

6 TRADITIONAL CULTURE

6.1 Introduction

The traditional cultures of the Dene and the Inuvialuit were uniquely adapted to the challenges to existence posed by the harsh northern environments in which they evolved. Three aspects have been key: the values, the behaviour and the artifacts that made survival in the North possible. The critical values identified were:

- respect for the earth and what it produced
- sharing within the band
- respect for others
- avoiding conflict

The behaviour and activities, like the values, shaped by the imperatives of survival, focused on killing game, fish and fowl for food, because, although available plant foods were eaten, the supply was too limited and seasonal to sustain life. Accordingly, survival depended on:

- mastering how to hunt, snare and fish
- learning how to survive in the cold, travel safely on the water or the ice, and avoid accidental injury or death

These behaviours depended on evolving specialized knowledge about animals and the environment, the skills to deal with both effectively, and the motivation and discipline to act, even though the cold was painful and the risks frightening. Communicating new experience and survival across generations depended on developing the necessary concepts and language, making it possible to communicate a hunter's success to others, so it could become part of the lore passed on to subsequent generations.

The artifacts created by the Inuit and the Dene, e.g., hunting gear, tools, dress, domicile structures, and facilities for travel on land and water, demonstrated their ingenious use of the resources available. As Euro-Canadian technology became available to them, these aspects of Aboriginal culture changed most rapidly, whereas traditional values, knowledge, skills and disciplines changed more slowly.

Social organization, the economic system, political organization and the worldview are other important aspects of culture, and these have changed greatly during the past century. Social organization changed considerably because of the diseases that ravaged virtually all bands in the Northwest Territories during the 19th and early 20th centuries. In time, fur trading led to the dual, increasingly

monetary, economy. The Government of Canada and land claim settlements have changed the political organization of the area, and ongoing devolution of government functions is initiating more changes. Missionaries, the education system and television have also changed important aspects of Aboriginal worldviews.

These influences have been, and in many cases continue to be, so powerful in effect that these cultural characteristics, i.e., social, economic, political organization and worldview, will be minimally affected by the project.

This characterization of the traditional Dene and Inuit cultures provides the basis for identifying four key indicators of traditional culture:

- participation in hunting and fishing
- consumption of the country food harvested by hunting and fishing
- participation in trapping and snaring of furbearers, important traditionally, but much more important after Euro-Canadians arrived to trade for them
- ability to speak the traditional language, the medium for most effective communication of all aspects of traditional culture

How will the project affect traditional culture?

This global concern includes two specific issues:

- project effects on traditional harvesting, i.e., hunting, fishing and trapping, thus using traditional lands in traditional ways
- project effects on language and cultural preservation

These issues are evaluated separately in the following sections.

6.2 Traditional Harvesting and Land Use

How will the project affect traditional harvesting and land use, and the prerequisite traditional knowledge, practices and skills?

This question is the central issue regarding project effects on traditional culture. As noted previously, the focal point of these cultures has always been survival by living on the land and harvesting the resources nourished by the land. If these cultures are to survive, future generations must acquire the knowledge and skills required for harvesting and physical survival. This is accomplished through *learning by doing*, for example by hunting with an experienced, skilled hunter.

However, the traditional and monetary economies are now symbiotic. Because much wage employment is seasonal in the Northwest Territories and the cost of living is very high, traditional foods are important for sustaining a standard of living. They are usually preferred by Aboriginal people and are nutritionally superior (Usher 1976) (see Volume 4, Section 5, Traditional Culture). Efficient resource harvesting makes use of costly equipment, e.g., snowmobiles, all-terrain vehicles, small boats and outboard motors, now only affordable with wage income because trapping alone cannot provide the necessary money with the current low fur prices. However, traditional harvesting and wage employment can be interpreted as competing activities, because the more time devoted to one, the less time there is available for the other. Therefore, the effects of project employment on traditional harvesting must be evaluated.

6.2.1 Effect Pathways

Figure 6-1 shows the various ways in which project-related and induced activities might affect traditional harvesting and land use. The effects of project influences can be positive or adverse, thereby strengthening or weakening traditional harvesting and land use.

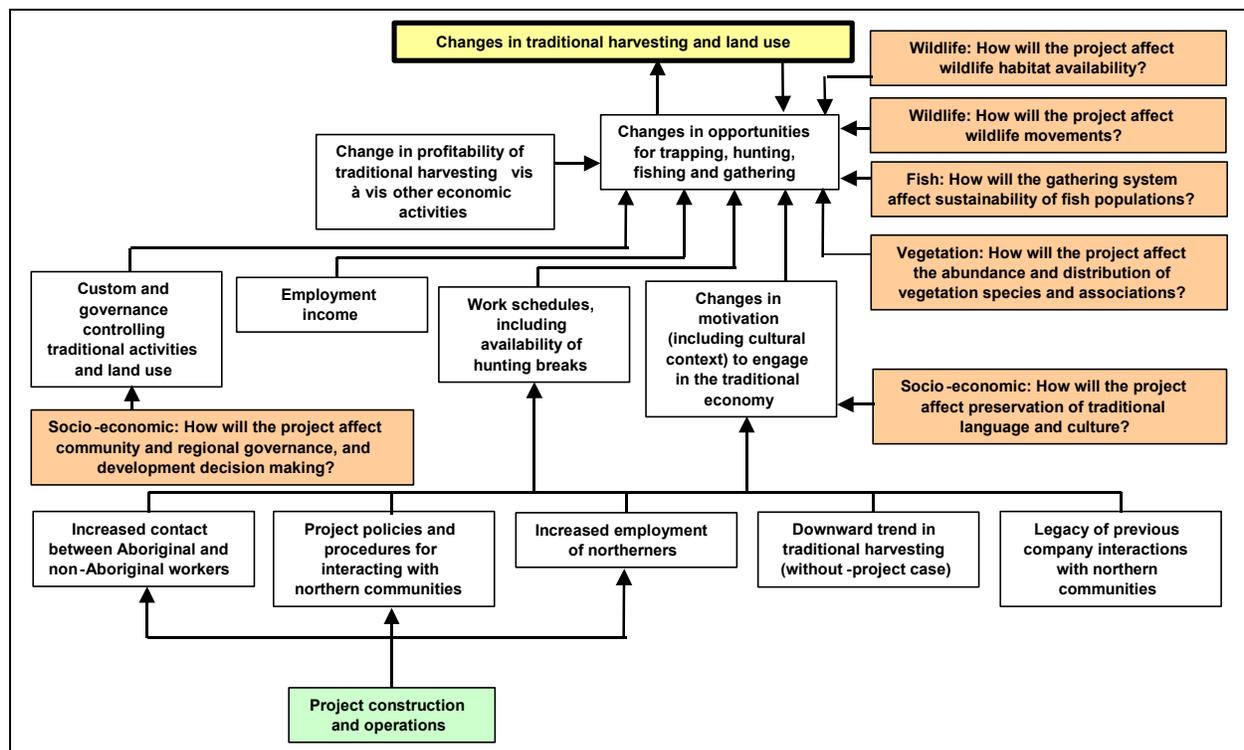


Figure 6-1: Project Effects on Traditional Harvesting and Land Use

Ongoing project consultations, and benefits and access agreement negotiations will determine policies and procedures for interacting with northern communities during construction. However, there will be an increase in employment of

northern residents, and the number of Aboriginal and non-Aboriginal employees working together. 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.

The requirements for labour during operations are so modest that the project will have no noticeable effects on traditional harvesting and land use.

Traditional harvesting motivation might also be affected by possible project-induced changes in traditional knowledge, practices and skills, and in Aboriginal language and culture preservation. Changes in opportunities for traditional harvesting, and thus changes in actual traditional harvesting and land use patterns, will be caused by project work schedules and induced changes in traditional harvesting motivation, together with:

- employment income
- customary and governance limitations on traditional harvesting and land use
- changes in the relative profitability of traditional harvesting and other sources of income
- project effects on the distribution and abundance of vegetation, fish and wildlife

Traditional harvesting and land use is driven by opportunities and motivation to participate. Opportunities are driven by:

- project effects on the land and wild food supplies
- changes in the time and resources available to engage in traditional activities

Motivation of Aboriginal harvesters could be affected by:

- strength of commitment to traditional culture
- favourable or unfavourable reactions to on-the-job associations with non-Aboriginal workers
- amount of income from other sources
- profitability of traditional harvesting relative to other income sources

The effect pathway diagram (see Figure 6-1, shown previously) provides a conceptual analysis of the influences affecting traditional harvesting and land use.

However, there are empirical indicators for only a few of the links. As a result, the following analysis is mostly based on:

- relevant scholarly literature
- the experience and judgement of the analysts
- consultations with potentially affected groups or individuals

The required critical input from project traditional knowledge studies has not yet been included as these studies are ongoing.

6.2.2 Existing Baseline Conditions

Traditionally, the people of the Northwest Territories and northwestern Alberta lived off the land and relied upon a variety of wildlife and plant species for sustenance. These activities have diminished in recent years because of a collapse in fur prices and increased wage-related employment opportunities. However, traditional activities continue to be important, and the Inuvialuit, Dene, Métis and Dene Tha' strive to maintain elements of their traditional culture.

As described in Volume 1, Section 3, Traditional Knowledge, the project has employed well-informed Aboriginal people to conduct traditional knowledge studies in the communities that might be affected by activities along the pipeline corridor and in the production area. This research is part of the environmental and socio-economic impact assessments for the project. When completed, the results of these traditional knowledge studies will be included in this environmental impact statement (EIS) as a supplemental filing. Because these studies are ongoing, and also as a part of the process of incorporating traditional knowledge information into this EIS, published traditional knowledge was reviewed. The results of this review directly relevant to traditional culture are presented in the following regional sections. These sources include important data from harvest studies in the Inuvialuit Settlement Region (ISR), Gwich'in Settlement Area (GSA) and the Sahtu Settlement Area (SSA).

6.2.2.1 Published Traditional Knowledge – Inuvialuit Settlement Region

Traditionally, the Inuvialuit relied upon a variety of species to support them, including beluga whale, seal, caribou, furbearing animals, fish and birds. In the 1970s and 1980s, hunting, fishing and trapping activities diminished because of a collapse in fur prices and the increasing availability of wage employment. Many Inuvialuit regret this loss.

