

# SOCIO-DEMOGRAPHIC AND ECONOMIC SECTOR ANALYSIS

## FINAL REPORT



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## EXECUTIVE SUMMARY

### INTRODUCTION

The Nunavut Planning Commission (NPC), an Institution of Public Government, has been given the responsibility of preparing community-based land use plans to fulfill the objectives established by the Nunavut Land Claims Agreement (NLCA). NPC's mandate arises specifically from Article 11, Section 11.3.1 of the NLCA, which states that a land use plan (LUP) document will be developed that contains text, schedules, figures and maps for the establishment of objectives and guidelines for short-term and long-term development. The LUP must take into consideration:

- Population demographics;
- Natural resource base and existing patterns of natural resource use;
- Economic opportunities and needs;
- Transportation and communication services and corridors;
- Energy requirements, sources and availability;
- Community infrastructure requirements, including health, housing, education and other social services;
- Environmental considerations, including parks and conservation areas, and wildlife habitat;
- Cultural factors and priorities, including the protection and preservation of archaeological sites and outpost camps; and,
- Special local and regional considerations.

In response to requirements of the NLCA, NPC contracted Terriplan Consultants to prepare a Socio-Demographic and Economic Sector Analysis report that will be used to help inform the Nunavut Land Use Plan. The intent of the report is to provide NPC with socio-demographic and economic information at the territorial, regional and community levels that will increase the Commission's understanding and awareness of current and possible future trends in the socio-economic environment of Nunavut.

### METHODOLOGY

This report is based on data and information collected using a variety of methods:

- Literature and Document Review:
  - Background information from secondary sources (research reports, government documents, presentations, market segment reports, websites and media notices) was compiled and reviewed.
- Statistical Data Review:
  - Current and past statistical data obtained from Statistics Canada, the Nunavut Bureau of Statistics and the NWT Bureau of Statistics formed the basis of the socio-demographic information obtained for the report.
- Interviews:
  - Interviews were conducted by telephone or in-person with over 28 representatives of governments, agencies and organizations with knowledge and experience related to the socio-demographic and/or economic environment in Nunavut. The purpose of the interviews was to provide information on the organization's mandate, priorities and initiatives related to enhancing economic development in Nunavut; the organization's opportunities and challenges in carrying out its mandate; and, additional information sources (documentation or geo-spatial) that might assist in the study.
- Digital Database Mapping:

- A variety of spatial datasets were compiled to create a series of maps that illustrate the locations and spatial extent of some existing economic development activities.

## SCOPE OF ANALYSIS

The socio-demographic analysis spans the timeframe from 1961 to 2006, with the key years of interest being the census years of 1996, 2001 and 2006. The geographic scope of the analysis includes the community/outpost, regional and territorial levels for Nunavut. The demographic characteristics for Nunavut were compared to corresponding conditions in Canada, including Alberta, Saskatchewan, Manitoba, and the Northwest Territories (NWT). Attempts were also made to collect forecast information on Nunavut and community populations to the year 2031.

The economic analysis highlights existing economic conditions in Nunavut and identifies future economic development opportunities. It provides an overview of the key characteristics of the economy, followed by a description of economic conditions and opportunities in each sector.

The information collected for this report was organized and analysed to identify the following:

- A detailed picture of the social and economic conditions currently existing in Nunavut;
- An assessment of social and economic trends leading to present conditions;
- A forecast of future conditions in Nunavut;
- A comparison of conditions with other jurisdictions within Canada and nationally as a whole;
- A review of current economic activities in the territory; and
- An assessment of potential opportunities (and barriers) for future social and economic development in Nunavut.

## STUDY FINDINGS

### POPULATION TRENDS IN NUNAVUT

#### *Recent Population Trends 1996-2006*

From 1996 to 2006, information obtained from Statistics Canada, the Nunavut Bureau of Statistics and the NWT Bureau of Statistics on recent population trends in Nunavut and jurisdictional comparisons, revealed the following highlights:

- Based on the 2006 census, Nunavut remains the smallest population of any province or territory in Canada, with a total of 29,474 residents representing 0.09% of the total Canadian population.
- Baffin is the largest region in the territory, accounting for 53.5% of the total census population and 50.6% of the total Aboriginal census population within Nunavut in 2006.
- Iqaluit was the largest community with a total of 6,186 residents, followed by Rankin Inlet (Pop. 2,358) and Arviat (Pop. 2,060), in 2006.
- Nunavut is composed primarily of Inuit, accounting for approximately 84% of the total census population in the territory in 2006.
- The communities with the greatest Aboriginal composition (approximately 96% in each community) in the 2006 census years included: Coral Harbour, Repulse Bay, Whale Cove, Clyde River, and Hall Beach.
- Compared to Canada as a whole, and within selected territories and provinces, Nunavut has the greatest proportion of Aboriginal people relative to its total territorial population.
- In 2006, Nunavut had a greater proportion of individuals in the 0-14 year age category (33.9%) and a lesser proportion in the 75 years and older grouping (0.8%) than Canada as a whole (17.6%)

and 6.4%, respectively) and selected provinces. The NWT showed similar demographic trends to those observed in Nunavut.

### ***Historic Population Growth***

Information obtained from Statistics Canada and the NWT Bureau of Statistics from 1961 to 2006 revealed that:

- Nunavut's population has increased from 4,166 residents in 1961 to 29,474 residents in 2006 (an increase of 14.1 %).
- In recent years, the population in Nunavut has grown at a much slower rate than in earlier years. From 1996 to 2001, Nunavut experienced a decrease in its growth rate from 16.4% to 8.1%. In 2006, the growth rate showed a slight increase (10.2%) but was still well below the rates previously experienced.

### ***Population Projections 2006 to 2031***

A population projection was to be developed for each community/outpost, and for Nunavut as a whole, for the years 2006 to 2031. However, given the current status of the data available from the Nunavut Bureau of Statistics and Statistics Canada, developing population projections from 2006 – 2031 with a reasonable degree of confidence, was not possible at this time.

The Nunavut Bureau of Statistics recently began preliminary research to prepare population projections for the territory; however this work is at a preliminary stage and was not able to be used to develop the required projections.

In September 2008, Statistics Canada is expected to release its population projections incorporating 2006 census data. Once this data becomes available, additional research would need to be done with regard to methodology and data inputs to ensure the projections are appropriate to the demographic conditions in Nunavut.

If population projections are to be developed with a sound degree of confidence, it is recommended that the task of developing the population projections to 2031 be postponed until the Nunavut Bureau of Statistics has completed its work on the population projections, and the estimates from Statistics Canada have been published.

## **CURRENT SOCIO-ECONOMIC PROFILE 2006**

Current socio-economic data on Nunavut obtained from the Statistics Canada's 2006 Census highlights the following findings.

### ***Labour Force Participation***

- Based on the total census population for 2006, Nunavut had lower participation and employment rates (65.3% and 55.2%, respectively) and higher unemployment rates (15.6%) than the national average (66.8%, 62.4% and 6.6%, respectively).
- The participation and employment rates (59.1% and 47.2%, respectively) for the Aboriginal 2006 census population in Nunavut were lower and the unemployment rate (20.1%) was even higher than the national Aboriginal averages (63.0%, 53.7%, and 14.8%, respectively).

### ***Educational Levels***

- In 2006, more than half of Nunavut's total census population (57.3%) and more than two-thirds of the Aboriginal census population (68.7%), had no educational certificate, diploma or degree. Within the Canadian population as a whole, 23.8% of the total census population and 43.7% of the Aboriginal population, had no educational certificate, diploma or degree.
- Based on the 2006 census data, 10.9% of the total Nunavut census population had a high school certificate or equivalent, compared to 25.5% of the total national population. With respect to the Aboriginal census population, 9.6% of the population in Nunavut had a high school certificate or equivalent, compared to 21.8% of the total national Aboriginal population.
- Only a very small percentage of the total 2006 census population in Nunavut (9.0%), and an even smaller percentage in the Aboriginal population (2.0%), had attained a university certificate, diploma or degree. This is significantly less than the national average, in which 18.1% of the total 2006 census population and 5.8% in the Aboriginal population had attained a university certificate, diploma or degree.
- In Nunavut, for both the total census population and the Aboriginal population, those individuals who were involved in academic pursuits were primarily engaged in the fields of 'architecture, engineering and related technologies' and 'business management, and public administration'.

### ***Average Income Levels***

- The average median income (money received from all sources) for the total census population, 15 years and older and living in Nunavut was \$20,982, approximately \$5,000 less than the national average. The average median income for the Aboriginal census population, 15 years and older, living in Nunavut (\$16,069) was similar to that for Aboriginal people nationally (\$16,752).
- The median earnings (money received from paid employment), for the total census population 15 years and older, living in Nunavut (\$26,848) were very similar to the national average (\$26,850). For the Aboriginal census population in Nunavut, 15 years and older, the median earnings (\$17,959) were \$1000 less than the national average for Aboriginal people.
- With respect to the composition of total income, the total 2006 census population in Nunavut had a higher percent of income originating from earnings (86.5%) than did the nation (76.2%). In the total Aboriginal population in Nunavut, 80.6% had income originating from earnings compared to 76.9% of Aboriginal peoples in the nation as a whole.

