based activities related to the non-commercial production and exchange of subsistence resources, specifically those related to domestic activities within the household and outside of it. These ties are produced and sustained by an ethos of reciprocity and sharing manifested by the regular exchange of various types of support, including material, emotional, and even spiritual. (Duhaime, 2004:302)

Therefore, social capital does not have to come only from mechanical forms of solidarity. It can also be generated through participation in wage labor and government and political activities. In fact, the two forms can be beneficial to each other. For example, people who work in wage employment can afford equipment, such as guns and vehicles, to successfully take part in hunting activities (GNWT, 2006).

### Cultural Capital

Bourdieu (1983) claims that, "cultural capital can exist in three forms: in the embodied state, i.e., in the form of long lasting dispositions of the mind and body; in the objectified state, in the form of cultural goods; and in the institutionalized state" (p. 243). The theory of cultural capital emerged to explain how empirical measurement factors, such as monetary investments, conversions and profits, cannot fully explain the proportions of resources that different individuals allocate to cultural investments. For example, a pile of rocks on the ground would not normally be considered valuable, however, if the "pile of rocks" where instead an *inukshuk* (a directional marker that signifies safety, hope and friendship) the value would greatly increase. Throsby (1999) further puts forth the definition of cultural capital as the stock of cultural value embedded in the object. Therefore, cultural value may give rise to economic value as people may be willing to pay a higher price for the cul-

tural content of an asset rather than what they may offer for the physical item alone. This definition clarifies the importance of cultural capital in the relationship between Indigenous people and harvesting activities. Thorsby (1999) further states:

> It is becoming clearer that cultural 'ecosystems' underpin the operations of the real economy, affecting the way people behave and the choices they make. Neglect of cultural capital by allowing heritage to deteriorate, by failing to sustain the cultural values that provide people with a sense of identity, and by not undertaking the investment needed to maintain and increase our stock of intangible cultural capital, will likewise cause cultural systems to break down, with consequent loss of welfare and economic output. (Throsby, 1999:9)

Berkes and Folke (1992) define the term cultural capital as "the factors that provide human societies with the means and adaptations to deal with the natural environment and to actively modify it" (p. 2). This dimension of capital includes traditional ecological knowledge (Johannes, 1989, cited in Berkes & Folke, 1992). Berkes (1999) refers to this knowledge as cultural continuity transmitted in the form of social attitudes, beliefs, values and conventions that are derived from historical experiences. This knowledge is important as it represents how the population has categorized and classified what is important to them. For Indigenous peoples, the failure to incorporate the basic elements of harvesting or the protection of cultural capital in resource management regimes reinforces trends of both their economic and social marginalization (Howitt, 2001).

Furthermore, cultural capital includes the ways in which societies interact with their environment. Berkes and Folke (1992) state that cultural capital is the interface between social and natural capital; therefore, cultural capital determines how natural capital is used and modified to create human capital. This is an important aspect in the changing North, as both human and natural capital has changed substantially for Indigenous populations in recent decades. It can be argued that human capital has been altered through technological changes in the North and natural capital has been coveted and extracted by external industries for profit.

Cultural capital is an important value inherent to Indigenous societies and should be valued and considered when assessing the impacts of non-traditional economic development in the North. Northern Indigenous populations have strong physical, emotional and spiritual connections to the land that have previously been profoundly impacted by economic development. Activities such as hunting, fishing and trapping

continue to be important to connections to the land and survival of tradition. As such, hunting involves more than the mere harvesting of food; "subsistence embodies cultural perspectives of relationships to places, people and animals" (Berkes et al. 1994:358).

When measuring cultural capital within a population there are a number of components that are considered. For example, the Mackenzie Valley Environmental Impact Review Board (2005) includes the protection of heritage and cultural resources. To measure this component, one must understand the aesthetic, cultural, archeological and spiritual values of places. It is also recommended to consider means to maintain traditional language, education, laws and tradition.

## Study Area and Methods

### The Communities

This study was conducted in the communities of N'Dilo and Dettah in the Northwest Territories of Canada. These communities are part of the Yellowknives Dene First Nation, which falls under the Akaitcho Territory Government. N'Dilo means "end of the island" and is located at the end of Latham Island, within the municipal bounds of the city of Yellowknife (Fig. 1). It was established when the gold mines of Yellowknife were active and has grown to near capacity, with only a few building lots remaining. Dettah means "the burnt place" and is across the bay from Yellowknife (Fig. 1). It is 6.5 kms from Yellowknife by ice road in winter or 27 kms by all-season road. Traditionally, the site was a fish camp for the Dene for hundreds of years before Yellowknife was established (Natural Resources Canada, 2007). Specific population statistics are only collected for Dettah, which in 2005 had a population of 213 people (GNWT, 2005). Although similar information is not collected for N'Dilo (as it is included as part of Yellowknife for census purposes), it is estimated that the total population is approximately 330 people.