Inuvialuit Elders regret the loss of hunting skills, language, and traditional beliefs and practices among the young. Hunting, fishing and trapping are the activities, above all others, that sustain the full expression of Inuvialuit values and identity. Hunting, whether full-time, seasonal, weekend or part-time, contributes to cultural, social, economic, psychological and spiritual well-being. These activities

are important because they provide traditional foods, thereby ensuring continued use of local resources. They also legitimize and transmit the tradition-based and fundamental relationship linking the society to its environment (Freeman et al. 1992).

The Inuvialuit want to maintain their traditional culture and continue to engage in traditional activities. According to the Tuktoyaktuk Community Conservation Plan (Community of Tuktoyaktuk et al. 2000),

... most community residents still depend on the land, in addition to their wage earning, more than 75 per cent of households derive a large portion of their food from hunting and fishing.

Caribou and muktuk appear to be the most important food sources for the Inuvialuit.

Imported foods cannot substitute for traditional foods because of the unique social institutions and cultural values involved in their acquisition, distribution, processing and consumption. A 1991 survey of preferences for traditional or imported foods found only minor differences between adults' and school children's choices. Among the most highly valued of these traditional local foods, especially among adults, is muktuk, preferably from the bowhead whale but now available only from the beluga (Freeman et al. 1992).

The most important mammal species, by weight, is caribou, which is hunted in every month of the year. In 1990, the peak harvest months were March (156 animals), October (242) and November (220), with the total for these three months accounting for about two-thirds of the annual caribou harvest (Freeman et al. 1992).

The Inuvialuit community conservation plans completed by Aklavik, Inuvik and Tuktoyaktuk demonstrate that the Inuvialuit are striving to balance development and traditional pursuits.

6.2.2.2 Published Traditional Knowledge – Gwich'in Settlement Area

The Gwich'in have experienced a decline in the amount of time spent pursuing traditional activities. This concerns Gwich'in Elders, who think that the younger generations are losing a connection with, and respect for, the land. Many youth spend little or no time on the land learning the skills, knowledge and values that have enabled the Gwich'in to survive on the land, and that are integral to their culture (Gwich'in Tribal Council 2001).

Parents and Elders were responsible for teaching children all of the skills they required to live on the land. Fathers taught the boys skills needed to hunt, trap, fish and survive on the land, whereas mothers taught the girls how to prepare meat, tan hides, cook, take care of children and make clothing.

Whatever your parents did, you helped them. You learned everything right there. Today it is not like that. Kids go to school. I don't think any kids know anything about what to do out there on the land. No time to go out. The only way to teach them how to live on the land is to take them out with you and do it with them. That's the only way, but they don't do that often enough. We always say there's no money for that (Gwich'in Tribal Council 2001).

Many Gwich'in are moving into the wage economy. Despite their desires to maintain their culture, some elements have been changing. As more people pursue wage employment, there will be fewer people on the land pursuing traditional activities. This will change the Gwich'in's relationship with the land and their dependence on it, and could lead to further erosion of Gwich'in tradition and culture. People's sense of stewardship for taking care of the land, resources and wildlife might be affected (Gwich'in Tribal Council 2001).

However, the Gwich'in are working to maintain their culture and to ensure that people have opportunities to practice skills on the land. A major priority identified by the Gwich'in is to develop on-the-land programs for Elders and youth, to ensure their youth learn about Gwich'in culture, traditional knowledge and skills. They feel these programs are critical for ensuring that the youth maintain the cultural connections and develop the relationships with the land that will foster stewardship ethics (Gwich'in Tribal Council 2001).

All four Gwich'in communities still regularly organize community hunts, which are usually subsidized by the Gwich'in Renewable Resource Council, the government or both. Harvests from these hunts are shared throughout the community, with priority to supplying local families in need, Elders and nonhunters. Therefore, those not able to actually participate in the hunt can still enjoy the harvest (Gwich'in Tribal Council 2001).

6.2.2.3 Published Traditional Knowledge – Sahtu Settlement Area

The Sahtu Dene and Métis have used the resources in the region for many generations. Moose, woodland and barren-ground caribou, Dall's sheep, beaver, marten, muskrat, waterfowl and other birds, fish, hare, and other small game continue to be important sources of subsistence (Sahtu Heritage Places and Sites Joint Working Group 2000, Blondin 1997). The Sahtu are committed to ensuring they can maintain their traditional lifestyle.

A fundamental principle of traditional Dene environmental ethics is that the land and its resources should be protected for the benefit of future generations. Ensuring this is the responsibility of every individual in the community (Johnson and Ruttan 1993).

The land has been used to provide food for thousands of years, and it should be maintained as a source of food.

If we contaminate the land, we contaminate ourselves. It's like a heart beating. If the land dies so do we perish (Sahtu Land Use Planning Board, no date).

However, the Sahtu Dene and Métis also recognize that for their lifestyle to survive, it must adapt to changing conditions. Therefore, they maintain a dynamic relationship with the landscape, one that is ever-changing and growing. Sahtu Dene and Métis culture continues to focus on the land, and interprets it as a living, ongoing relationship (Sahtu Heritage Places and Sites Joint Working Group 2000).

6.2.2.4 Published Traditional Knowledge – Deh Cho Region

Little of the reviewed literature focused on the Deh Cho. However, this does not change the importance of their traditional culture to the people. Sources reviewed emphasized the continuing importance of hunting and trapping as key aspects of the Deh Cho culture. A study by the Deh Cho First Nation found that the Dene and Métis in the Deh Cho eat 50 different species of traditional animal and plant foods. The most common are moose, woodland caribou and whitefish (Deh Cho First Nation, no date). This study also found that traditional foods are important because they:

- help keep people in tune with nature
- promote sharing in the community
- are essential to community culture
- teach children skills in survival and food preparation
- provide opportunities for learning, patience and other good personal qualities
- build pride and confidence
- bring respect to successful wildlife harvesters

Moreover, many believe that *traditional foods are the only kind of food that make people feel strong, and that really keep them warm in winter* (Deh Cho First Nation, no date).

6.2.2.5 Published Traditional Knowledge – Dene Tha' First Nation

The Dene Tha' have completed a Traditional Land Use and Occupancy Study, which concluded that the traditional lifestyle of the Dene Tha' has been disturbed by industrial activities, especially forestry, and oil and gas developments.

Today, there is a lot of logging going on, even on our lands and reserves. When we complain about it, they tell us that they have the right to do so, and they shut us off there. Last year, I went to my

cabin with a skidoo. I went to see if there were any animals, but there are hardly any because there has been logging on my trapline, where we used to trap for muskrat and beaver, but now there are no lakes. Now all the water is gone due to the logging. You people have to do something about that logging on our lands for future generations to come (Dene Tha' First Nation 1997).

The Dene Tha' have managed to maintain their traditional culture, despite these disturbances. Most Elders in the community are active trappers and hunters. A large part of the Dene Tha' diet is obtained from the bush. Moose and duck are staples. Dry meat is still prepared by virtually every household. Moose products, including moccasins, mukluks, gloves and hides, are made by most Dene Tha' women. Beading, tufting and other traditional artwork are still practiced (Dene Tha' First Nation 1997).

The Dene Tha' believe they should be directly involved in decision-making regarding use of their territory, so that they can make better resource management decisions that will allow them to proceed with their traditional lifestyle.

More than three generations have been on our trapline. These traplines are our economic base, and they need to be kept safe from further disruption. The industry and governments need to consult us more and better when they embark on further development on our lands (Dene Tha' First Nation 1997).

6.2.2.6 Current Indicators of Traditional Harvesting

Section 6.1, Introduction, describes the reasons for selecting the following indicators of participation in traditional harvesting:

- harvest survey findings
- the self-reported percentage of households in which more than half of the food consumed is country food
- the percentage of men who are active trappers

These are seen as indicators of traditional income-in-kind, i.e., country food, and the traditional source of monetary income, i.e., active trappers. The trapping data, presented as percentages of males aged 25 to 59 years, is used as the indicator, rather than percentages of trappers in each age group, because information on the gender and ages of active trappers is not available. Data is also provided showing average incomes per active trapper, because these earnings influence the decision to trap.

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Table 6-1 shows the total and per capita weights of edible meat, based on surveys of harvesters over several years in the ISR, GSA and SSA. No data exists for the Deh Cho Region (DCR) because no such surveys have been done there. The surveys were conducted in different years in the three regions. Accordingly, accurate comparisons of the three regions cannot be made. All have been successful in their harvesting, as indicated by the per capita edible weights of meat in each region.

Table 6-1: Total and Per Capita Weights of Edible Harvests by Inuvialuit, Gwich'in and Sahtu Aboriginal Residents

Region	Species	1993		1997	
		Total kg	Total kg per Capita	Total kg	Total kg per Capita
ISR	Mammals	185,647 ^a	61	163,868 ^a	54
	Birds	14,929	5	20,194	7
	Fish	76,492	25	62,751	21
	Total	277,068	91	246,813	82
Region	Species	1996		2000	
		Total kg	Total kg per Capita	Total kg	Total kg per Capita
GSA	Mammals	82,390 ^a	49	51,334 ^a	31
	Birds	2,206	1	5,915	4
	Fish	86,753	52	72,815	43
	Total	171,349	102	130,064	78
Region	Species	1999		2001	
		Total kg	Total kg per Capita	Total kg	Total kg per Capita
SSA	Mammals	171,165	95	134,462	75
	Birds	8,286	5	6,577	4
	Fish	43,848	24	20,977	12
	Total	223,299	124	162,016	91
NOTE: kg = kilograms a Exclusive of polar and grizzly bear, which are not commonly eaten					
SOURCES: Calculated from: Joint Secretariat (2003), Gwich'in Renewable Resource Board (1997, 1998, 1999, 2000), Sahtu Renewable Resources Board (2002, 2003)					

Note that the total and per capita weights declined in each region between the earlier and later years. The harvest years for the Sahtu in the table are more recent than the harvest years for both the Gwich'in and Inuvialuit. Because the Sahtu harvests in the table are larger than those of the Inuvialuit and Gwich'in, the Sahtu probably still have the largest per capita harvests.

This set of wildlife harvest data complements and substantiates the available information on consumption of country food. Questions dealing with the proportions of country food consumed by respondent households were included in the GNWT labour force surveys conducted in 1993, 1998 and 2002. Both Aboriginal and non-Aboriginal residents were included in the surveys. Therefore, the percentages in Table 6-2 are based on total community or regional households that include non-Aboriginal people in every case. However, the proportion of these people in the Aboriginal communities is low. Information is provided for the settlement areas, and for individual communities close to construction camps or sizeable construction requirements, e.g., river crossings. Figure 6-2 provides a graphic description of this data.