### ***Workforce by Industry Sector and Occupation***

- In Nunavut, for the total 2006 census population, Aboriginal and non-Aboriginal individuals in the workforce participated primarily in industries such as 'educational services', business services', 'retail services' and 'other services'
- In Nunavut, for the total 2006 census population, Aboriginal and non-Aboriginal individuals in the workforce were typically engaged in occupations such as 'sales and service occupations', 'trades; transport and equipment operators and related occupations', 'occupations in social science; education; government service and religion', and 'business; finance and administration occupations'.

### ***Income Level by Education Levels***

- Generally speaking, there is a direct relationship between an individual's education level and his or her average employment income.

## EXISTING ECONOMIC CONDITIONS

### *Overview of Existing Economic Conditions*

Nunavut has a mixed economy that depends on both the wage-based economy and the much smaller land-based activities such as hunting, crafts and fishing.

The government in Nunavut dominates the territorial economy and the service sector. The private sector in Nunavut is comparatively less developed than in the southern parts of Canada. The public sector in Nunavut accounts for a significant portion of Gross Domestic Product (GDP), making up about 26% of its value in 2006. By contrast, the public sector accounted for less than 6 percent of the GDP for Canada as a whole in 2006.

The Government of Nunavut (GN) projects expenditures of \$1.1 billion for 2008-09. The federal government will contribute about 81% of GN expenditures. Since the creation of Nunavut, the public sector has been the principal engine of the economy. It accounts for approximately 30 percent of territorial wage earners, significantly higher than the Canadian average, which is less than 6 percent.

In the goods-producing sector in 2004, the most important sectors were construction, followed far behind by utilities, manufacturing, mining and commercial fisheries.

The domestic economy is progressing at a healthy pace. Job creation is strong and income levels are rising as a result of government and private industry expansion. Nunavut benefited especially from mining industry activity, after several years of decline resulting from the closures of several major mines such as the Jericho and Nanisivik Mines.

### *Current Economic Activity*

The following economic activities currently exist in Nunavut:

**Transportation:** Transportation infrastructure in Nunavut is in need of updating and expansion. There are no roads or rail lines connecting communities with each other or the rest of the country and, although all the communities can be accessed by air year-round and all but one by sea during the summer months, the marine and air infrastructure is inadequate. These transportation issues need to be addressed to facilitate economic development.

**Commercial Fisheries:** Commercial fisheries are an emerging sector in Nunavut's economy. In 2005 it was estimated that the industry added between \$12 and \$14 million annually to the territory's economy and creates 300 seasonal jobs. Value-added processing plants in Nunavut are responsible for the greatest contribution. Currently, there are three main species being fished for commercial purposes in the territory – turbot, shrimp and Arctic char.

**Government:** Government is the largest employer in Nunavut. The public sector has remained Nunavut's prime economic driver and it is expected to remain so for the foreseeable future. This heavy dependence on the public sector is the result of circumstances such as a harsh climate, geographic remoteness, small population, and underdeveloped infrastructure systems which have led to serious constraints for private sector economic development in the territory.

**Tourism:** The tourism industry in Nunavut has an opportunity to capitalize on its unique natural and cultural features. The Government of Nunavut has identified the sector as one of the three pillars of economic growth within the territory. Currently, the sector employs 500 hospitality workers, attracts

approximately 13,000 people each year, primarily from Canada, American and Europe and contributes \$26 million to the economy.

**Communications:** Having adequate communications infrastructure is an essential part of facilitating economic development and improving quality of life in Nunavut. Working towards this goal, in 2005 the federal government provided financial assistance to enable the territory to provide broadband internet service to 25 communities at a cost of \$18 million.

**Oil and Gas:** Nunavut's oil and gas sector has not seen much activity to this point, yet it holds significant potential for the future of the territory's economy. There are proven oil and gas resources contained within fourteen sedimentary basins. It is estimated that the resources hold 530 million barrels of oil and 12 trillion cubic feet of natural gas.

**Energy:** In Nunavut, electricity is provided through diesel generation. Diesel is shipped to each community annually by sea and stored in large fuel tanks. A primary focus for the Quilliq Energy Corporation is conserving and reducing energy use and finding an alternative to diesel, particularly as issues arise regarding increasing fuel costs, growing demand and environmental concerns.

**Arts & Crafts:** Nunavut's arts and crafts sector is emerging as a successful, internationally-recognized part of the territory's economy. It currently provides income to more than 27% of the Inuit population and contributes \$30 million annually to the economy. Inuit art not only makes up more than 10% of Canadian art sold globally, it is a major draw for visitors coming into the territory.

**Wildlife:** Wildlife harvesting is an important part of meeting subsistence needs for Inuit, 70% of whom participate in these activities. It provides a fresh alternative to expensive imported food. Wildlife is also harvested for commercial purposes in Nunavut. Species such as polar bears, muskox, caribou and seals can be harvested and sold in a variety of forms locally and to markets throughout Canada and internationally.

**Mining:** Mining has great potential as a contributor to Nunavut's GDP. While there are currently no active mines, there are several projects at various stages in the environmental assessment process and many sites undergoing exploration. In 2007, a number of properties in the territory were being explored for uranium (49), diamonds (41), gold and precious metals (26), base metals (9), iron (2), coal (2), and gemstones (sapphires) (1). For the mining sector to fully realize its potential, issues such as transportation infrastructure and regulatory process efficiency must be adequately addressed.

### ***Key Challenges for the Economy***

There are a number of important challenges/barriers that impede Nunavut's ability to participate successfully in economic endeavours:

- The primary challenge is the capacity of Inuit living in Nunavut, and in particular the labour force, business and public institutions, to take full advantage of economic opportunities in Nunavut.
- A second challenge is that economic expansion is expected to easily outpace advances in Nunavut's social performance, which has been slow to improve.
- A third challenge is that Inuit still suffer from high unemployment and low levels of skills and education that the territory needs to address.

- A fourth challenge relates to aging and inadequate infrastructure which is limiting human development and economic success.

Other barriers faced by Nunavut that limit economic development include:

- The limited size of communities and their remoteness from the major metropolitan centres of Canada and other northern communities;
- The harsh climate and the impact it has on facilities' costs;
- The high cost of living;
- The high cost of transportation of people and goods to the north and among northern communities, along with the need to import most goods from the south, including the higher cost of fossil fuel, which is heavily subsidized by the government of Nunavut
- The high burden of taxation faced by residents of the north;
- The almost complete absence of banks and other mainstream financial institutions in many communities;
- The lack of access to investment capital for businesses and infrastructure;
- The lack of mechanisms to support trade of locally produced products -- small local markets limit business growth;
- The difficulties of recruiting specialized skills locally, and for Inuit small businesses to compete with high wages offered by government and major mining companies;
- The international trade laws that act as barriers to marketing Inuit / Nunavut products (e.g. marine mammal products, caribou meat, products from musk oxen, bear hunting, etc.);
- The necessity of providing services to customers and/or in dealing with government in two or three different languages;
- The need to greatly improve the availability and quality of socio-economic baseline data relevant to economic development and to make it more comprehensive, integrated and publicly available in order to better inform economic, regional and community planning; and,
- The regulatory system.

## **FUTURE ECONOMIC DEVELOPMENT OPPORTUNITIES**

### **OVERVIEW OF FUTURE ECONOMIC DEVELOPMENT OPPORTUNITIES**

#### ***Economic Outlook and Forecasts for Nunavut***

The 2005 Nunavut Economic Outlook for 2005-2020 forecasts the following economic activity and GDP growth:

- Although the public sector remains the major player in Nunavut's domestic economy and will remain so over the forecast period, recent advances in the private sector will diminish this dominance. Led by mining and construction industries, growth in business investments will result in more private-sector jobs.
- Real Gross domestic Product (GDP) is expected to grow 4.7% over the period from 2006-2010. Then growth is expected to decline markedly to 2.4% from 2011 to 2015 and to 1.6% from 2016-2020.
- In the early years of the forecast period, the public sector will provide new opportunities for employment and stimulate much of the territory's growth. In the later years, growth will shift towards three areas in the private sector: mining, fishing and construction.
- With growth in the Nunavut economy coming from sectors other than government, the economy will be more diversified and will lessen the territory's dependence on federal transfers.

### *Opportunities for Future Economic Development*

There is very strong potential in mining development including gold, metals and uranium. Mining provides the greatest long-term opportunities in monetary terms. According to a 2007 GN report, “optimistically, 1500 new mine-related jobs could be created in Nunavut over the next 10 years”. Mines with known deposits possibly going forward for approval include:

- Agnico-Eagle Mines Ltd. – Meadowbank Project (gold), Kivalliq;
- Areva Resources Inc. – Kiggavik Project (uranium), Kivalliq;
- Newmont Mining Corp. – Hope Bay Project (gold), Kitikmeot;
- Zinifex Canada - Izok Lake Project (lead, zinc), Kitikmeot;
- Zinifex Canada - High Lake Project (gold/copper), Kitikmeot; and,
- Baffinland Iron Mines Corporation – Mary River Project (iron ore), Qikiqtani.