The proximity of the two communities to the urban centre of Yellowknife means that residents are exposed to a greater urban influence than many other more remote Dene communities in the Northwest Territories. This results in unique sociocultural influences that may affect knowledge, perspectives and behaviors related to subsistence activities. In addition, the people of the Yellowknives Dene First Nation communities are concerned about residual arsenic contamination of their water and land from two former gold mines (Giant Mine and Con Mine) near the City of Yellowknife and the potential effects of this contamination on human and animal health.

**The Survey**

The study in N'Dilo and Dettah was part of a larger study conducted in these communities and the Inuit communities of Nain and Hopedale in Nunatsiavut to better understand people's knowledge, understanding and communication needs related to environment and health risks. The first phase of the research project involved the collection of data on demographics, health status, lifestyle, risk perspectives and communication and information needs via the administration of a face-to-face questionnaire. The questions were based in part on previous surveys conducted by Fletcher et al. (1997) in Kuujjuarapik, Quebec and by Furgal et al. in Nunatsiavut (2005). This paper is based on the responses to specific questions asked in the lifestyle section of the questionnaire dealing with engagement in traditional activities and consumption of traditional foods.

Once developed, the draft questionnaire was translated and back-translated into Dogrib, the local language for the two communities. It was then verified and pre-tested with three people to ensure adequate wording, consistent meaning to all respondents and standardized expectations for the type of response (Fowler, 1993; Taylor-Powell, 1998; American Statistical Association, 1999). Pre-testing also allowed for standardization of interviewing approach and techniques. Feedback from the pre-test was used to modify the interview guides and interviewing procedures. Ethics approval for this stage of the research was obtained from the Research Ethics Board of the Faculty of Agriculture, Forestry and Home Economics of the University of Alberta on 23 March 2005.

The questionnaire was administered by trained local community fieldworkers in March and April, 2005. The sampling frame was all individuals in N'Dilo and Dettah over the age of 18. In a community survey conducted by the Government of the Northwest Territories (GNWT) Bureau of Statistics in 2004, the population of Dettah (age 15+) was determined to be 150 people and the population of N'Dilo (age 15+) was 204 (GNWT, 2005). Proportional quota sampling was used in this study, with a target of a total 50 individuals for the two communities. This number was chosen on the basis of limitations imposed by the extensive time required for one-on-one interviews and the overall time and budget resources available for the study. It represents 14% of the eligible participants in this population, with a confidence interval of ±13% (at the 95% confidence level). This sample size was therefore considered sufficient to obtain the required rigor through representativeness of the population (Baxter & Eyles, 1997).

Initial participant selection was based on a randomized selection of eligible participants from available lists of community members. "Snow-

ball sampling"—a standard social science technique for developing a sample where existing study subjects identify future subjects from among their acquaintances—was then used for subsequent determination of potential participants. This sampling technique is considered to be an effective means to building a relatively exhaustive sampling frame when dealing with a small population of people who are likely to know each other (Bernard, 2006). As much as possible, participants were then chosen to reflect the age and gender stratified proportions recorded in the last census of each community. However, respondent availability and willingness to participate ultimately dictated the sample composition. The final sample consisted of 29 people in N'Dilo (8 men and 21 women) and 21 people in Dettah (9 men and 12 women). Although the gender ratio of this sample (0.52 M/F) was different than that reported by the GNWT Bureau of Statistics for 2004 (1.13 M/F), the age breakdown of the participants closely mirrored those for Dettah at the time of the 2005 territorial census.

Responses to the interview questions were recorded by the community fieldworkers directly on the questionnaire form. Answers to the open-ended questions were digitally recorded (when permitted by the participant) and transcribed verbatim. The surveys were conducted in the local Dogrib language when appropriate, and then translated to English for subsequent data entry and analysis.