Table 6-2: Percentage of Households Consuming Country Food

Region	Consumed Country Foods ¹ (%)		
	1993	1998	2002
Northwest Territories	29	32	33
NWT Aboriginal communities ²	57	65	70
BDR total	–	51	44
BDR Aboriginal communities	73	74	62
ISR total	71	72	–
GSA total	41	43	–
GSA Aboriginal communities	76	80	–
SSA total	40	62	65
SSA Aboriginal communities	51	78	87
DCR total	43	46	61
DCR less Fort Simpson	52	47	79
Fort Good Hope	47	72	–
Fort Simpson	30	42	40
Inuvik	30	31	29
Norman Wells	14	25	31
Tuktoyaktuk	71	71	–
Yellowknife	10	11	16
Hay River	29	20	18
NOTES: – = data not available BDR = Beaufort Delta Region 1 Half or more of food consumed is country food 2 All study area communities in the Northwest Territories, except Inuvik, Norman Wells, Fort Simpson, Yellowknife and Hay River			
SOURCES: GNWT Bureau of Statistics (2002a), GNWT Bureau of Statistics (2003a)			

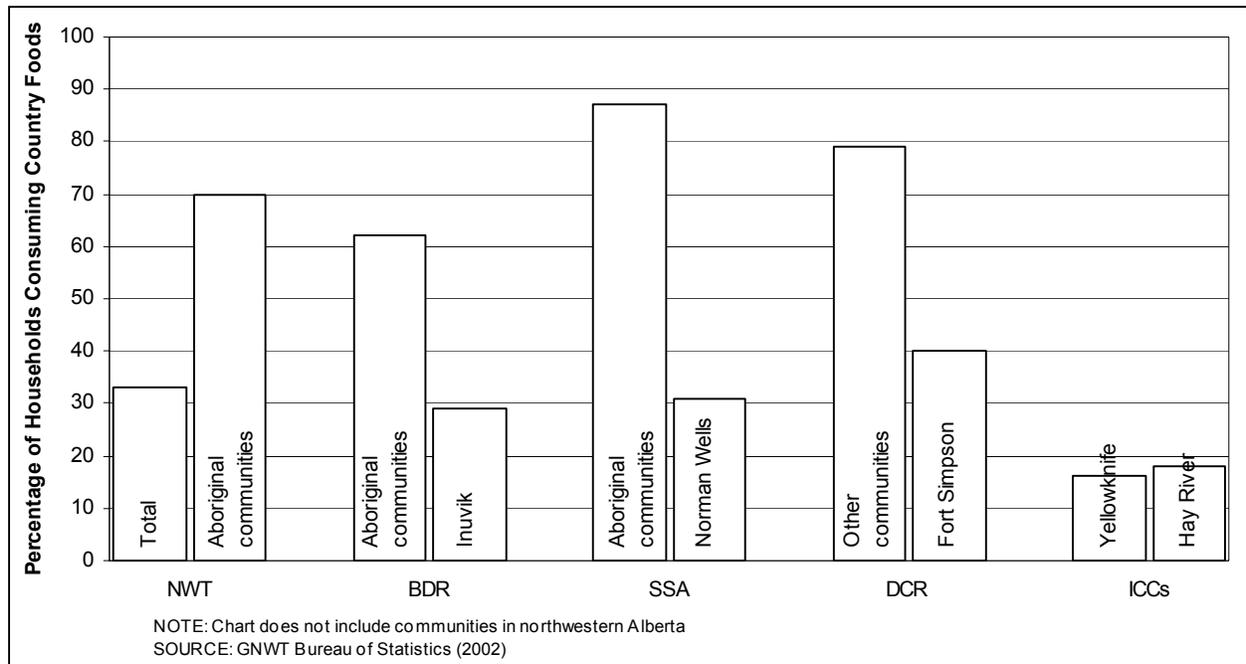


Figure 6-2: Household Consumption of Country Foods in the Northwest Territories (2002)

On average, a higher proportion of households reported one half or more of food consumed was country food in 1998 than in 1993, also higher in 2002 than 1998. The aggregated data for all Northwest Territories Aboriginal communities in the study area shows the percentages increasing from 57% in 1993 to 65% in 1998 to 70% in 2002. In agreement with the harvest data, the country food consumption data in Table 6-2 (shown previously) shows that the SSA consumed the highest level of country food in 2002, and the DCR the second highest. The available data does not permit disaggregating the 2002 data to obtain values for the ISR and GSA, but the aggregated data for the Beaufort Delta Region (BDR) Aboriginal communities shows lower levels of consumption than in the SSA or the DCR.

The data in Table 6-2 (shown previously) shows increases in country food consumption between 1998 and 2002 in the two southern regions, but declining rates in the BDR Aboriginal communities during this period. Data in Table 6-1, shown previously, shows declining harvest rates for all four regions. However, this data is from earlier years, with the SSA 2001 data the most recent for harvesting. Changes from year to year in the migratory movements of birds and caribou can cause changes in the size of harvests, which are not changes in harvest rate trends. Therefore, some data presented here might appear to indicate a decline in wildlife harvesting and consumption. However, this might only be indicative of short-term changes in availability of game or in the number of people available for harvesting in a particular year.

The time series data in Table 6-3 shows the percentages of adult men who were active trappers, and trapper earnings per capita for 1987, 1993, 1999 and 2002. As

in the case of the country food consumption data, data for a few non-Aboriginal trappers is probably included.

Table 6-3: Active Trappers and Average Earnings per Trapper

Region	Active Trappers ¹ (%)				Average Earnings per Trapper ² (\$)			
	1987	1993	1999	2002 ³	1987	1993	1999	2002 ³
NWT Aboriginal communities ⁴	47	18	3	14	2,514	672	919	991
ISR total	56	17	18	13	1,144	918	708	1,024
GSA Aboriginal communities	82	20	15	14	1,819	275	618	667
SSA total	53	16	17	21	4,052	915	1,540	1,633
SSA Aboriginal communities	82	26	26	33	4,120	917	1,540	1,630
DCR total	67	35	30	25	2,876	602	814	628
Fort Good Hope	88	21	25	31	3,851	1,566	1,538	1,916
Fort Simpson	44	18	21	19	1,965	523	870	768
Inuvik	14	4	3	4	1,821	432	729	676
Norman Wells	4	1	2	1	1,449	846	1,040	1,747
Tuktoyaktuk	34	8	14	4	1,415	1,132	438	807
Yellowknife	3	1	1	0.4	1,856	162	849	650
Hay River	10	3	6	5	1,336	295	763	881
NOTES:								
1 Percentage of adult males, aged 25 to 59 years								
2 Earning figures not adjusted for inflation								
3 Based on incomplete data								
4 All study area communities in the Northwest Territories, except Inuvik, Norman Wells, Fort Simpson, Yellowknife and Hay River								
SOURCE: GNWT Resources, Wildlife and Economic Development (RWED) (various years)								

In 1987, over half the men were trapping in every region, with the highest percentage, 82%, in the GSA and SSA Aboriginal communities, followed by the DCR, 67%, and ISR, 56%. By 1993, the highest trapper percentages were 35% in the DCR and 26% in the SSA Aboriginal communities, followed by the GSA Aboriginal communities at 20% and the ISR at 17%. The data also shows that between 1987 and 1993, trapper incomes fell sharply, by about 75% on average. Although trapper incomes fluctuated thereafter, driven by furbearer cycles and the demands of fashion, they were usually so low that few men trapped. Thus, in 2002, the highest percentages of men trapping were in the SSA Aboriginal communities, 33%, and the DCR, 25%. For the GSA Aboriginal communities and the ISR, the figures were only 14% for the GSA and 13% for the ISR. Figure 6-3 provides a graphic description of this data.

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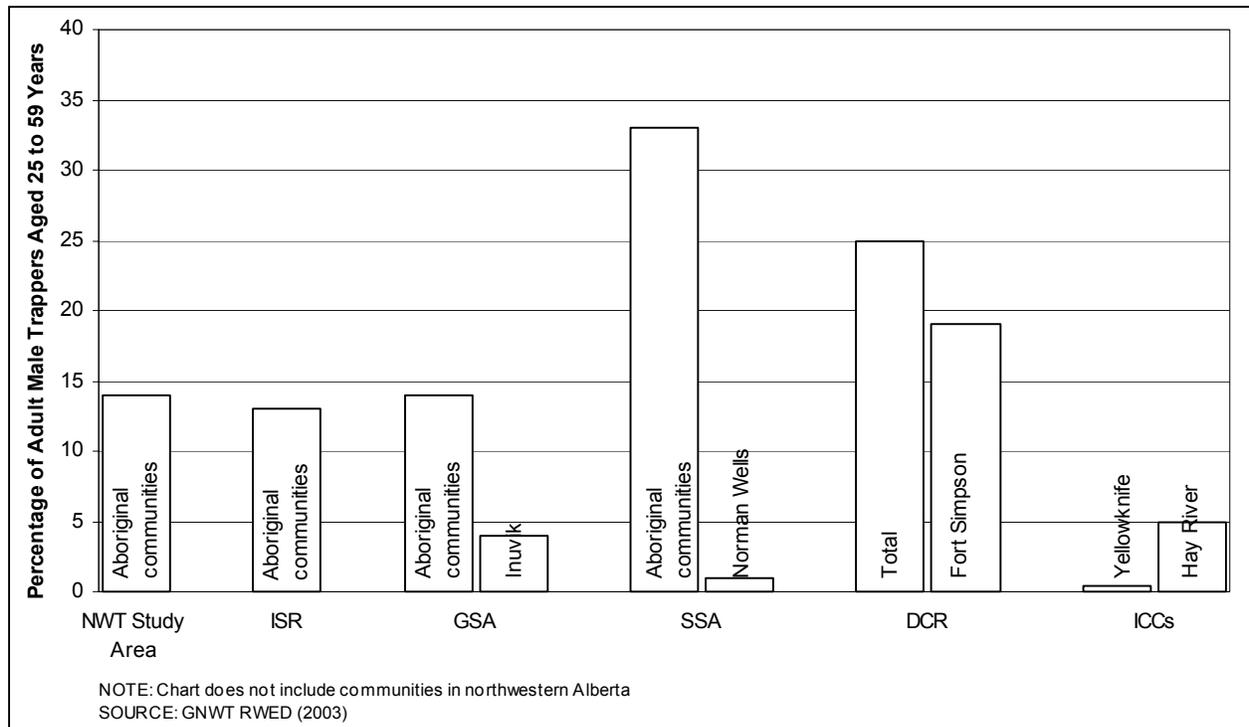


Figure 6-3: Active Trappers in the Northwest Territories (2002)

Despite the reduced interest in trapping, the continued involvement of many men in food harvest trapping reflects the continued importance of these traditional activities among many Aboriginal people.