Nunavut has proven oil and gas potential, accounting for 5% of known oil reserves and 15% of known gas reserves in Canada. Gas production is expected to reach 345 billion cubic feet or 6% of total projected Canadian production.

In the longer term, higher fuel prices will make diverse alternatives to diesel generation such as hydro electricity, residual heat and energy conservation, more viable across Nunavut, and it is hoped that research into 'green' energy alternatives will continue to develop.

After mining, the fishing industry has the potential to become a major driver of Nunavut’s future economy. Fisheries are expected to expand to include new species such as flounder, clams, crab and scallops. Those opportunities can be augmented if Nunavut can access new fishing quotas and develop its offshore and in-shore fisheries through future developments in fish science.

Potential public infrastructure projects include:

- Construction of a deep-sea port in Iqaluit, currently under study. It is expected to bring benefits to the fishing, tourism and transportation industries as well as reducing shipping costs;
- Manitoba – Kivalliq Road;
- Northwest Passage as a potential gateway;
- Bathurst Inlet Port and Road Project; and
- Hydroelectric development in the vicinity of Iqaluit

### *Economic Priorities*

In 2008, the Nunavut Economic Forum (NEF) identified three top priorities for the medium term: education, community and organizational capacity and local business development. For the NEF, it is crucial that Nunavut makes a concerted effort to ensure that its economy diversifies and attracts private investments, which are expected to expand as the land claims settlement creates a positive investment climate and is more predictable. Nunavut’s key challenge will be to ensure that more of the wealth produced in Nunavut stays in Nunavut -- not an easy task. According to the NEF, as of 2008, sector strategies have been completed in the following areas: mining, fishing, sealing, arts and crafts, housing, adult learning and climate change. In early 2009, the NEF is expected to convene the Sivummut III Economic Development Conference which will provide the opportunity to assess progress in implementing the 2003 NEF Economic Strategy and identify new priorities for the coming years. This will help all levels of government establish their direction for investing in economic development in Nunavut.

The GN Targeted Investment Program (TIP) has identified four thematic areas for investment:

- Building the knowledge base in key economic sectors;
- Enhancing the economic infrastructure base;
- Promoting capacity development of organizations, associations, small and medium sized enterprises (including social enterprises), and individuals; and
- Enhancing economic diversification within regions and sectors with a focus on the development of new sectors, products and markets.

The GN will receive \$182.7 million from the federal government over the next seven years for capital infrastructure. This funding will be allocated to the following sectors: transportation infrastructure; wastewater treatment and solid waste management; clean drinking water; disaster mitigation; cultural relevance; and sport and tourism.

The federal government's Strategic Investments in Northern Economic Development (SINED) program earmarked investments in seven areas of the TIP program between 2005 and 2009, including four sectors with the greatest potential for growth: mining and exploration (32%), fishing (8%), tourism/parks (18%), and arts and cultural industries (5%); and in three areas where progress will greatly enhance Nunavummiut participation in the economy: community organizational capacity (22%), trade (10%), and broadband/connectivity (5%).

### ***Future Opportunities in Economic Sectors***

Future economic activity in Nunavut includes the following:

**Transportation:** There are currently several projects in the planning and review stages aimed at addressing the challenges with Nunavut's transportation infrastructure. This includes the construction of ports, roads, harbour facilities and a railway line. These investments, made by both government and private companies not only facilitate economic development, but will also improve access and opportunities for the residents of Nunavut.

**Commercial Fisheries:** Activity in Nunavut's commercial fishing industry is predicted to grow. By the year 2013 it is expected to bring in \$85 million to the economy. Efforts to achieve this growth include investments in marine infrastructure, such as ports, docks and harbour facilities, as well as training programs that address the need for a skilled fishing workforce. In addition to expanding the current fisheries, exploration into new fish species will occur.

**Government:** In order for the government to move closer to the NLCA targets for Inuit employment, they must continue their efforts to increase training and education opportunities so as to improve Inuit capacity and thereby increase Inuit employment numbers. The proposed transfer of administration and control of public lands and resources and rights with respect to waters, from INAC to the GN will result in an increased need for a trained, representative workforce.

**Tourism:** Tourism is a sector that is highly desirable in Nunavut as it offers the opportunity for job creation at the community level, promotion of Inuit culture and protection of natural resources. Its successful development requires appropriate marketing, infrastructure development and standards and regulations. Opportunities for expansion are arising in capitalizing on the European market, taking advantage of the infrastructure created by mining activities, and promoting the unique remoteness of the area.

**Communications:** The current goal in the communications sector is to increase broadband capacity. Doing so would create multiple benefits including promotion of arts and crafts and tourism, generation of jobs in the IT sector, and improved access to public services.

**Oil and Gas:** It is expected that the oil and gas sector in Nunavut will grow significantly if there are sustained high oil and gas prices or supply shortages. These factors will lead to further exploration of the territory's resources. It is predicted that the rate of gas production will reach 345 cubic feet per year by 2020. To realize these predictions the territory must first overcome the obstacles presented by its extreme climate and inadequate transportation infrastructure.

**Energy:** As in the oil and gas sector, the increasing price of fuel and increasing demands will trigger the examination of opportunities for alternative methods of generating and conserving energy. Current efforts are focused on exploring residual heat programs, conservation initiatives, nuclear power, hydro-electric generation and other alternatives such as, solar and wind power.

**Arts and Crafts:** The development of a successful arts and crafts sector is being pursued through a variety of strategic investments such as initiatives that help create international recognition, expand the international market share and increase the quality of Nunavut art.

**Wildlife:** There is potential in this sector for growth and development. This is dependent, however, on a number of variables including the international policy on seal and polar bear hunting, changing climate conditions and the effects of development in other sectors on the environment. Careful monitoring and research of wildlife is needed as the economy and population of Nunavut expands.

**Mining:** Mining could potentially be one of the most lucrative industries for Nunavut. There are three significant projects anticipated to begin operations in the near future and it is projected that there will be 8 open mines by 2016. Each mine brings both revenue and employment to the territory. Two trends of particular interest in this sector are research into environmentally friendly operations and the push to invest in commodities given current global political uncertainty.

## CONCLUSION

This report has provided a detailed picture of the socio-demographic and economic conditions and trends in Nunavut, compared to that in other jurisdictions. A review and analysis was conducted of current drivers and trends, and future economic development opportunities for the Nunavut economy. The analysis of demographic trends, economic issues and opportunities provides a comprehensive overview of information to support the Nunavut Planning Commission's work as it proceeds to develop a land use plan for Nunavut.

## ACRONYMS

BIPAR	Bathurst Inlet Port and Road project
CEGEP	Collège d'enseignement général et professionnel (College of General and Vocational Education)
DFO	Fisheries and Oceans Canada
GDP	Gross Domestic Product
GN	Government of Nunavut
HRSDC	Human Resource and Social Development Canada
INAC	Indian and Northern Affairs Canada
MLA	Members of the Legislative Assembly
NEB	National Energy Board
NEF	Nunavut Economic Forum NLCA – Nunavut Land Claims Agreement
NPC	Nunavut Planning Commission
NRCan	Natural Resources Canada
NSA	Nunavut Settlement Area
NTI	Nunavut Tunngavik Incorporated
NWT	Northwest Territories
QEC	Qulliq Energy Corporation
RCMP	Royal Canadian Mounted Police
SINED	Strategic Investments in Northern Economic Development
TIP	Targeted Investment Program

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## GLOSSARY OF TERMS<sup>1</sup>

**Aboriginal Identity** - Refers to those persons who reported identifying with at least one Aboriginal group, that is, North American Indian, Métis or Inuit, and/or those who reported being a Treaty Indian or a Registered Indian, as defined by the *Indian Act* of Canada, and/or those who reported they were members of an Indian band or First Nation.

**Aboriginal Population** – refers to all those individuals who identify themselves as Aboriginal (refer to Aboriginal identity)

**Age** - refers to the age at last birthday (as of the census reference date, May 16, 2006). This variable is derived from date of birth.

**Beneficiaries** – refers to Inuit living in Nunavut who are beneficiaries of the Nunavut Land Claims Agreement.

**Composition of income** - the composition of the total income of a population group or a geographic area refers to the relative share of each income source or group of sources, expressed as a percentage of the aggregate total income of that group or area.

**Constant dollars income** - refers to the presentation of income data for one or more previous years, calculated to reflect the increase or decrease in the cost of living over the intervening period.

**Earnings or employment income** - refers to total income received by persons 15 years of age and over during calendar year 2005 as wages and salaries, net income from a non-farm unincorporated business and/or professional practice, and/or net farm self-employment income.

**Educational attainment** - refers to the highest level of schooling a person has attained in terms of grades of elementary or secondary school completed and certificates or diplomas obtained. It also refers to post secondary institutions attended and certificates, degrees or diplomas granted. While a hierarchy of educational attainment is implied with this variable, in a number of instances the levels are not entirely hierarchical. For example, the placement of Trades certificate or diploma as a higher level of attainment than the Secondary (high) school graduation certificate is justified on the basis of the former being obtained primarily for employment or occupational purposes by persons who were, on the whole, beyond the secondary school age at the time of completion of the course. However, a sizable proportion of the group may never have obtained a secondary school certificate. In effect, it cannot be implied that, if a person has attained a certain level, they have necessarily attained all lower levels.