### Data Analysis

The responses from each questionnaire interview were entered into the statistical analysis computer program SPSS v.14.0. Thematic content analysis was conducted wherein common codes for the open-ended responses were developed and agreed upon by the investigators in both sets of communities and answers were coded and categorized accordingly (Miles & Huberman, 1994). Files were structured so that the data could be analyzed by each individual community and for the composite of both communities together. A linear probability model was used to explore the relationship between selected demographic characteristics (gender, age, education, and if the respondent had children) when deemed appropriate to further interpret the results (Savage, 1993).

## Results & Discussion

### Participation in Harvesting Activities

Overall, 58% of the 50 respondents (29 people) stated they currently go out on the land to engage in traditional and subsistence activities. These activities varied for individuals. Of those who stated that they go

out on the land, 72% (21 people) hunted, 69% (20 people) fished, 79% (23 people) picked berries, 58% (17 people) collected firewood, and 38% (11 people) trapped. An additional 58% of respondents (17 people) stated they engaged in other activities such as picnicking, harvesting medicinal plants, making dried meat and preparing hides. Note that these numbers are based on multiple responses from the survey participants. According to the guidelines of the Mackenzie Valley Environmental Impact Review Board (2005), taking part in harvesting activities is an important aspect of cultural capital.

Gender, age and education variables did not influence the amount of time that respondents spent on the land. This is consistent with the findings of Jardine et al. (2009) for risk perceptions in these communities, where it was concluded that gender differences do not exist when communities are stressed by multiple and concurrent risks. The only significant variable was children ($p<0.01$); those who had children were 69% more likely to go out on the land than those who did not have children. This may be due to the fact that commercial food products can be expensive in the North (Berkes et al., 1994) and therefore feeding children is more economical when including country foods. Additionally, as harvesting involves teaching traditional values, children may be learning techniques from elders while actively engaging in hunting, fishing and gathering. These learning activities are important for the development of cultural capital.

Participants were also asked questions related to the change in the amount of time spent out on the land over the past ten years. Overall, 40% of the individuals (20 people) stated that they have completely stopped going out on the land. A further 32% (16 people) stated that the amount of time they spend on the land has decreased in the last 10 years. It should be noted that more people in N'Dilo had either stopped or decreased the amount of time spent on the land (25 people or 86% of the 29 people surveyed in this community) than in Dettah (11 people or 52% of the 21 people surveyed in this community). This may be because N'Dilo is closely located to the larger urban centre of Yellowknife. The types of self-identified traditional activities that people had done in the past but no longer engage in included hunting, fishing, trapping, berry picking, collecting firewood and picnicking. It is recognized that these self-reported changes in engaging in traditional activities may be influenced by informant recall bias, and therefore cannot be conclusively used to empirically evaluate changes in community land and resource use over time (Usher & Wenzel, 1987). Nonetheless, this information is important because it reflects the belief that traditional activities have decreased, and thus indicates a loss to the members of these commu-

nities of both the social relations and cultural value associated with these activities.

Thirty-two respondents provided reasons why they had stopped participating in some traditional activities or completely stopped going out on the land. Of these, the largest percentage (38% or 12 people) stated that a lack of time was the biggest barrier to harvesting, primarily because of commitments to wage earning employment: "…because to have a job now, you have to pay the rent, buy food. You need to have a good education and you stop the rest."

The second largest barrier to harvesting reported by respondents was the lack of people with whom to go out on the land. Overall, 22% of respondents (7 people, n=32) stated that they would not go out on the land because of a lack of companionship. Comments such as "there is nobody to go with," "my grandparents used to take me out on the land," or "I won't go by myself" were common responses to this question. These answers reflect a decrease in social connectivity (capital) among respondents which in turn influences their ability to maintain elements of cultural capital associated with practicing traditional and subsistence activities.

Another barrier to harvesting activities mentioned by respondents was a lack of transportation. A small number of respondents (13% or 4 people) stated that they did not have access to cars or vehicles that would take them to harvesting areas. This could be due to the respondents' close proximity to Yellowknife. As discussed later in this paper, many do not wish to hunt close to urban areas and must go further from communities. Therefore, it takes more time to get to the hunting areas and transportation is required. Traditional hunting grounds are very important to northern Indigenous people, yet respondents have chosen to harvest away from these areas to decrease the risk of food contamination. This undermines their ability to maintain strong and active ties with the land, resulting in further loss of social and cultural capital. Additional barriers to harvesting cited by respondents in this study are also indicative of an erosion of traditional ways in engaging in these activities, such as too many bylaws and a loss of traditional knowledge.