As some cash income is necessary for all Northwest Territories Aboriginal households, the early and continued decline in income from trapping has contributed to an increase, well over twice the 1987 percentage, in wage employment. However, continued importance of income-in-kind is clear.

Community-specific data for 2002 is not available. However, the community-specific 1998 data (see Volume 4, Section 5, Traditional Culture) demonstrates that harvesting motivation is strongest in the more isolated and smaller communities, and there is relatively modest wage employment in these communities. Examples of communities with high food consumption indicators for 1998 include (GNWT Bureau of Statistics 1999):

- Kakisa at 100%
- Colville Lake at 97%
- Holman at 83%
- Déline at 83%

However, much lower percentages were found in:

- Inuvik and Jean Marie River at 31%
- Nahanni Butte at 22%
- Hay River at 20%
- Yellowknife at 11%

Notably, in the Hay River and Yellowknife urban environments, securing country food is inconvenient. The association of resource harvesting with traditional culture is indicated by the percentage of people fluent in a traditional language (see Volume 4, Section 5, Traditional Culture), which is higher in communities where more country food is obtained.

One interpretation of this varied data suggests that there are three broad groupings of resource harvesters:

- full-time
- seasonal
- recreational

The full-time harvesters are the most traditional. Harvesting activity is important to them and their sense of identity. Many continue to trap, and if trapping were sufficiently profitable to permit purchase of the expensive equipment they need for efficient harvesting, they would rarely accept wage employment. However, with low fur values, they hope for seasonal employment to subsidize harvesting of traditional foods and other land-based activities.

Seasonal harvesters include those whose lives are invested in both harvesting activity and wage work. They do not pursue either one to the exclusion of the other. They see their wage work as necessary to maintain their quality of life, and provide equipment and consumables for efficient harvesting. As well, harvesting activity strengthens their Aboriginal identity, and supplies the food that they and their families prefer. They have a true dual economic dependence, on both employment and harvesting.

The attitude of recreational harvesters is closer to that of non-Aboriginal hunters or anglers. They like getting out, enjoying the country, stalking game or testing their skills in catching fish, but their livelihood comes from monetary employment. They are occasional, weekend or annual leave harvesters who go hunting or fishing for fun and cultural importance. The value of harvesting for recreational harvesters should not be underestimated as this activity is central to their Aboriginal identity and perception of self.

The levels of country food consumption, together with the trapper data, indicate relative commitment to resource harvesting. A low level of participation is suggestive of weakening interest in this activity. Based on this assumption, the

data indicates that Aboriginal people in Yellowknife, Hay River, Inuvik and Norman Wells are normally much less involved in harvesting, and include more recreational harvesters. In 1998, their country food consumption levels were less than half the levels of the regions in which they are situated. Many are involved in full-time employment and have easy access to food stores where prices are relatively low by Northwest Territories standards.

A substantial gap exists in project knowledge of baseline conditions. This gap is being addressed by ongoing traditional knowledge studies (see Volume 1, Section 3, Traditional Knowledge). Anecdotal information suggests that much of the harvesting activity is conducted by the older generation of community residents, i.e., over 40 years of age. Although many of these people might be interested in project employment, it is likely that it will be predominantly young adults who are employed by the project. To the extent this proves true, the diversion of harvesters to wage employment might be lessened. In addition, if younger nonharvesting family members contribute project-related income toward needed harvesting inputs of their older relatives and friends, the beneficial project effects on harvesting could be enhanced. Although this tendency might serve to inhibit transmission of traditional skills between generations, it is likely that construction will have little effect on existing trends.

6.2.3 Assessment and Management of Project-Specific Effects

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. There is concern that increased employment could reduce time spent on harvesting activity. However, earnings from this well-paying employment also could make possible the purchase of new and better equipment, such as snow machines, all-terrain vehicles, boats and outboard motors, to make resource harvesting more efficient and more productive

The opportunities presented by the project will affect the full-time, seasonal and recreational harvesters differently, and might cause shifts from one category to another.

Project-induced employment can increase harvesting motivation among all three harvester types. Those who spend some of their earnings on harvesting equipment, e.g., boats, outboard motors, snowmobiles and rifles, will be eager to use their equipment. The full-time and seasonal harvesters will be most eager to invest in upgrading their equipment, whereas the recreational harvesters will likely be interested in a broader range of expenditure options.

For many Aboriginal people, harvesting is both a source of food and of cultural sustenance, and will not decrease because of wage employment. Harvesters will

still find time to hunt (participant at the second ISR–GSA technical workshop in February 2004).

Alternatively, harvesting motivation might be undercut by substantial incomes, often earned in work activities and settings more physically comfortable than those associated with the dual economy harvesting component. Those most vulnerable would be the full-time harvesters who might be attracted by the number and diversity of jobs not previously available to them. Alternatively, the behaviour of non-Aboriginal supervisors or work associates and the work place culture will likely be less emotionally comfortable for most full-time harvesters than when they are out hunting. Depending on their experiences working on the project, seasonal harvesters might experience a strengthening of either their harvesting or their wage employment interests, or both.

The relative importance of these contradictory influences and motivations is determined by peoples' backgrounds, aptitudes, skills and obligations. The full-time harvesting commitment of a hunter on whom several households depend for game food will not likely be undercut by the prospect of employment. However, an older adolescent, who is a seasonal hunter because wild foods are needed to supplement inadequate, occasional wage income, might be tempted, by the right opportunities, to become a recreational hunter. An additional influence that can erode harvesting interest is seen in some areas where store food has a higher status than country food.

It is not possible to fully evaluate the importance of these competing influences and motivations. For example, in 1998, at least half the diet of 72% of ISR coastal community residents was country food, demonstrating continued obligation and motivation for traditional harvesters to provide this type of food. The increase between 1993 and 2002 in percentages of households primarily dependent on country foods also indicates continued demand and motivation for full-time and seasonal harvesters. If mitigation is effective and such harvesters respond with suitable decisions, potential harmful effects can be limited and benefits realized.

The minimal effects of operations on traditional harvesting activity are assessed at the end of each region-specific discussion in the following sections.

6.2.4 Mitigation Measures

Although the project can have both facilitating and inhibiting influences on traditional harvesting, project effects could accelerate the slow, ongoing decline in traditional harvesting activity. Mitigation should focus on inhibiting any such tendency. Relevant efforts can be made by the GNWT and the project. Local communities can continue to expect and consume the traditional harvesting bounty, and encourage and reward the harvesters with praise and status.

Government of the Northwest Territories (GNWT) Department of Resources, Wildlife and Economic Development (RWED) has devoted much effort to facilitating traditional harvesting, including programs to *grubstake* trappers and send their furs to auction. It also publishes a trapper newsletter, and several well-illustrated, region-specific booklets showing how to butcher the game available in the area and how to cook the various cuts of the meat. It is recommended that these programs and publications be continued.

Given the significance of country food gift exchanges with relatives, friends and other communities, it is important to provide opportunities for bountiful harvests through participation in harvesting activities.

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
- supporting community-based traditional lifestyle initiatives that promote traditional harvesting and positive relationships with communities, such as:
 - traditional harvesting training camps for young people
 - traditional skill proficiency demonstrations or competitions
- supporting cultural activities and events that are consistent with the project proponents' principles and practices for community involvement

It is expected that harvester compensation agreements will be negotiated. The purpose of the harvester compensation agreements is to address actual and potential future wildlife harvest loss resulting directly from project construction and operations. The specific terms and provisions of the agreements will be negotiated by the project proponents with the hunters' and trappers' committees or other relevant authorities in the settled land claim regions, and the affected communities in the DCR.

This management initiative also addresses the project effects identified in Volume 5, Section 10, Wildlife; Section 9, Vegetation; and Section 7, Fish and Fish Habitat.

The bases for the project program are:

- prevention
- mitigation
- compensation
- dispute resolution

The project proponents will recognize or participate in industry common practices, especially in areas where there are multiple project activities, e.g., drilling and production facilities, the gathering system, pipeline, and other exploration and development activities, to reduce duplicate, overlapping or questionable claims.

6.2.5 Traditional Harvesting – Inuvialuit Settlement Region

In this section, the focus is on examination of project effects on traditional harvesting in the ISR, but the discussions on effect pathways, data, assessment of effects and mitigation also apply.

6.2.5.1 Assessment and Management of Project-Specific Effects – Construction

See Section 6.2.3, Assessment and Management of Project-Specific Effects, for an assessment of project influences relevant to the whole study area that might promote or discourage traditional harvesting.

There is concern that increased employment could reduce time spent on harvesting activity, as almost three quarters of the ISR households reported major dependence on country food in 1998. This effectively ensures the continuing obligation and motivation of many to continue harvesting. The importance of hunting beluga, and of gift exchanges among the Inuvialuit communities involving muktuk, caribou and muskox meat, might indicate a relative resilience of the ISR dual economy to project effects. Full-time and seasonal harvesters are likely found in larger proportions in the ISR. As noted previously, indicators of the strength of traditional food harvesting by full-time harvesters are seen in the smaller ISR communities, except Sachs Harbour (see Volume 4, Section 5, Traditional Culture).

The desire to consume country foods is very strong. Particularly important is the delight of many Inuvialuit residents in hunting beluga whales, and the importance of this food harvest and eating muktuk. Also noteworthy is the gift exchange trade of the Inuvialuit in Inuvik and Tuktoyaktuk with other ISR communities, which might be imperilled by high rates of project employment.

The Niglintgak barge option has been identified by the Inuvialuit, and in particular the hunters' and trappers' committees, as an option that could affect traditional harvesting. During round two of the public participation process, and specifically at the ISR–GSA regional workshop held in Inuvik, individuals expressed concern about marine habitats in the region, and the effects that barge traffic and potential dredging would have on beluga whales, herring and marine birds in the Mackenzie Delta. According to participants, potential disturbances of the river bottom would affect herring use of that area. This would, in turn, affect herring harvest by those in the area and potentially also beluga use of the region, as herring is a food source for the whale. Additionally, vibrations resulting from

the potential dredging and barge traffic could affect beluga and marine bird use of the region. The other concern identified by ISR participants was the closeness of the barge and potential dredging to the Kendall Island Bird Sanctuary, which could affect migratory birds and therefore migratory bird harvesting.