**Employed** - persons who, during the week (Sunday to Saturday) prior to Census Day (May 16, 2006): did any work at all for pay or in self-employment or without pay in a family farm, business or professional practice

were absent from their job or business, with or without pay, for the entire week because of a vacation, an illness, a labour dispute at their place of work, or any other reasons.

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<sup>1</sup> Many of the definitions included in this glossary were taken directly from the following sources: Statistics Canada. Concepts and Variables. <http://www.statcan.ca/english/concepts/definitions/index.htm> (last updated: 2006-07-03) and Statistics Canada. Complete A to Z Index. <http://www12.statcan.ca/english/census06/reference/dictionary/atoz.cfm> (last modified March 4, 2008).

**Employment Rate** - refers to the number of persons employed in the week (Sunday to Saturday) prior to Census Day (May 16, 2006), expressed as a percentage of the total population 15 years of age and over.

$$\text{Employment rate} = \frac{\text{Employed}}{\text{Population 15 years and over (excluding institutional residents)}} \times 100$$

**Experienced Labour Force** – refers to persons who, during the week (Sunday to Saturday) prior to Census Day (May 16, 2006), were employed and the unemployed who had last worked for pay or in self-employment in either 2005 or 2006. The experienced labour force can also be derived by excluding from the labour force those unemployed persons 15 years of age and over who have never worked or who had last worked prior to January 1, 2005 only.

$$\text{Experienced labour force} = \text{Employed} + (\text{Unemployed who last worked in 2005}) + (\text{Unemployed who last worked in 2006})$$

**Government Transfer Payments** - refers to total income from all transfer payments received from federal, provincial, territorial or municipal governments during calendar year 2005. This variable is derived by summing the amounts reported in:

- the Old Age Security pension and Guaranteed Income Supplement, Allowance and Allowance for the Survivor
- benefits from Canada or Quebec Pension Plan
- benefits from Employment Insurance
- Child benefits
- other income from government sources

**Highest degree, certificate or diploma** - refers to the highest educational certification attained by a person. This is a derived variable obtained from the educational qualifications questions, which asked for all certificates, diplomas and degrees to be reported. There is an implied hierarchy in this variable (secondary school graduation, registered apprenticeship and trades, college, university) which is loosely tied to the 'in-class' duration of the various types of education. However, at the detailed level a registered apprenticeship graduate may not have completed a secondary school certificate or diploma, nor does an individual with a master's degree necessarily have a certificate or diploma above the bachelor's degree level. Therefore, although the sequence is more or less hierarchical, it is a general rather than an absolute gradient measure of academic achievement.

**Industry** - is a generally homogeneous group of economic producing units, primarily engaged in a specific set of activities. An activity is a particular method of combining goods and service inputs, labour and capital to produce one or more goods and/or services (products). The activities that define an industry are homogeneous with respect to the production processes used.

**Labour Force** - refers to persons who were either employed or unemployed during the week (Sunday to Saturday) prior to Census Day (May 16, 2006).

$$\text{Labour force} = \text{Employed} + \text{Unemployed}$$

**Labour Force Activity** - refers to the labour market activity of the population 15 years of age and over in the week (Sunday to Saturday) prior to Census Day (May 16, 2006). Respondents were classified as Employed, Unemployed, or Not in the labour force.

**Major Field of Study** - refers to the predominant discipline or area of learning or training of a person's highest postsecondary certificate, diploma or degree. The major field of study classification structure consists of 10 broad or major categories: educational, recreational and counselling services; fine and applied arts; humanities and related fields; social sciences and related fields; commerce, management and business administration; agricultural, biological, nutritional, and food sciences; engineering and applied sciences; applied science technologies and trades; health professions and related technologies; and mathematics, computer and physical sciences. This structure is, in turn, subdivided into over 100 'minor' classification categories and about 980 'unit' groups.

**Median** - refers to the midpoint in a series of numbers; half the data values are above the median, and half are below.

**Occupation** - refers to the kind of paid work performed. The kind of work is described in terms of tasks, duties and responsibilities, often including factors such as materials processed or used, the industrial processes used, the equipment used, and the products or services provided. Occupations are generally homogeneous with respect to skill type and/or skill level.

**Other income from government sources** - refers to all transfer payments, excluding those covered as a separate income source (Child Benefits, Old Age Security pensions and Guaranteed Income Supplements, Canada or Quebec Pension Plan benefits and Employment Insurance benefits) received from federal, provincial, territorial or municipal programs during the 2005 calendar year.

**Other money income** - refers to regular cash income received during calendar year 2005 and not reported in any of the other ten sources listed on the questionnaire. For example, severance pay and retirement allowances, alimony, child support, periodic support from other persons not in the household, income from abroad (excluding dividends and interest), non-refundable scholarships, bursaries, fellowships and study grants, and artists' project grants are included.

**Other Services** – Under the North American Industry Classification System (NAICS) 2007, this sector comprises establishments, not classified to any other sector, primarily engaged in repairing, or performing general or routine maintenance, on motor vehicles, machinery, equipment and other products to ensure that they work efficiently; providing personal care services, funeral services, laundry services and other services to individuals, such as pet care services and photo finishing services; organizing and promoting religious activities; supporting various causes through grant-making, advocating (promoting) various social and political causes, and promoting and defending the interests of their members. Private households are also included.

**Participation rate** - refers to the labour force in the week (Sunday to Saturday) prior to Census Day (May 16, 2006), expressed as a percentage of the population 15 years of age and over.

$$\text{Participation rate} = \frac{\text{Labour force}}{\text{Population 15 years of age and over (excluding institutional residents)}} \times 100$$

**Sex** - refers the sex of a person.

**Total income** - refers to the total money income received from the following sources during calendar year 2005 by persons 15 years of age and over:

- wages and salaries (total)
- net farm income
- net non-farm income from unincorporated business and/or professional practice
- Child benefits
- Old Age Security pension and Guaranteed Income Supplement
- benefits from Canada or Quebec Pension Plan
- benefits from Employment Insurance
- other income from government sources
- dividends, interest on bonds, deposits and savings certificates, and other investment income
- retirement pensions, superannuation and annuities, including those from RRSPs and RRIFs
- other money income.

**Total Population** –includes both Aboriginal and non-Aboriginal people

**Unemployed** - persons who, during the week (Sunday to Saturday) prior to Census Day (May 16, 2006), were without paid work or without self-employment work and were available for work and either:

- had actively looked for paid work in the past four weeks; or
- were on temporary lay-off and expected to return to their job; or
- had definite arrangements to start a new job in four weeks or less.

**Unemployment rate** - refers to the unemployed expressed as a percentage of the labour force in the week (Sunday to Saturday) prior to Census Day (May 16, 2006).

$$\text{Unemployment rate} = \frac{\text{Unemployed}}{\text{Labour force}} \times 100$$

## **1.0 INTRODUCTION**

### **1.1 OVERVIEW OF THE STUDY**

This Socio-Demographic and Economic Sector Analysis for Nunavut, prepared for the Nunavut Planning Commission (NPC), was developed to provide information on demographic trends and economic opportunities and needs to support the NPC in developing a land use plan for Nunavut.

#### ***1.1.1 The Nunavut Planning Commission***

The Nunavut Planning Commission (NPC) is an Institution of Public Government charged with preparing community-based land use plans to fulfill the objectives established by the Nunavut Land Claims Agreement (NLCA). The Nunavut Planning Commission derives its mandate from Article 11 of the NLCA.

Article 11, section 11.3.1 of the NLCA states that a land use plan document will be developed that contains text, schedules, figures and maps for the establishment of objectives and guidelines for short-term and long-term. The plan must take into account:

- Demographic considerations;
- Natural resource base and existing patterns of natural resource use;
- Economic opportunities and needs;
- Transportation and communication services and corridors;
- Energy requirements, sources and availability;
- Community infrastructure requirements, including health, housing, education and other social services;
- Environmental considerations, including Parks and Conservation Areas, and wildlife habitat;
- Cultural factors and priorities, including the protection and preservation of archaeological sites and outpost camps; and,
- Special local and regional considerations.

#### ***1.1.2 Purpose of the Report***

The Nunavut Planning Commission has contracted Terriplan Consultants to prepare this ‘Socio-demographic and Economic Sector Analysis’ that will be used in the preparation of the Nunavut Land Use Plan.

The purpose of the report is to provide the Nunavut Planning Commission with socio-demographic and economic information at the territorial, regional and community levels that will increase the Commission’s understanding and awareness of current and possible future trends in the socio-economic environment of Nunavut. This body of information, compiled from document reviews, statistical analysis, semi-structured interviews, and digital mapping, will allow the NPC to assess the social and economic development needs and opportunities of Nunavut which will, in turn, help the commission create the Nunavut Land Use Plan.

The assignment included collecting maps that illustrate the location and spatial extent of existing and future economic development activities and designing a spatial database of digital data files containing the compiled maps.