A small percentage of individuals in N'Dilo and Dettah actually reported an increased level of participation in trapping, hunting and fishing activities. This could be the result of higher incomes related to mine employment, which facilitates individuals being able to purchase and maintain hunting equipment and supplies and vehicles for transportation to remote sites. The average income in all areas of the Northwest Territories has increased substantially since 1997 (GNWT, 2006). This increase is especially present in small local communities where growth in income has been almost twice the Canadian average. Others may

have increased their harvesting activities in relation to their rotational work schedule (two weeks in camp and two weeks off) which may have decreased disruption to their traditional lifestyle. This analysis supports the argument that a continued rise in non-traditional activities could in fact strengthen cultural well-being and community vitality:

> …the wage economy provides the supplementary means by which to enhance hunting and fishing harvests. The influx of money can be used to purchase equipment such as boats, motors, snowmobiles, rifles, tents, etc., and to secure needed supplies such as gas, ammunition, basic foods and staples. Modern equipment increases the hunter's mobility and the productivity of the hunt. The increased income allows Indigenous people to maintain their connection to the land and continue to pass their heritage onto their children. Thus, ironically, the impact of wages combined with a two week rotation period can actually promote and sustain the traditional lifestyles activities. (GNWT, 2006: p.45)

However, the decrease in time devoted to harvesting reported by 75% of the respondents in this study may also be attributed to mining activities and wage labor. The De Beers Environmental Assessment Report (cited in GNWT, 2006) stated that the lack of time individuals possess may limit their ability to pursue traditional activities, which impacts the lifestyle and maintenance of cultural activities. This decrease in participation affects both social and cultural capital. Furthermore, the Diavik Environmental Assessment Report (cited in GNWT, 2006) noted that "industrial work may erode traditional practices." According to Gibson et al. (2005), mining workers generally stated that they "spend less time teaching bush skills to kids, spend less time on the land gaining survival skills and know less about the history of the land" (p. 11). Therefore, the participation in non-traditional activities such as wage employment may contribute to the decrease in traditional harvesting activities and ultimately to a decrease in social and cultural capital and well-being.

As stated previously, it is difficult to explicitly measure the impacts of non-traditional labor activities on social capital. In the North's mixed economy, there is both organic and mechanical solidarity at work. The individual may gain money from wage labor, but may choose to spend it on hunting gear and in the end be able to participate more readily in traditional activities. Therefore, the increase in one form of solidarity does not necessarily mean a decrease in the other.

### Consumption of Traditional Foods

Despite the barriers to harvesting previously discussed, 96% of all

respondents (48 people) stated that they eat traditional foods, with 88% (44 people) doing so at least once a week. Fifty-six percent of respondents (28 people) reported eating traditional foods at least four times a week. Of those eating traditional foods (n=48), the majority get their food from relatives (85% or 41 people) and friends (75% or 36 people), with only 19% (9 people) reporting harvesting the food themselves. Most people stated that it is easy or very easy to get traditional food (54% or 26 people). An additional 40% (20 people) reported it is sometimes easy and sometimes difficult. Only one person stated that it was difficult to obtain traditional food.

Overall, 98% of respondents (49 people) believed that there were benefits to eating traditional foods, primarily because it is healthier. Some of the specific benefits described included: lack of chemical additives, rich in protein, less expensive, important for cultural reasons and that it is generally healthier than store bought food. However, 38% (19 people) had worries or concerns about eating traditional foods. Of those who were worried about eating traditional foods, 95% (18 people) were concerned that environmental pollution from mining activities was contaminating the water, plants and animals. One respondent noted they were concerned about "…contaminants from the mine, and from those big trucks that are going back and forth to the mines. I imagine all the fumes and gas that's going into the lake when they drive by the ice road. Our animals eat it, that live around it." Another stated "I worry about where the ducks have flown, where caribou are eating and if they ate anything near or on Giant Mine property or other mines around Yellowknife and mines in the North."

Forty-two percent of all respondents (21 people) stated there are places they have stopped going to get traditional food, primarily because of worries about contamination or because they are reluctant to travel to remote locations by themselves. These responses can be tied to a decrease in cultural capital, with knowledge of the land and the value of hunting grounds as indicators. The refusal to hunt on traditional hunting lands because of contamination could very well be harmful to the protection and continuity of cultural practices.