6.2.5.2 Mitigation Measures

The mitigation measures described in Section 6.2.4, Mitigation Measures, also apply to the ISR.

With specific reference to the Niglintgak barge-based option, a plan for mitigation will become more detailed once ongoing traditional knowledge studies provide spatial and temporal information related to sensitive traditional land use and subsistence harvesting areas. The bathymetric and environmental studies scheduled to take place during summer 2004 will also provide more detailed information related to potential dredging requirements and the subsequent effect on marine habitats.

6.2.5.3 Residual Effects

The harvesting component of the dual economy is sufficiently flexible to permit scheduling of harvest leaves. Table 6-4 summarizes the expected residual effects of the project on traditional harvesting. It is assumed that the project will support harvesting leaves, where possible, and that the GNWT will continue relevant programs.

Table 6-4: Traditional Harvesting – Project Effect Attributes for the Inuvialuit Settlement Region

Location	Effect Attribute				Significant
	Direction	Magnitude	Geographic Extent	Duration	
ISR total	Adverse	Moderate	Regional	Short term	No
Holman, Paulatuk and Sachs Harbour	Neutral	Low	Regional	Short term	No
Tuktoyaktuk	Adverse	Moderate	Local	Short term	No

Because of the expected mix of beneficial and adverse effects on different people, overall the effects on the ISR as a whole, and on Tuktoyaktuk specifically, are expected to be adverse. The effects on traditional harvesting activity are expected to be moderate magnitude, and therefore will only marginally affect harvesting levels. However, because of the greater dependence on traditional harvesting in Holman, Paulatuk and Sachs Harbour, and the greater opportunity and motivation for continued harvesting that this suggests, the project effects in these communities are expected to be neutral, and any change in harvesting is expected to be within a low magnitude of change. Gift exchanges of traditional foods among the BDR communities, and particularly between Tuktoyaktuk and

Sachs Harbour, Holman and Paulatuk, are very important. Accordingly, these effects might extend to more distant communities, but only during construction.

Although the barge option for Niglintgak has the potential to affect subsistence harvesting in the area, additional information obtained from the ongoing traditional knowledge and environmental studies will clarify this issue. In Volume 5, Section 10, Wildlife, the biophysical effects assessment has concluded that beluga habitat availability, movement and mortality are not expected to be significantly affected. Furthermore, although some localized and short-term physical displacement could occur, it is unlikely that there would be a loss of harvesting opportunity.

6.2.5.4 Operations Effects

Most employment and opportunities generated by the project will end once construction and site restoration activities are complete. There will be some continued well drilling activities, and there will be about 80 operations and maintenance jobs created in the BDR. However, project effects are expected to be restricted to construction. There will be no need for mitigation and no residual effects during operations.

6.2.6 Traditional Harvesting – Gwich'in Settlement Area

In this section, the focus is on examination of project effects on traditional harvesting in the GSA, but the discussions on effect pathways, data, assessment of effects and mitigation also apply.

6.2.6.1 Assessment and Management of Project-Specific Effects – Construction

See Section 6.2.3, Assessment and Management of Project-Specific Effects, for an assessment of project influences relevant to the whole study area that might promote or discourage traditional harvesting. Undoubtedly, many Gwich'in people will want to and will obtain some form of project-related employment that could involve unusual demands on their time. If this results in reduced traditional harvests, it would affect the 81% of Fort McPherson and 73% of Tsiigehtchic households where at least half of their diet was country food in 1998. Alternatively, this level of dependence might ensure the continuing obligation and motivation of many to continue harvesting. Particularly important is the pleasure and spiritual significance Gwich'in people experience when eating caribou.

6.2.6.2 Mitigation Measures

The mitigation measures described in Section 6.2.4, Mitigation Measures, also apply to the GSA.

6.2.6.3 Residual Effects

The harvesting component of the dual economy is sufficiently flexible to permit scheduling of harvest leaves. Table 6-5 summarizes the residual effects of the project on traditional harvesting. It is assumed that the project will support harvesting leaves, where possible, and that the GNWT will continue relevant programs..

Table 6-5: Traditional Harvesting – Project Effect Attributes for the Gwich'in Settlement Area

Location	Effect Attribute			Significant	
	Direction	Magnitude	Geographic Extent		
GSA Aboriginal communities	Adverse	Moderate	Regional	Short term	No
GSA total	Adverse	Low	Regional	Short term	No
Inuvik	Adverse	Low	Local	Short term	No

Because of the expected mix of beneficial and adverse effects on different people, the effects are judged on balance to be slightly adverse. As indicated previously, the residual effects after mitigation are expected to be broadly similar throughout the GSA. It is expected that traditional harvesting activity in the Aboriginal communities will be affected at a moderate level of magnitude. However, in Inuvik, the effects on resource harvesting are expected to be low magnitude, although still adverse. These effects are expected to last only during construction.

6.2.6.4 Operations Effects

Most employment and opportunities generated by the project will end once construction and site restoration activities are complete. There will be some continued well drilling activities, and there will be about 80 operations and maintenance jobs created in the BDR. However, project effects are expected to be restricted to construction. There will be no need for mitigation and no residual effects during operations.

6.2.7 Traditional Harvesting – Sahtu Settlement Area

In this section, the focus is on examination of project effects on traditional harvesting in the SSA, but the discussions on effect pathways, data, assessment of effects and mitigation also apply.

6.2.7.1 Assessment and Management of Project-Specific Effects – Construction

See Section 6.2.3, Assessment and Management of Project-Specific Effects, for an assessment of project influences relevant to the whole study area that could promote or discourage traditional harvesting. Undoubtedly, many Sahtu people will want to and will obtain some form of project-related employment that could

involve unusual demands on their time. If this results in reduced traditional harvests, it will affect the 87% of Sahtu Aboriginal community households where at least half of their diet was country food in 2002, a substantial increase over the 76% rate for 1998. This level of dependence might ensure the continuing obligation and motivation of many to continue harvesting wild foods. Important, as well, is the satisfaction of the Sahtu people when eating moose meat, and their testimony to the importance of this food harvest.

6.2.7.2 Mitigation Measures

The mitigation measures described in Section 6.2.4, Mitigation Measures, also apply to the SSA.

6.2.7.3 Residual Effects

The harvesting component of the dual economy is sufficiently flexible to permit scheduling of harvest leaves. Table 6-6 summarizes the residual effects of the project on traditional harvesting. It is assumed that the project will support harvesting leaves, where possible, and that the GNWT will continue relevant programs..

Table 6-6: Traditional Harvesting – Project Effect Attributes for the Sahtu Settlement Area

Location	Effect Attribute			Significant
	Direction	Magnitude	Geographic Extent	
SSA Aboriginal communities	Adverse	Low	Regional	No
Norman Wells	Neutral	No effect	Local	No

As indicated, the residual effects after mitigation are expected to be quite similar throughout the SSA. Because of the expected mix of beneficial and adverse effects on different people, the effects are judged on balance to be very slightly adverse in the Aboriginal communities and regional in extent. The effects on traditional harvesting activity are expected to be low magnitude. In Norman Wells, because there are few Aboriginal residents, effects on resource harvesting are expected to be negligible, and local in extent. All effects are expected to last only during construction.

6.2.7.4 Operations Effects

Most employment and opportunities generated by the project will end once construction and site restoration activities are complete. There will be about 20 pipeline operations and maintenance positions created in the SSA. However, project effects will be short term and restricted to construction. There will be no need for mitigation and no residual effects during operations.

6.2.8 Traditional Harvesting – Deh Cho Region

In this section, the focus is on examination of project effects on traditional harvesting in the DCR, but the discussions on effect pathways, data, assessment of effects and mitigation also apply.

6.2.8.1 Assessment and Management of Project-Specific Effects – Construction

See Section 6.2.3, Assessment and Management of Project-Specific Effects, for an assessment of project influences relevant to the whole study area that can promote or discourage traditional harvesting. Undoubtedly, many Deh Cho people will want to and will obtain some form of project-induced employment that could involve unusual demands on their time. If this results in reduced traditional harvests, it would affect the 79% of Deh Cho Aboriginal community households, exclusive of Fort Simpson, where at least half of their diet was country food in 2002, a substantial increase over the 49% rate for 1998.

This level of dependence might ensure the continuing obligation and motivation of many to continue harvesting wild foods. This increase in percentages of households primarily dependent on country foods demonstrates the commitment to traditional harvesting despite competing activities, interests and motivations.

6.2.8.2 Mitigation Measures

The mitigation measures described in Section 6.2.4, Mitigation Measures, also apply to the DCR.

6.2.8.3 Residual Effects

The harvesting component of the dual economy is sufficiently flexible to permit scheduling of harvest leaves. Table 6-7 summarizes the residual effects of the project on traditional harvesting. It is assumed that the project will support harvesting leaves, where possible, and that the GNWT will continue relevant programs..

Table 6-7: Traditional Harvesting – Project Effect Attributes for the Deh Cho Region

Location	Effect Attribute			Significant
	Direction	Magnitude	Geographic Extent	
DCR (except Fort Simpson)	Adverse	Low	Regional	No
Fort Simpson	Adverse	Low	Local	No

As indicated, the residual effects after mitigation are expected to be similar throughout the DCR. Given the expected mix of beneficial and adverse effects on different people, the effects are judged on balance to be very slightly adverse.

Effects are expected to affect this traditional harvesting activity only marginally, i.e., low magnitude. These effects are expected to extend to all communities supplying workers to the project, but last only during construction.

6.2.8.4 Operations Effects

Most employment and opportunities generated by the project will end once construction and site restoration activities are complete. There are no technical operations jobs planned for the DCR, although there might be about 10 contract maintenance opportunities based there. Project effects are expected to be restricted to construction. There will be no need for mitigation and no residual effects during operations.

6.2.9 Traditional Harvesting – Industrial and Commercial Centres in the Northwest Territories

In this section, the focus is on examination of project effects on traditional harvesting in the ICCs in the Northwest Territories, but the discussions on effect pathways, data, assessment of effects and mitigation also apply.

6.2.9.1 Assessment and Management of Project-Specific Effects – Construction

Although both Yellowknife and Hay River are mostly non-Aboriginal communities, there are many Aboriginal residents living in the town or adjacent suburb settlements. Some of these Aboriginal people are harvesters, actively using their traditional culture. The analysis in this section focuses on these people.

See Section 6.2.3, Assessment and Management of Project-Specific Effects, for an assessment of project influences relevant to the whole study area that can promote and discourage traditional harvesting. Undoubtedly, many ICC Aboriginal people will want to and will obtain some form of project-induced employment that could involve unusual demands on their time. If this results in reduced traditional harvests, it will affect the 18% of Hay River and 16% of Yellowknife households where, in 2002, at least half of their diet was country food.