### **1.1.3 The Territory**

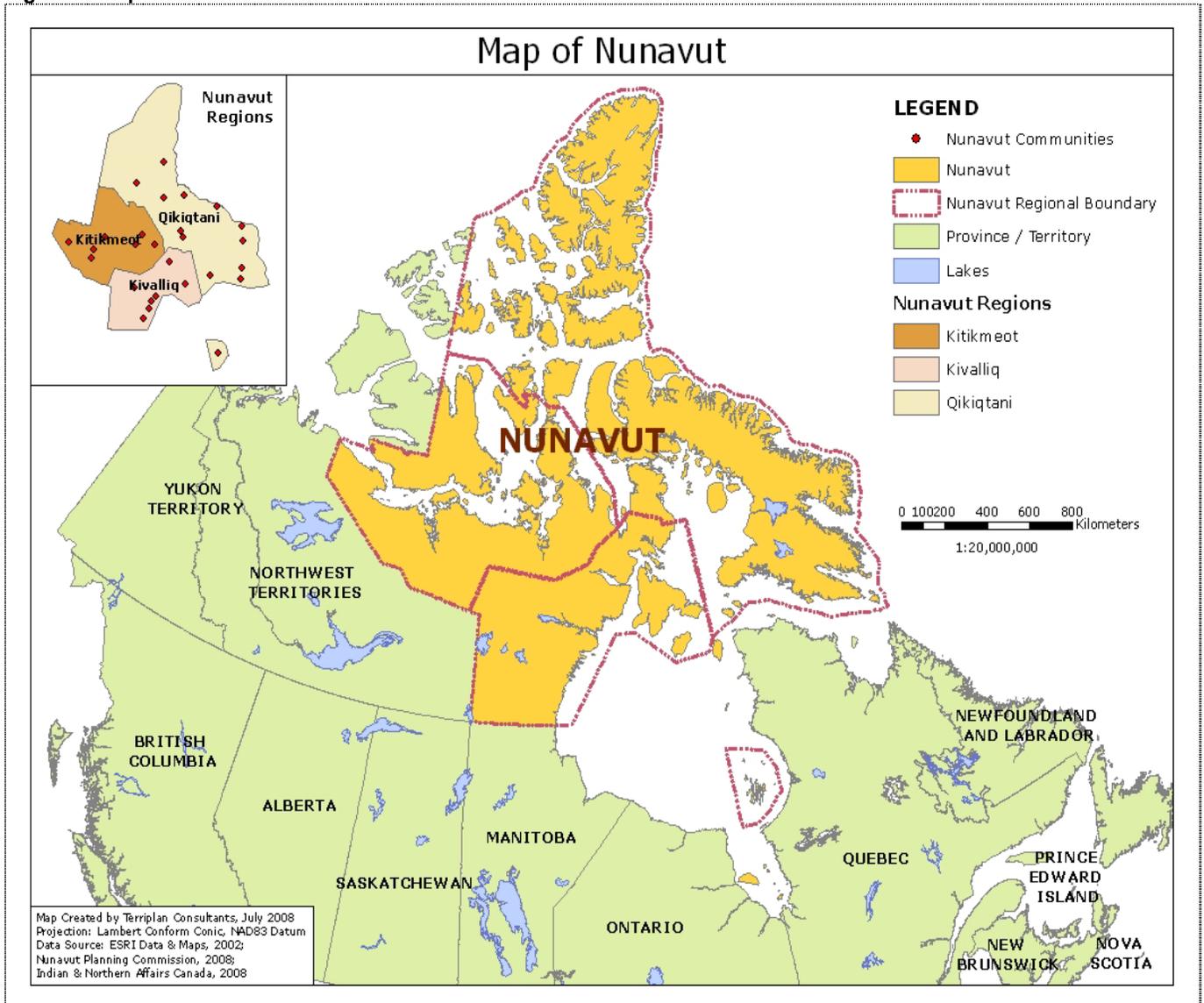
Nunavut became Canada's third territory on April 1, 1999. Canada signed the *Nunavut Land Claims Agreement (NLCA)* with the Inuit of the Nunavut Settlement Area as represented by the Tungavik Federation of Nunavut on May 25, 1993. The NLCA represents the largest Aboriginal land claim settlement in Canadian history. The Agreement included a promise that a new territory, to be known as Nunavut, composed predominately of Inuit, would be established in the Eastern Arctic. In 1999, the Nunavut Settlement Area (NSA), became a reality. "Nunavut" is an Inuktitut word meaning "Our Land".

Nunavut, at approximately two million square kilometres in size, covers nearly one-fifth of Canada's land surface and is larger than Mexico (refer to Table 1). It is unique in Canada in that the territory spans three time zones, has a population of less than 30,000 people (over 80% of them Inuit) and has 27 communities, most of them accessible only by air.<sup>2</sup>

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<sup>2</sup> *The Hill Times*, May 26, 2008 and <http://atlas.nrcan.gc.ca/site/english/maps/peopleandsociety/nunavut>

Figure 1: Map of Nunavut



### 1.1.4 Structure of the Report

The report sections are structured as follows:

- **Section 2:** Methodology (data sources, data limitations, scope of analysis)
- **Section 3:** Study Findings (population trends, current socio-demographic profile, existing economic conditions, future economic opportunities)
- **Section 4:** Conclusions

## 2.0 METHODOLOGY

The data gathering methodology, including sources of data and information for the demographic, economic and geo-spatial study elements of the study, are described below. Limitations to the data collection are also discussed.

## **2.1 DATA COLLECTION / INFORMATION SOURCES**

This report is based on data and information collected using a variety of methods:

- Literature and Document Review;
- Statistical Data Review;
- Interviews; and,
- Digital Database Mapping.

### ***2.1.1 Literature and Document Review***

For this project, background information from secondary sources (research reports, government documents, presentations, market segment reports, websites and media notices) was compiled and reviewed. As additional documentation was identified (e.g. through discussions in interviews), these items were added to the review. A list of the documents reviewed for the study is provided in Appendix A.

### ***2.1.2 Statistical Data Review***

Statistics Canada, the Nunavut Bureau of Statistics and the Northwest Territories (NWT) Bureau of Statistics were the sources for the statistical data analyzed in the study. Current statistical information included those components of the 2006 census available at the time of writing. Past statistical information was obtained from previous census year materials (e.g., from 1996, 2001, etc.). Discussions with representatives of these organizations were held to clarify aspects of the census data and population projections.

### ***2.1.3 Interviews***

Interviews were conducted by telephone or in-person with over 28 representatives of governments, agencies and organizations with knowledge and experience related to the socio-demographic and/or economic environment in Nunavut. In-person interviews were held with 9 departmental/organizational representatives; 19 interviews were conducted by telephone.

The purpose of the interviews was to provide information on:

- The organization's mandate, priorities and initiatives related to enhancing economic development in Nunavut;
- The organization's opportunities and challenges in carrying out its mandate; and,
- Additional information sources (documentation or geo-spatial) that may assist in the study.

A copy of the interview questions are provided in Appendix B.

The list of organizations and potential individuals to be interviewed was developed in consultation with the NPC. A range of governments, agencies and organizations were invited to take part in the interview process in the following categories:

- Federal government;
- Territorial government;
- Inuit Associations (territorial and regional);
- Institutions of public government;

- Municipal associations;
- Business organizations; and,
- Economic development organizations.

The list of organizations interviewed is provided in Appendix C.

### **2.1.4 Spatial Database and Sources**

Based on background research, publicly available data and direct communications with GIS personnel in various levels of governments, Terriplan Consultants established a variety of spatial datasets to be used for creating a series of maps for illustration in the report showing the locations and spatial extent of some existing economic development activities. The spatial datasets and their metadata are stored in a central repository designed for this project – a *File GeoDatabase* – and can be retrieved by the NPC for future analysis and map compilation.

Terriplan's data activities for this assignment consisted primarily of:

- *Data collection* – Terriplan visited a number of Internet sites and government agencies to search for readily available spatial data for Nunavut.
  - **Internet sites** included: GeoBase, The Atlas of Canada, GeoGratis and GeoConnections Discover Portal
  - **Government agencies** included: NRCan, INAC, Government of Nunavut, and Nunavut Tourism
- *Data conversion and cleansing* – Once the data was obtained, Terriplan staff pre-processed all datasets to ensure that data complies with NPC's required standards. This included: corrected spatial reference (Canada Lambert Conformal Conic Project, NAD83), correct file format (ESRI Shapefile), metadata standards (FGDC). All data was pre-processed using the ArcGIS 9.2 Suite of software.
- *Data storage and management* – To optimize usage, version updates and data management, Terriplan created a file geodatabase to store all spatial data collected for the purposes of this study. Once the geodatabase was created from the data model, data was imported as a layer into geodatabase using ArcCatalog, and converting them into feature classes.
- *Compilation of Maps* - Terriplan created a series of maps as supporting presentations to the geographic references to Nunavut and its current economic analysis and. All maps have been inserted into this report as images.

## **2.2 DATA ASSUMPTIONS AND LIMITATIONS**

The data and information forming the basis of this report is subject to the following limitations:

### **2.2.1 Interview Data**

The in-person interviews were planned to be held in the three regional centres: Cambridge Bay, Rankin Inlet and Iqaluit. Due to inclement weather and airplane technical problems, the visit to Cambridge Bay had to be cancelled. To the extent possible, the Cambridge Bay interviews were re-scheduled to take place by telephone, but no in-person interviews were conducted in that regional centre.