## Summary & Conclusions

Harvesting is still an important part of lifestyles in N'Dilo and Dettah, NWT. Overall, many people still go out on the land and take part in traditional activities such as hunting, fishing, trapping and gathering. Harvesting remains an important component of social, cultural, and physical well-being as the vast majority of people sampled (98%) still consume traditional foods, whether they harvest it themselves or get it from

others. This is particularly striking given the close proximity of N'Dilo and Dettah to the urban centre of Yellowknife. Additionally, in the past ten years many respondents stated that there has been a change in the amount of time they have spent on the land. This decrease has been mainly attributed to a lack of time, lack of transportation and lack of people to join in the harvesting. This relationship is illustrative of the connections between social and cultural capital in that stronger social capital in the community can provide avenues to protect and preserve elements of cultural capital and vice versa.

Development activities surrounding the communities have also affected the residents' perception of risk in food sources. The major concern is the contamination of traditional foods from industrial sites and mines. This, in turn, has affected where people choose to harvest; many people state that they have chosen to hunt further from the community and mines to lessen the risk of contaminated food sources.

Although it has been shown that harvesting is very important to northern Indigenous populations, activities such as hunting, fishing and gathering remain difficult to measure in formal economic terms. This is mostly due to the fact that traditional food and medicines are rarely bought and sold in the market sector (Usher et al., 2003). Perhaps if the traditional activities discussed in this paper were easily measured in formal economic terms, it would be much easier to acknowledge the importance of these activities to communities and individuals. In the face of environmental and economic change via development and other driving forces it is necessary to take into account the social and cultural capital value of these activities and their products in northern communities. It has been shown that a decrease in number of people to go hunting with has become a large barrier to harvesting. However, harvesting remains an important aspect of community where a majority of people still share in the harvest.

The concept of cultural capital was an important focus throughout participants' responses. It was clear that harvesting skills and techniques were considered to be critical in maintaining traditional practices and knowledge. This agrees with the literature on cultural capital in the sense that food and subsistence items were not only products for survival, but also necessary for knowledge of the land and respect for community. Subsistence must therefore be understood as a system of human relations, in which the reproduction of social relations and development of cultural capital is as valued as the production of material goods (Usher et al., 2003).

As Berkes et al. (1994) stated, the planning of cultural, ecological and economic sustainability of communities must be considered together.

The communities of N'Dilo and Dettah are no longer based solely on traditional lifestyles; conversely, they are mixed economies where many rely on a wage income but also depend on traditional economic pursuits. From this study, it is recommended that further research be conducted in the areas of concerns and barriers to hunting. It is important to understand why so many respondents eat traditional foods, yet report that there are hazards of doing so. Another vital research area would be to look at organic solidarity to determine if wage labor is increasing social capital in more ways than traditional activities. In the future it would also be desirable to have base line harvesting data for both communities to help assess the changes that occur over time.

Finally, this exploration of social and cultural capital in relation to traditional activities in the North is based on how these terms are currently defined and understood in the literature and by the researchers. Further research is required to explore if these terms have meaning for members of these communities. What do they believe counts as social and cultural capital? Are these separate concepts, or do they overlap to the extent that differentiations are meaningless? Does social and cultural capital rest with individuals, communities or both? Are social and cultural capital primarily a body of knowledge and a set of skills, or do they include the capacity to implement one's knowledge and skills? Should social and cultural capital change over time? Can not-so-traditional activities and ideas lead to the creation of new forms of social and cultural capital (for example, building a website, organizing a workshop, or designing a training program or school curriculum for teaching traditional ecological knowledge)? Research designed to answer these questions from a community perspective would greatly increase the understanding of the more intangible effects on social relations and cultural values caused by development activities in northern communities.

It is becoming standard practice for a socio-economic impact assessment to be conducted prior to the commencement of a new externally controlled activity in the Northwest Territories. These results emphasize the need to account for the more intangible effects on social relations and cultural values when planning for further development activities in northern communities. Socio-economic assessments need to focus on minimizing the disruption of traditional activities, and maintaining and strengthening traditional knowledge and social relations, to preserve the very important social and cultural capital of northern Indigenous societies.

## Notes

1. Social indicators can be defined as indexes of social conditions and changes therein over time (Land, 1983). Social conditions are both "the external (physical and social) and the internal (subjective and perceptional) contexts of human existence in a given society" (Land, 1975: 14). The concept of social indicators evolved as it was obvious that traditional economic indicators had limitations in measuring general social welfare or well-being (Land, 1983). Carley (1981) states that these economic indicators, "failed to reflect the quality of life, the dimension of equity, or such side-effects of economic prosperity as environmental pollution" (p. 17).

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**Figure 1**
**Locations of the Study Communities in the NWT**