For many who live near an ICC, the trade-off between wage employment and traditional harvesting opportunities is familiar and accepted. Some people newly attracted to an ICC might find their harvesting interests challenged by project-related employment. The decline between 1993 and 2002 in percentages of households in Hay River depending mostly on country foods might indicate the vulnerability of traditional harvesting to competing activities and interests there. However, in Yellowknife, the data indicates an increase in traditional harvesting and therefore suggests resilience of the traditional harvest, especially during a period of high wage-employment opportunities.

6.2.9.2 Mitigation Measures

The mitigation measures described in Section 6.2.4, Mitigation Measures, also apply to the ICCs.

6.2.9.3 Residual Effects

The harvesting component of the dual economy is sufficiently flexible to permit scheduling of harvest leaves. Table 6-8 summarizes the residual effects of the project on traditional harvesting. It is assumed that the project will support harvesting leaves, where possible, and that the GNWT will continue relevant programs..

Table 6-8: Traditional Harvesting – Project Effect Attributes for Industrial and Commercial Centres in the Northwest Territories

Location	Effect Attribute			Significant
	Direction	Magnitude	Geographic Extent	
Yellowknife	Neutral	No effect	Local	No
Hay River	Adverse	Low	Local	No

As indicated, the residual effects after mitigation are expected to be similar in the ICCs. Although the expected mix of beneficial and adverse effects will be different for different people because Aboriginal residents are accustomed to ICC conditions and resources, the effects are judged on balance to be neutral and are expected to have no effect in Yellowknife, and very slightly adverse but likely low magnitude in Hay River. All effects will be local, and last only during construction.

6.2.9.4 Operations Effects

Most employment and opportunities generated by the project will end once construction and site restoration activities are complete. There are no direct operation and maintenance jobs planned in the ICCs. Therefore, project effects will be restricted to construction. There will be no need for mitigation and no residual effects are expected during operations.

6.2.10 Traditional Harvesting – Dene Tha’ First Nation in Northwestern Alberta

Reports indicate that the DTFN are avid resource harvesters, and that they are eager for employment. Because of the low current income levels of the Dene Tha’ and the time they might want to devote to well-paying employment, the project effects on traditional harvesting and land use could be slightly adverse. However, the DTFN people are used to high levels of oil and gas activity, and their strong traditional harvesting traditions persist.

In general, the assessment of effects and management measures discussed in Section 6.2.3, Assessment and Management of Project-Specific Effects, also apply here. Programs of the GNWT are not applicable. In the absence of direct input from the DTFN to this assessment, the residual effects summarized in Table 6-9 have been estimated by the assessment team.

Table 6-9: Traditional Harvesting – Project Effect Attributes for the Dene Tha’ First Nation

Location	Effect Attribute			Significant	
	Direction	Magnitude	Geographic Extent		
DTFN	Adverse	Low	Local	Short term	No

6.2.11 Traditional Harvesting – Industrial and Commercial Centres in Northwestern Alberta

Although traditional harvesting is important for the DTFN, it is not as important for residents of High Level, Rainbow Lake and Zama City, where livelihoods depend on the businesses and activities supporting the oil patch. Many residents are sport hunters and anglers, but these activities will be little influenced by the project.

6.3 Preservation of Traditional Language and Culture

How will the project affect preservation of traditional language and culture?

This question addresses how the project might affect the cross-generation transfer of traditional language, and the knowledge of and identification with traditional culture. This question deals with survival of language and culture, because without successful transfer from one generation to the next, both would soon disappear.

6.3.1 Effect Pathways

Figure 6-4 shows the various ways in which project-related and induced activities can affect language and culture preservation. The effects of project influences might be either positive or adverse, strengthening or weakening language and culture preservation. More likely, both effects might result from the same experience for different individuals. This question addresses how the project might affect survival of the prerequisites for successful language and culture preservation.

Ongoing project consultations, and benefits and access agreement negotiations during construction activities will determine policies and procedures for interacting with northern communities. There will be an increase in employment of Aboriginal people, and an increase in their on-the-job associations with non-Aboriginal workers. These influences will reduce the time workers spend in their

home communities with their families, and might change the influence of the family and community on workers. Collectively, these influences, plus project effects on traditional knowledge, practices and skills, and the harvesting that gives them functional importance, could affect Aboriginal language use and cultural education.

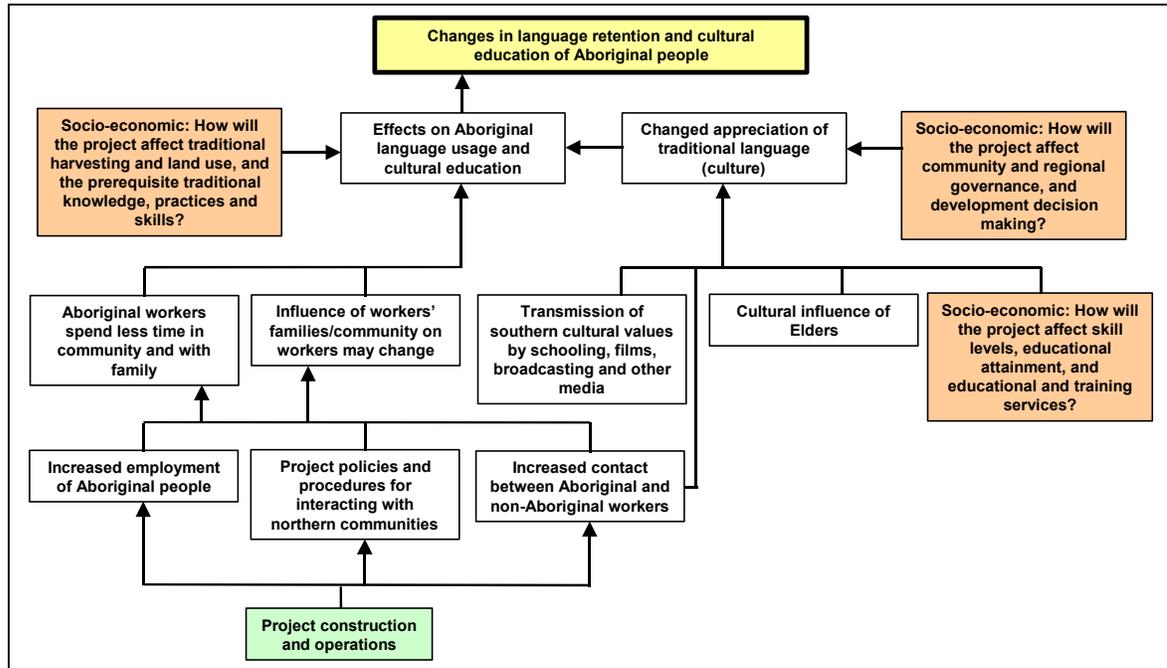


Figure 6-4: Project Effects on Traditional Language and Culture

Influences unrelated to the project include transmission of southern interests and values through the school system, films, television and other media, and the competing cultural influence of the Elders. These influences, plus project effects on education and training services and achievements, and on community and regional governance, can induce changes in the appreciation of traditional language, culture and lifestyle. These changes could also affect Aboriginal language use and cultural preservation.

Therefore, possible changes in inter-generational transmission of language and culture will depend on:

- time spent with family and home community residents
- time spent with non-Aboriginal fellow workers
- the competing influences of southern media and schooling, and the Elders

Therefore, influences on the amount of time spent in traditional contexts will interact with influences affecting possible changes in appreciation of the traditional language and culture. The current level of language and culture preservation is also important in affecting its resistance to erosive influences.

Analysis of the effect pathways for project effects on preservation of traditional language and culture is largely conceptual. There are empirical indicators for only a few links. As a result, the following analysis is largely based on:

- available current baseline data
- consultations with potentially affected groups and individuals
- the broad experience of the analysts

Data from ongoing traditional knowledge studies will be used to update this analysis as the studies are completed. It is likely that project-induced employment experiences and increases in income will add to existing influences, affecting transmission of traditional language and culture to future generations.

6.3.2 Existing Baseline Conditions

The percentage of Aboriginals in the study area communities who reported that they spoke an Aboriginal language in various years is a suitable indicator for language and culture preservation. Unfortunately, there are no other indicators of Aboriginal commitment to traditional culture, fluency or how frequently the native language is used.

Table 6-10 shows that between 1989 and 1999, there was an 11% decline in the proportion of those speaking an Aboriginal language in the Northwest Territories as a whole. Figure 6-5 depicts those aged 15 and older who spoke their Aboriginal language in the various study area regions in 1999. The highest rates of language retention in 1999 were found in the two southern settlement areas, including 72% in the DCR Aboriginal communities and 68% in the SSA Aboriginal communities. The percentages in the ISR and GSA were almost the same, at 29% for the ISR total and 28% for the GSA Aboriginal communities. The percentage of traditional language speakers among Hay River Aboriginal people was 29%, the same as in Norman Wells and in the ISR overall. Among Aboriginal people in Yellowknife, 22% spoke a traditional language. The percentage decline in language retention between 1994 and 1999 was about 5% in the ISR, SSA and DCR. However, during this period in the GSA Aboriginal communities, a 2% increase in the language facility was reported.

Additional information on the culture and history of the Aboriginal people of the study area is presented in Volume 4, Section 1, Introduction and Section 8, Heritage Resources of this volume.

6.3.3 Assessment and Management of Project-Specific Effects

The project will affect language and culture preservation through effects on the time available for Aboriginal people to spend with others in their home communities. Their motivation to engage in shared activities, such as communal hunting or whaling, will also be important, because their language has particular

relevance for these activities. Large project demands for workers, and likely a broad range of employment opportunities, will be found throughout most of the study area. Those responding to these opportunities will find their time with family and home community could be substantially reduced for two or more years. Their opportunities to speak their Aboriginal language will thus be reduced.