The results of the interviews are based on those organizations that were both selected initially as important resources and that were able to take part in the interviews. While some public and website information was available for organizations not able to take part in the interviews (see Appendix D), the views in this study generally reflect those expressed by participants in the interviews. Terriplan Consultants, in collaboration with the Nunavut Planning Commission, made all reasonable efforts to ensure that an appropriate cross section of voices and interests are reflected in this report.

### **2.2.2 Demographic Data**

The study was intended to include projections for the Nunavut population, at territorial and community levels, from 2006 to 2031. However, due to challenges related to reliability of data, these projections are not included. A detailed discussion of the challenges is provided in Section 3.1.3.

One component of the demographic analysis - "Income Level by Industry Sector" - is not yet available for 2006 at the time of writing.

Statistics Canada data has been subject to random rounding. Random rounding is less reliable for smaller populations such as communities, but more reliable for larger populations such as Nunavut.

There is some question about the reliability of the population data for Nunavut prior to, and including, 1966.

### **2.2.3 Spatial Data**

Economic spatial data for Nunavut was generally not available on the Internet. Yet, through direct communication and data request, INAC and NRCan have supported this project by providing mining and land parcel data which they collected for their own studies. In addition, the Department of Community and Government Services of the Government of Nunavut supplied Terriplan with extensive municipal infrastructure data (by community).

A variety of maps showing economic activities, such as tourist lodges, and valuable geographic features, like the national and territorial parks, are available in reports reviewed and referenced for this project. These are embedded images that cannot be converted as spatial data.

Terriplan has made every effort to complete the metadata for each layer with our best knowledge and understanding of the spatial layer. However, metadata for some spatial data is not as comprehensive as others because it was not produced by the owner of the data source.

## **2.3 SCOPE OF THE ANALYSIS**

### **2.3.1 Scope of Socio-Demographic Analysis**

The socio-demographic study spans the timeframe from 1961 to 2006. The key years of interest are the recent census years of 1996, 2001 and 2006. The discussion of recent demographic factors and patterns is therefore conducted at an in-depth level for those timeframes. The Nunavut and community populations were to be projected into the future to the year 2031.

The geographic scope of the analysis includes the community/outpost, regional and territorial levels for Nunavut. The demographic characteristics for Nunavut are then compared to corresponding conditions in the Canada, Alberta, Saskatchewan, Manitoba, and the Northwest Territories (NWT).

### **2.3.2 Scope of Economic Analysis**

The economic analysis describes existing economic conditions in Nunavut and identifies future economic development opportunities. It provides an overview of the key characteristics of the economy, followed by a description of economic conditions and opportunities in each sector.

### **2.3.3 The Analysis**

Since a variety of information types were collected for this report, data analysis required the use of different tools and techniques. Data obtained from documents, statistical sources and Internet-based research was summarized, organized and analysed for content. Interviews with governments, agencies and organizations yielded qualitative information that was summarized, organized and analysed using standard social science methods for qualitative data.

For this study, there are two basic types of analysis:

- Analysis of secondary research information collected from literature, reports, statistics, and web content; and
- Analysis of primary research information collected from personal interviews.

Using the information collected in these two research activities, the data was organized and analysed to identify the following:

- A detailed picture of the social and economic conditions currently existing in Nunavut;
- An assessment of social and economic trends leading to present conditions;
- A forecast of future conditions in Nunavut;
- Comparison of conditions with other in-scope jurisdictions within Canada and nationally as a whole;
- Review of current economic activities in the Territory; and,
- An assessment of potential opportunities (and barriers) for future social and economic development in Nunavut.

## **3.0 STUDY FINDINGS**

### **3.1 POPULATION TRENDS IN NUNAVUT**

This section of the report outlines the population trends in Nunavut<sup>3</sup>. It highlights:

#### **3.1.1 Recent Population Trends 1996 – 2006**

- Nunavut: The Territory, Regions and Communities
- Jurisdictional Comparisons: National and Selected Territorial and Provincial Comparisons

#### **3.1.2 Historic Population Growth**

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<sup>3</sup> It should be noted that Terriplan Consultants has calculated the percentages contained within the demographic section based on numbers obtained from Statistics Canada.

### 3.1.3 Population Projections 2006 – 2031

- Nunavut Bureau of Statistics Population Projections
- Statistics Canada Population Projections
- Recommendation

#### **3.1.1 Recent Population Trends 1996 – 2006**

Nunavut is unique in many ways. It has the smallest, yet fastest growing population, in the largest area of Canada. It is also home to the highest proportion of Aboriginal people, the Inuit, in any jurisdiction.

A brief summary of recent population trends in Nunavut, covering the years from 1996 to 2006, is provided below. The summarized data was derived from data obtained from Statistics Canada, the Nunavut Bureau of Statistics and the NWT Bureau of Statistics (the latter for information pre-separation).

- Nunavut had a total census population of 29,474 in 2006.
- In the 2006 census, Nunavut residents represented only 0.09% of the total Canadian population.
- Nunavut is composed primarily of Inuit, accounting for approximately 84% of the total population in the territory.
- Baffin is the largest region in the territory, accounting for 53.5% of the total census population and 50.6% of the total Aboriginal census population in 2006.
- Iqaluit (the capital of Nunavut) was the largest community with a total of 6,186 residents, followed by Rankin Inlet (n=2,358) and Arviat (n=2060), in 2006.
- Compared to Canada as a whole and selected territories and provinces, Nunavut has the greatest proportion of Aboriginal people.
- Compared to the nation and selected provinces, Nunavut has a greater number of individuals in the 0-14 year age category and a lesser number in the 75 years and older grouping (similar trends are noted in the NWT).

#### ***Nunavut: The Territory, Regions and Communities/Outposts***

Table 1 presents the census population numbers from the east to the west of Canada. Although Nunavut's population increased in size from 1996 to 2006, it still remains the smallest population of any province or territory in Canada, with a total of 29,474 residents representing 0.09% of the total Canadian population (based on the 2006 census population).

**Table 1: Census Population Numbers for Canada, Provinces and Territories: 1996, 2001, 2006<sup>4</sup>**

Jurisdiction	Population Size		
	1996	2001	2006
<b>Canada</b>	<b>28,846,761</b>	<b>30,007,094</b>	<b>31,612,897</b>
Newfoundland & Labrador	551,792	512,930	505,469
Prince Edward Island	134,557	135,294	135,851
Nova Scotia	909,282	908,007	913,462
New Brunswick	738,133	729,498	729,997
Quebec	7,138,795	7,237,479	7,546,131
Ontario	10,753,573	11,410,046	12,160,282
Manitoba	1,113,898	1,119,583	1,148,401
Saskatchewan	990,237	978,933	968,157
Alberta	2,696,826	2,974,807	3,290,350
British Columbia	3,724,500	3,907,738	4,113,487
Yukon Territory	30,766	28,674	30,372
Northwest Territories	39,672	37,360	41,464
<b>Nunavut</b>	<b>24,730</b>	<b>26,745</b>	<b>29,474</b>

Source: Statistics Canada. Population and dwelling counts, for Canada, provinces and territories, 2006 and 2001 censuses - <http://www12.statcan.ca/english/census06/data/popdwel/Table.cfm?T=101&SR=1&S=5&O=D>  
<http://www12.statcan.ca/english/census01/products/standard/popdwel/Table-PR.cfm>  
<http://www.stats.gov.nt.ca/Stainfo/Census/census96/april/green.html>

What the new territory lacks in numbers of people, it more than makes up for in geographic size. Nunavut accounts for nearly two million square kilometres, almost one-fifth of Canada's total land mass. The inhabitants of Nunavut reside in 3 regions - Kitikmeot, Keewatin (Kivalliq), and Baffin (Qikiqtaaluk), which are comprised of 27 communities in total (refer to Figure 2).

<sup>4</sup> Census population numbers based 100% data.

Figure 2: Map of Nunavut: Regions and Communities

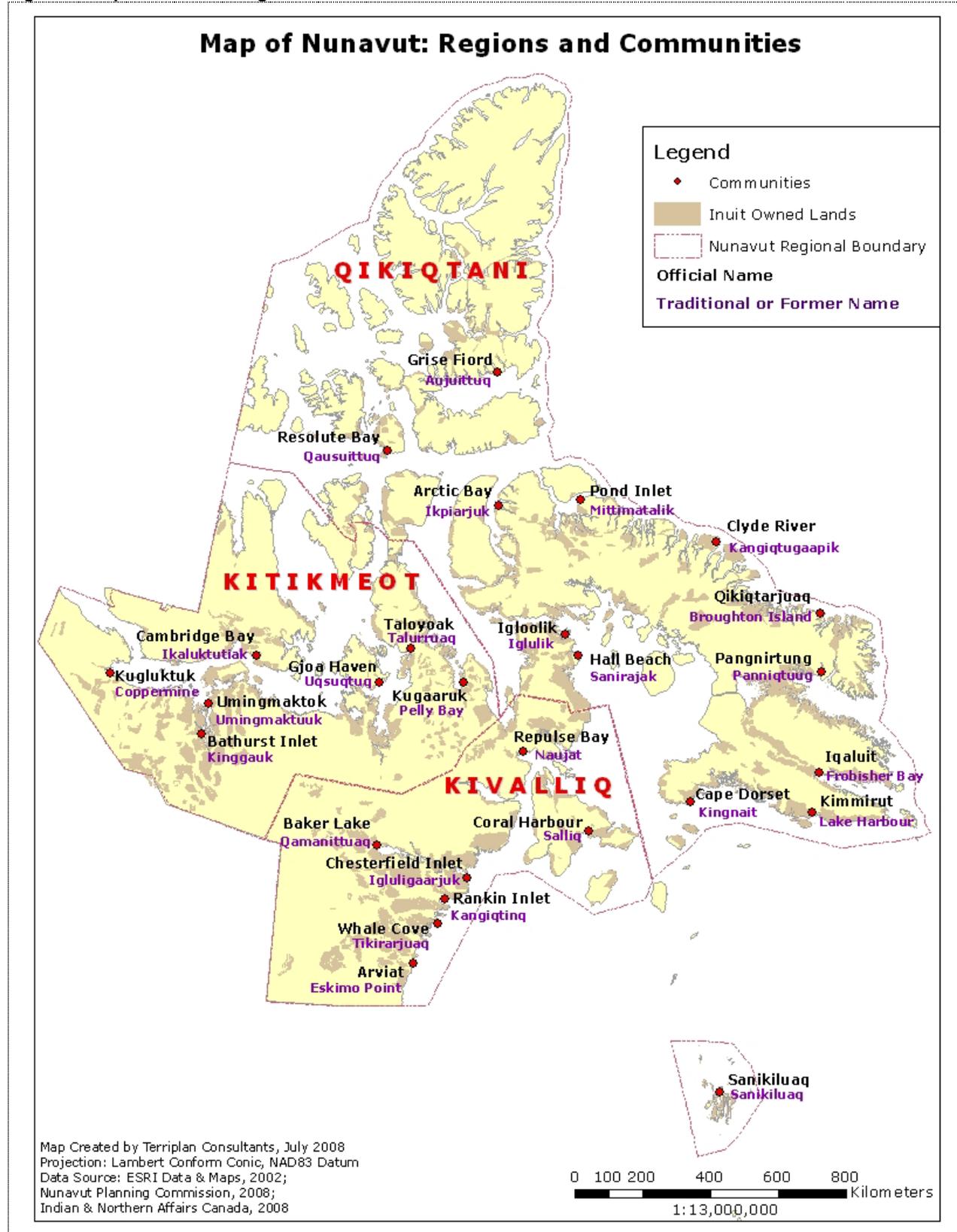


Table 2 reveals that both the total (including both Aboriginal and non-Aboriginal) and the Aboriginal census population numbers for the territory and the regions increased from 1996 to 2006. Table 2 also shows the significant variation in total and Aboriginal community population numbers both within and between regions. For example: (1) the total population in Iqaluit in 2006 was 6,184, while the total population in Grise Fiord was 141 and (2) the Aboriginal population in Rankin Inlet in 2006 was 1955, while the Aboriginal population in Chesterfield Inlet was 295.

**Table 2: Census Population Numbers for Nunavut Territory, Regions and Communities: 1996, 2001, and 2006**

Location	Total Population			Aboriginal Population		
	1996	2001	2006	1996	2001	2006
<b>Nunavut</b>	<b>24,730</b>	<b>26,745</b>	<b>29,474</b>	<b>20,690</b>	<b>22,720</b>	<b>24,915</b>
<b>Kitikmeot Region</b>	<b>4,644</b>	<b>4,816</b>	<b>5,361</b>	<b>4,475</b>	<b>4,335</b>	<b>4,800</b>
Cambridge Bay	1,351	1,309	1,477	1,025	1,035	1,215
Gjoa Haven	879	960	1,064	835	925	995
Kingak (Bathurst Inlet)	18	5	0	n/a	n/a	0
Kugaaruk (Pelly Bay)	496	605	688	470	575	635
Kugluktuk (Coppermine)	1201	1,212	1,302	1,070	1,120	1,195
Taloyoak	648	720	809	605	675	745
Umingmaktok (Bay Chimo)	51	5	0	55	n/a	0
Kitikmeot, Unorganized	0	0	21	0	0	n/a
<b>Keewatin Region</b>	<b>6,868</b>	<b>7,557</b>	<b>8,348</b>	<b>6,065</b>	<b>6,825</b>	<b>7,510</b>
Arviat	1,559	1,899	2,060	1,475	1,790	1,915
Baker Lake	1,385	1,507	1,728	1,275	1,415	1,560
Chesterfield Inlet	337	345	332	305	325	295
Coral Harbour	669	712	769	625	695	735
Rankin Inlet	2,058	2,177	2,358	1,575	1,720	1,955
Repulse Bay	559	612	748	530	590	715
Whale Cove	305	301	353	285	295	340
Keewatin, Unorganized	0	0	0	0	0	0
<b>Baffin Region</b>	<b>13,218</b>	<b>14,372</b>	<b>15,765</b>	<b>10,555</b>	<b>11,560</b>	<b>12,610</b>
Arctic Bay	639	646	690	590	610	640
Cape Dorset	1,118	1,148	1,236	1,010	1,070	1,130
Clyde River	708	785	820	665	750	790
Grise Fiord	148	163	141	135	150	120
Hall Beach	543	609	654	500	585	630
Igloolik	1,174	1,286	1,538	1,075	1,225	1,445
Iqaluit	4,220	5,236	6,184	2,600	3,065	3,650
Kimmirut (Lake Harbour)	397	433	411	360	405	385
Pangnirtung	1,243	1,276	1,325	1,160	1,210	1,240
Pond Inlet	1,154	1,220	1315	1,085	1,145	1,215
Qikiqtarjuaq (Broughton Island)	488	519	473	470	495	445
Resolute	198	215	229	155	170	200
Sanikiluaq	631	684	744	595	645	710
Nanisivik (Mine closed 2002)	287	0	0	45	0	0
Baffin, Unorganized	270	75	5	100	N/A	N/A

Source: Statistics Canada. 2006, 2001, 1996 Community Profiles. 2006, 2001, 1996 Census.

<http://www12.statcan.ca/english/profil/PlaceSearchForm1.cfm>

<http://www12.statcan.ca/english/profil01/CP01/Index.cfm?Lang=E>

<http://www12.statcan.ca/english/census06/data/profiles/community/Index.cfm?Lang=E>

Source: Statistics Canada. 2006, 2001 Aboriginal Profiles. 2006, 2001 Census

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Index.cfm?Lang=E>

<http://www.census2006.ca/english/Profil01/AP01/Index.cfm?Lang=E>

Source: NWT Bureau of Statistics. 1996 Aboriginal Identity. 1996 Census

<http://www.stats.gov.nt.ca/Statinfo/Census/census96/aboriginal/aboriginal.html>

Table 3 reveals that the largest region by far is the Baffin Region which accounted for 53.5% of the total Nunavut census population in 2006, followed by Keewatin (28.3%) and Kitikmeot (18.2%). This trend was also evident in 1996 and 2001, as well as in the Aboriginal census population for 1996-2006.

**Table 3: Nunavut Regions as a Percentage of the Total and Aboriginal Census Populations: 1996, 2001 and 2006**

Region	Total Population			Aboriginal Population		
	1996	2001	2006	1996	2001	2006
	Percent (%) of Total Population			Percent (%) of Aboriginal Population		
Kitikmeot	18.8	18.0	18.2	21.6	19.1	19.3
Keewatin	27.8	28.3	28.3	29.3	30.0	30.1
Baffin	53.4	53.7	53.5	51.0	50.9	50.6

Source: Statistics Canada. 2006, 2001, 1996 Community Profiles. 2006, 2001, 1996 Census.