Table 6-10: Residents Who Speak their Aboriginal Language

Location	1989 (%)	1994 (%)	1999 (%)
Northwest Territories	56	50	45
ISR total	41	35	29
ISR coastal communities ¹	50	39	34
GSA total	28	25	26
GSA Aboriginal communities	33	26	28
SSA total	86	68	64
SSA Aboriginal communities	88	73	68
DCR total	78	70	65
DCR less Fort Simpson	82	76	72
Fort Good Hope	81	54	48
Fort Simpson	72	61	55
Inuvik	26	25	25
Norman Wells	52	36	29
Tuktoyaktuk	38	30	25
Yellowknife	37	34	22
Hay River	34	30	29
NOTES:			
1 includes Tuktoyaktuk, Holman, Paulatuk and Sachs Harbour Aboriginals aged 15 years and over			
SOURCE: GNWT Bureau of Statistics (2002b, 2003a)			

For some, project-induced employment and the resulting interactions with non-Aboriginal fellow workers might increase their valuation of traditional language and culture. For others, these relationships with fellow workers might be valued as friendly, interesting, challenging or giving promise of access to new opportunities. Substantial project-related earnings, often in work activities and settings more physically comfortable than those associated with traditional harvesting, might exacerbate this tendency.

However, there are also counterbalancing forces, including the strong influences of Elders favouring traditional ways, the support implicit in Aboriginal language taught in the schools, and also the mistrust many Aboriginal people feel from their dealings with some non-Aboriginal officials and individuals, perhaps a result of faulty communication.

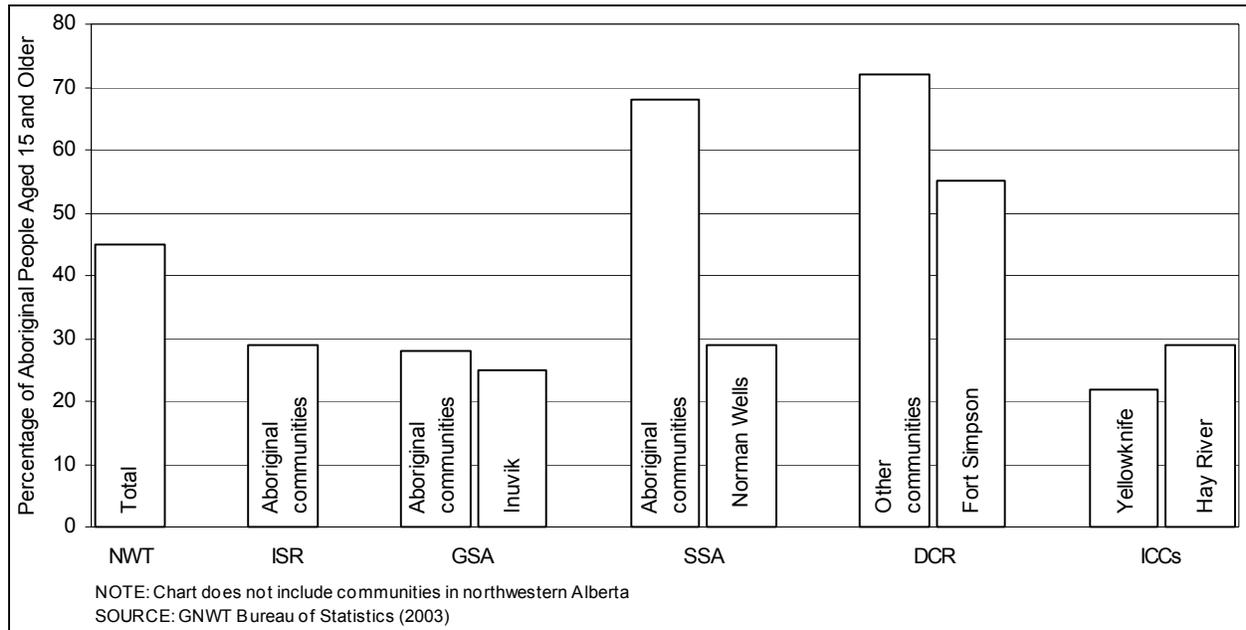


Figure 6-5: Residents Who Speak their Aboriginal Language (1999)

6.3.4 Mitigation Measures

An implication of the trends described previously is that although the project can have both facilitating and inhibiting effects, project-related employment might add to the slow, ongoing decline in language and culture preservation. Relevant mitigation efforts can be made by the project and the GNWT. The project will take steps to reduce its effect on this process. Language and culture can be strengthened when local communities esteem Elders and the way of life they advocate, and to honour those who are knowledgeable in traditional language and culture.

The project will implement the following important initiatives:

- providing cultural awareness training to all workers on the project. The goal will be to provide the trainees with information on the traditional Inuvialuit and Dene cultures, and their values, norms and conceptions of human nature and suitable human behaviour. The result of this training is to facilitate smooth, friendly interaction between Aboriginal and non-Aboriginal employees at work and in camp and, more importantly, promote appreciation and respect for Aboriginal people and their culture.
- 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

- supporting community-based traditional lifestyle initiatives that promote traditional culture and positive relationships with communities, such as:
 - traditional harvesting training camps for young people
 - Aboriginal language proficiency demonstrations or competitions
- supporting cultural activities and events that are consistent with the project proponents' principles and practices for community involvement
- periodically providing country foods in the construction camps
- providing access to Aboriginal language reading material, and Aboriginal language radio and television broadcasts, tapes and CDs where available
- providing an opportunity for Aboriginal artisans to display and sell original handcrafts in camps, if local communities favoured this. Such exhibits would enable camp workers to buy a memento of their northern work experience, provide Aboriginal craft-workers with a large market for their work and forestall any need for workers, wanting to buy Aboriginal handcraft, to visit a local community.

The GNWT RWED efforts to facilitate traditional harvesting, where proficiency in the traditional language is particularly apparent, were described in Section 6.2.4, Mitigation Measures, and are relevant here. The GNWT has encouraged local school boards to provide Aboriginal language instruction in schools. Aurora College offers several courses designed to help perpetuate traditional skills and activities. These programs should be continued.

6.3.5 Preservation of Traditional Language and Culture – Inuvialuit Settlement Region

In this section, the focus is on examination of project effects on preservation of traditional language and culture in the ISR, but the discussions on effect pathways, data, assessment of effects and mitigation also apply.

6.3.5.1 Assessment and Management of Project-Specific Effects – Construction

Major project demands for workers and a very broad range of employment opportunities will be found in the BDR. The Inuvialuit have a reputation as good workers interested in employment. Therefore, many will likely have project-related employment, and their time with family and home communities could be substantially reduced for two or more years. Opportunities to speak their Aboriginal language will be similarly reduced.

With only 29% of residents in the ISR speaking Inuvialuktun as early as 1999, use of English in the ISR communities is much more widespread than use of the

Inuvialuit language. Holman is an exception, with 58% Inuvialuktun speakers in 1999. Because of the lack of traditional language use, existing trends and influences that might further erode traditional language preservation can be stronger than those sustaining language and culture preservation. Therefore, the project might have some effect, but people dedicated to maintaining Aboriginal language might interpret it as an important effect.

6.3.5.2 Mitigation Measures

The mitigation measures described in Section 6.3.4, Mitigation Measures, also apply to the ISR.

6.3.5.3 Residual Effects

Table 6-11 summarizes the residual effects of the project on language and culture preservation. The effects are based on the assumption that the required provision for Aboriginal preferences and interests in construction camps and the process for authorizing harvest leaves are in place, and that the relevant GNWT programs will be continued. Without this mitigation, language and culture preservation could suffer because it is the younger Aboriginal men who will be most vulnerable to the adverse influences previously described.

Table 6-11: Language and Culture Preservation – Project Effect Attributes for the Inuvialuit Settlement Region

Location	Effect Attribute				Significant
	Direction	Magnitude	Geographic Extent	Duration	
ISR coastal communities ¹	Adverse	Low	Local	Short term	No
ISR total	Adverse	Low	Regional	Short term	No
NOTE: 1 includes Tuktoyaktuk, Holman, Paulatuk and Sachs Harbour					

The residual adverse effects are expected to be strongest in those communities most affected by project-related employment, including Tuktoyaktuk, Aklavik, and likely Paulatuk and Sachs Harbour. Because of the traditional culture and isolation of Holman, this community might experience minimal effects. Project effects are expected to be low magnitude, undetectable relative to the historical trend in culture and language preservation because of:

- the strength of English language influences in the Northwest Territories
- the decline in the number of people speaking Inuvialuktun from 1989 to 1999
- the relatively short duration of project-induced influences

The effects are expected to last only during construction.

6.3.5.4 Operations Effects

Most employment and opportunities generated by the project will end once construction and site restoration activities are complete. There will be some continued well drilling activities, and there will be about 80 operations and maintenance jobs created in the BDR. Project effects will be restricted to construction. There will be no need for mitigation and no residual effects during operations.

6.3.6 Preservation of Traditional Language and Culture – Gwich'in Settlement Area

In this section, the focus is on examination of project effects on preservation of traditional language and culture in the GSA, but the discussions on effect pathways, data, assessment of effects and mitigation also apply.

6.3.6.1 Assessment and Management of Project-Specific Effects – Construction

Major project demands for workers and a very broad range of employment opportunities will be found in the BDR, and so will be readily accessible to the Gwich'in. Project-related effects are similar to those described previously in Section 6.3.5.1, Assessment and Management of Project-Specific Effects – Construction, for the ISR.

With only 28% of GSA Aboriginal community residents able to speak the Gwich'in language in 1999, the use of English is more widespread than the use of Gwich'in. Therefore, existing trends and influences to further erode traditional language preservation can be stronger than those sustaining language and culture preservation. The project might have only a marginal effect, but people dedicated to maintaining Aboriginal language can interpret it as an important effect.

6.3.6.2 Mitigation Measures

The mitigation measures described in Section 6.3.4, Mitigation Measures, also apply to the GSA.

6.3.6.3 Residual Effects

Table 6-12 summarizes the residual effects of the project on language and culture preservation. These effects are based on the assumption that the required provision for Aboriginal preferences and interests in construction camps and the process for authorizing harvest leaves are in place, and that the relevant GNWT programs will be continued. Without this mitigation, language and culture preservation could suffer because it is the younger Aboriginal men who will be most vulnerable to the adverse influences previously described.

Table 6-12: Language and Culture Preservation – Project Effect Attributes for the Gwich'in Settlement Area

Location	Effect Attribute				Significant
	Direction	Magnitude	Geographic Extent	Duration	
GSA Aboriginal communities	Adverse	Low	Local	Short term	No
GSA total	Adverse	Low	Regional	Short term	No
Inuvik	Adverse	No effect	Local	Short term	No

The post-mitigation residual adverse effects on language and culture preservation are expected to be stronger in Fort McPherson than in Tsiigehtchic, because of Tsiigehtchic's greater isolation. English language influences are already so strong in Inuvik that project effects on language and culture preservation are expected to be negligible. Project effects are expected to be low magnitude in the GSA Aboriginal communities because of:

- the strength of English language influences in the Northwest Territories
- the decline in fluency in the Gwich'in language between 1989 and 1999
- the relatively short duration of project-induced influences

In the GSA as a whole, the effects are expected to be low magnitude. The effects will last only during construction.

6.3.6.4 Operations Effects

Most employment and opportunities generated by the project will end once construction and site restoration activities are complete. There will be some continued well drilling activities, and there will be about 80 operations and maintenance jobs created in the BDR. However, project effects are expected to be restricted to construction. There will be no need for mitigation and no residual effects during operations.

6.3.7 Preservation of Traditional Language and Culture – Sahtu Settlement Area

In this section, the focus is on examination of project effects on preservation of traditional language and culture in the SSA, but the discussions on effect pathways, data, assessment of effects and mitigation also apply.

6.3.7.1 Assessment and Management of Project-Specific Effects – Construction

There will be large project demands for workers and a broad range of employment opportunities in the SSA and elsewhere in the study area. Project-related effects are similar to those described previously in Section 6.3.5.1,

Assessment and Management of Project-Specific Effects – Construction, for the ISR.

With 68% of SSA Aboriginal community residents able to speak North Slavey in 1999, the use of English is much less common than in the BDR. This is particularly true in Déline, where 93% of the population speaks their native tongue. Despite this relative strength, it is believed that existing trends and influences on language and culture preservation are erosive, and influences deriving from project employment will tend to further this process.

Although many Norman Wells residents speak an Aboriginal language, English influences are already so strong in this community that the project is expected to have little or no effect on language and culture preservation there.

6.3.7.2 Mitigation Measures

The mitigation measures described in Section 6.3.4, Mitigation Measures, also apply to the SSA.

6.3.7.3 Residual Effects

The residual effects of the project on language and culture preservation are summarized in Table 6-13. These effects are based on the assumption that the required provision for Aboriginal preferences and interests in construction camps and the process for authorizing harvest leaves are in place, and that the relevant GNWT programs will be continued. Without this mitigation, language and culture preservation might suffer because it is the younger Aboriginal men who will be most vulnerable to the adverse influences previously described.

Table 6-13: Language and Culture Preservation – Project Effect Attributes for the Sahtu Settlement Area

Location	Effect Attribute				Significant
	Direction	Magnitude	Geographic Extent	Duration	
SSA Aboriginal communities	Adverse	Low	Local	Short term	No
SSA total	Adverse	Low	Regional	Short term	No
Norman Wells	Neutral	No effect	Local	Short term	No

The residual adverse effects on language and culture preservation might be stronger in Fort Good Hope than in the other SSA communities because Fort Good Hope is less traditional than the other Aboriginal SSA communities. Given the strength of English language influences in the Northwest Territories, the indications of decline in speakers of an Aboriginal language between 1989 and 1999, and the relatively short duration of project-induced influences, project effects are expected to be low magnitude in the SSA Aboriginal communities,

undetectable from the language and culture preservation historical trend. In the SSA as a whole, the effects are expected to be low magnitude. The effects are expected to last only during construction.

English language influences are already so strong in Norman Wells that project effects on language and culture preservation there are expected to be negligible (no effect).

6.3.7.4 Operations Effects

Most employment and opportunities generated by the project will end once construction and site restoration activities are complete. There will be about 10 operations and maintenance positions based in the SSA. However, project effects are expected to be restricted to construction. There will be no need for mitigation and no residual effects during operations.

6.3.8 Preservation of Traditional Language and Culture – Deh Cho Region

In this section, the focus is on examination of project effects on preservation of traditional language and culture in the DCR, but the discussions on effect pathways, data, assessment of effects and mitigation also apply.

6.3.8.1 Assessment and Management of Project-Specific Effects – Construction

The project will affect language and culture preservation through effects on the time available for DCR residents to spend with others in their home communities, and their motivation to engage in shared activities, such as communal hunting. Many Deh Cho residents will likely have project-related employment, and their time with family and home community could be substantially reduced for two or more years. They will thus have fewer opportunities to speak their Aboriginal language.

About 72% of DCR Aboriginal community residents were able to speak South Slavey in 1999. Accordingly, there is much less use of English than in the BDR, and this is particularly true in the small communities, such as Wrigley, 92%, and Trout Lake, 91%. Despite this relative strength, existing trends and influences on language and culture preservation plus project effects might be slightly adverse. These influences might undercut traditional language retention, although to a lesser extent than in the BDR.

6.3.8.2 Mitigation Measures

The mitigation measures described in Section 6.3.4, Mitigation Measures, also apply to the DCR.

6.3.8.3 Residual Effects

The residual effects of the project on language and culture preservation are summarized in Table 6-14. These effects are based on the assumption that the required provision for Aboriginal preferences and interests in construction camps and the process for authorizing harvest leaves are in place, and that the relevant GNWT programs will be continued. Without this mitigation, language and culture preservation might suffer because it is the younger Aboriginal men who will be most vulnerable to the adverse influences previously described.

Table 6-14: Language and Culture Preservation – Project Effect Attributes for the Deh Cho Region

Location	Effect Attribute				Significant
	Direction	Magnitude	Geographic Extent	Duration	
DCR total	Adverse	Low	Regional	Short term	No
Fort Simpson, Fort Liard and Fort Providence	Adverse	Low	Local	Short term	No

The post-mitigation residual adverse effects on language and culture preservation are expected to be slightly weaker in Fort Simpson, Fort Providence and Fort Liard than in the other DCR communities. Fort Simpson and Fort Providence have considerable exposure to English influences because they are located near the associated commercial and, in the case of Fort Simpson, government service functions. Fort Liard has recent and ongoing experience with hydrocarbon exploration and development.

Relevant influences in these larger DCR communities include:

- the strength of English language influences in the Northwest Territories
- the employment of many Deh Cho residents during the last five years in the diamond mines, where communication is in English
- the decline in fluency in an Aboriginal language between 1989 and 1999

Therefore, given the relatively short duration of project-induced influences, the combined effects of the project on all DCR communities are expected to be low magnitude, and undetectable from the language and culture preservation historical trend. These effects are expected to occur only during construction.

6.3.8.4 Operations Effects

Most employment and opportunities generated by the project will end once construction and site restoration activities are complete. There will be no technical operations jobs based in the DCR, although there might be about 10 contract

maintenance positions based there. Therefore, project effects are expected to be restricted to construction. There will be no need for mitigation and no residual effects during operations.

6.3.9 Preservation of Traditional Language and Culture – Industrial and Commercial Centres in the Northwest Territories

In this section, the focus is on examination of project effects on preservation of traditional language and culture in the ICCs in the Northwest Territories, but the discussions on effect pathways, data, assessment of effects and mitigation also apply.

6.3.9.1 Assessment and Management of Project-Specific Effects – Construction

Although both Yellowknife and Hay River are mostly non-Aboriginal communities, there are Aboriginal people living in the community or adjacent suburb settlements. Some of them are harvesters, actively using their traditional culture. The analysis in this section focuses on these people.

The project will affect language and culture preservation through effects on the time available for ICC Aboriginal residents to spend with others in their home communities. Many of these people have had extensive experience with wage employment, and many will likely have project-related employment. This could reduce their time with family and home community for two or more years, and reduce their opportunities to speak their Aboriginal language.

However, with only 29% of Aboriginal Hay River residents and 22% of Aboriginal Yellowknife residents able to speak an Aboriginal language in 1999, English is already commonly used and spoken among these people. Accordingly, it is likely that the influences of the project on language and culture preservation will contribute little, if anything, to the existing erosive process.

6.3.9.2 Mitigation Measures

Despite the very low levels of effects on language and cultural retention expected in the ICCs, the mitigation measures that will be adopted throughout the study area might have some effect in the ICCs as well. The mitigation measures described in Section 6.3.4, Mitigation Measures, also apply to the ICCs.

6.3.9.3 Residual Effects

The residual effects of the project on language and culture preservation are summarized in Table 6-15. These effects are based on the assumption that the required provision for Aboriginal preferences and interests in construction camps and the process for authorizing harvest leaves are in place, and that the relevant GNWT programs will be continued. Without this mitigation, language and culture

preservation might suffer because it is the younger Aboriginal men who will be most vulnerable to the adverse influences previously described.

Table 6-15: Language and Culture Preservation – Project Effect Attributes for Industrial and Commercial Centres in the Northwest Territories

Location	Effect Attribute			Significant	
	Direction	Magnitude	Geographic Extent		
Yellowknife and Hay River	Neutral	No effect	Local	Short term	No

The expected mix of beneficial and adverse effects will differ for different people. Therefore, the effects are judged on balance to be neutral. Effects on language and cultural preservation are expected to be weaker than in any of the settlement areas, because there are many other existing influences in the ICCs. There should be no project effects on language and culture preservation among Aboriginal ICC residents.

6.3.9.4 Operations Effects

Most employment and opportunities generated by the project will end once construction and site restoration activities are complete. There will be no operations and maintenance jobs based in the ICCs. Thus, project effects are expected to be restricted to construction. There will be no need for mitigation and no residual effects during operations.

6.3.10 Preservation of Traditional Language and Culture – Dene Tha’ First Nation in Northwestern Alberta

In 1996, 75% of the Dene Tha’ aged over 14 years reported that South Slavey was their home language, and this is interpreted as a valid indicator of general cultural retention. It is noteworthy that the DTFN have succeeded in retaining their language fluency, despite the many influences that promote English language use in their area. Available project employment for the DTFN will generally only be for the single year of NGTL pipeline construction.

Because of the notably high rate of DTFN language retention and the brief NGTL construction period, it is expected that the project will have only negligible effects on DTFN traditional language and culture (see Table 6-16).

Table 6-16: Language and Culture Preservation – Project Effect Attributes for the Dene Tha’ First Nation

Location	Effect Attribute			Significant	
	Direction	Magnitude	Geographic Extent		
DTFN	Neutral	No effect	Local	Short term	No

6.3.11 Preservation of Traditional Language and Culture – Industrial and Commercial Centres in Northwestern Alberta

High Level, Rainbow Lake and Zama City have populations of diverse ethnic origins, including many Aboriginal people in High Level. Preservation of individual languages and cultures is important for groups sharing such interests. The closeness of High Level Aboriginal residents to the Dene Tha' reserves in the area provides easy access to the traditional culture and language resources of these reserve communities.

NGTL activities are not expected to affect the traditional language and culture of Aboriginal and other people in High Level, Rainbow Lake or Zama City.