<http://www12.statcan.ca/english/profil/PlaceSearchForm1.cfm>

<http://www12.statcan.ca/english/profil01/CP01/Index.cfm?Lang=E>

<http://www12.statcan.ca/english/census06/data/profiles/community/Index.cfm?Lang=E>

Source: Statistics Canada. 2006, 2001 Aboriginal Profiles. 2006, 2001 Census

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Index.cfm?Lang=E>

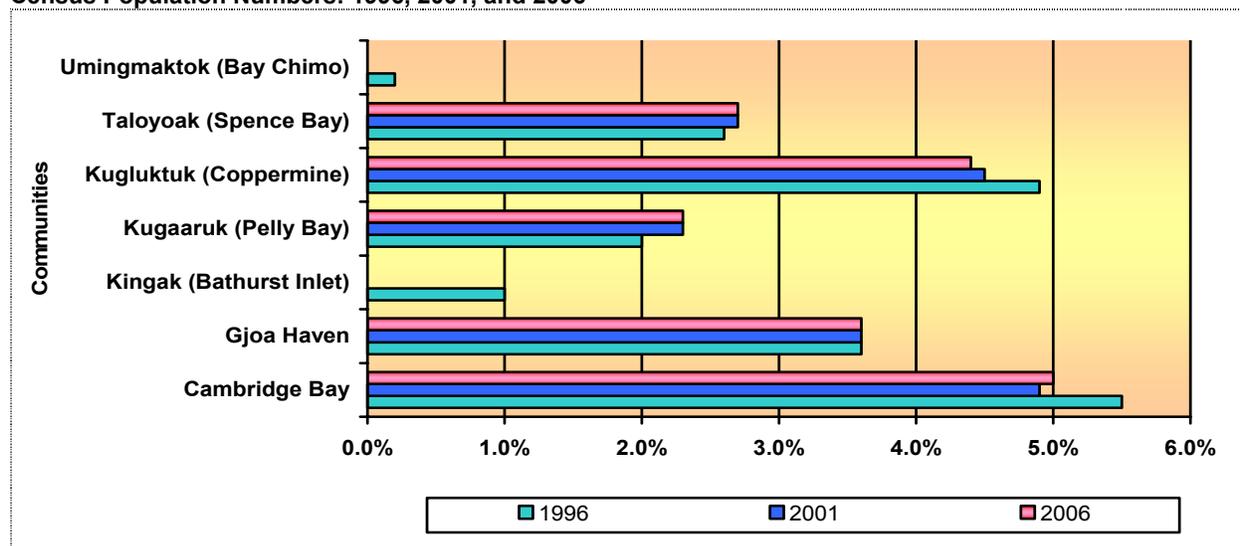
<http://www.census2006.ca/english/Profil01/AP01/Index.cfm?Lang=E>

Source: NWT Bureau of Statistics. 1996 Aboriginal Identity. 1996 Census

<http://www.stats.gov.nt.ca/Statinfo/Census/census96/aboriginal/aboriginal.html>

Figures 3 through 5 depict, for the 1996, 2001, and 2006 census periods, the total census population in each of the communities by region as a percentage of Nunavut's total census population. A comparison of these communities shows that in the 2006 census period the majority of individuals lived in Iqaluit (21.0%), Rankin Inlet (8.0%) and Arviat (7.0%). This same trend was also noted in 2001 (19.6%, 8.1% and 4.9%, respectively) and in 1996 (17.1%, 8.3% and 5.5%, respectively). Conversely, Figure 5 shows that in the 2006 census period Baffin (Unorganized) (0.02%), Grise Fiord (0.5%), and Resolute (0.8%) represented the smallest communities in Nunavut, with a total of 375 persons.

**Figure 3: Kitikmeot Region Communities (Total Census Populations) as a Percentage of the Total Nunavut Census Population Numbers: 1996, 2001, and 2006**



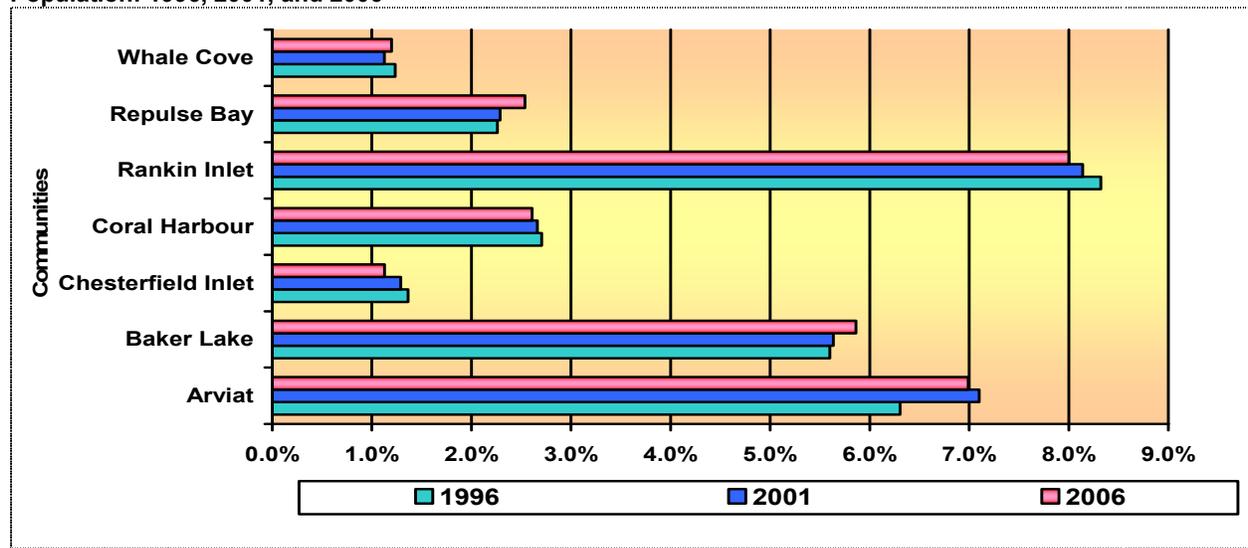
Source: Statistics Canada. 2006, 2001, 1996 Community Profiles. 2006, 2001, 1996 Census.

<http://www12.statcan.ca/english/profil/PlaceSearchForm1.cfm>

<http://www12.statcan.ca/english/profil01/CP01/Index.cfm?Lang=E>

<http://www12.statcan.ca/english/census06/data/profiles/community/Index.cfm?Lang=E>

**Figure 4: Keewatin Region Communities (Total Census Populations) as a Percentage of the Total Nunavut Population: 1996, 2001, and 2006**



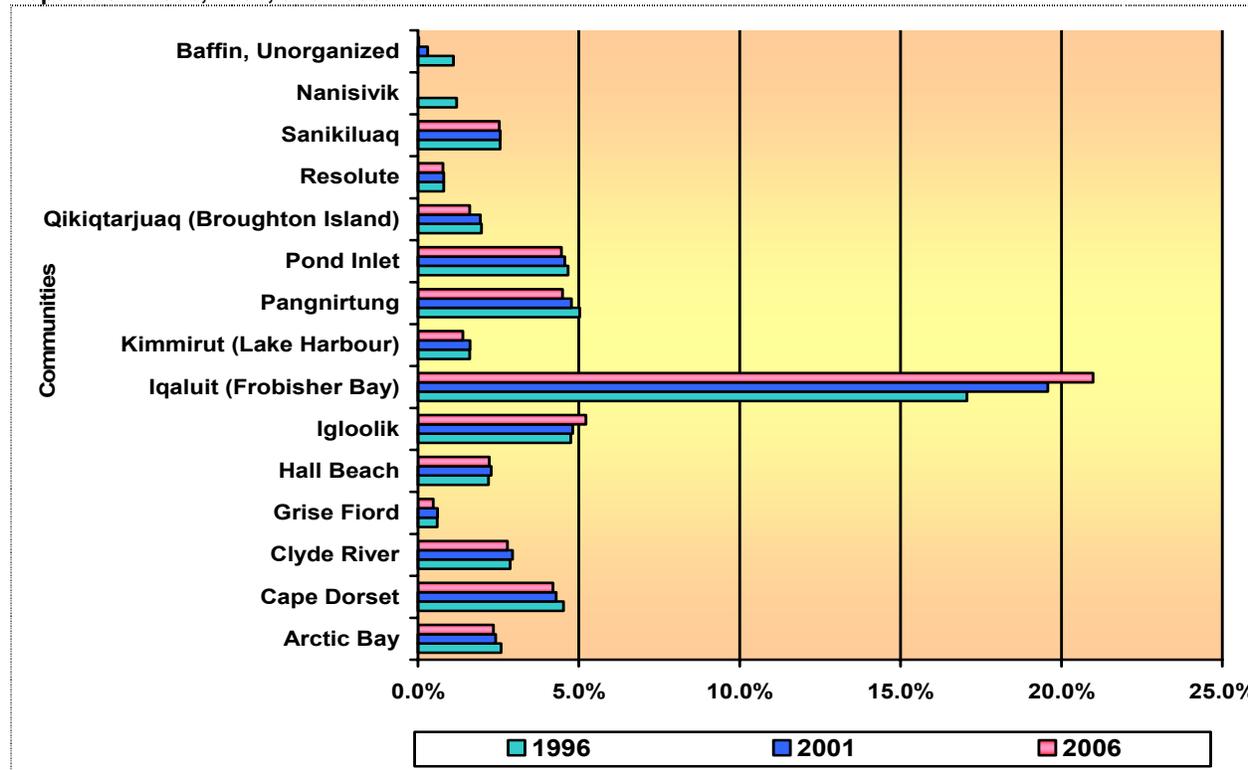
Source: Statistics Canada. 2006, 2001, 1996 Community Profiles. 2006, 2001, 1996 Census.

<http://www12.statcan.ca/english/profil/PlaceSearchForm1.cfm>

<http://www12.statcan.ca/english/profil01/CP01/Index.cfm?Lang=E>

<http://www12.statcan.ca/english/census06/data/profiles/community/Index.cfm?Lang=E>

**Figure 5: Baffin Region Communities (Total Census Populations) as a Percentage of the Total Nunavut Population: 1996, 2001, and 2006**



Source: Statistics Canada. 2006, 2001, 1996 Community Profiles. 2006, 2001, 1996 Census.

<http://www12.statcan.ca/english/profil/PlaceSearchForm1.cfm>

<http://www12.statcan.ca/english/profil01/CP01/Index.cfm?Lang=E>

<http://www12.statcan.ca/english/census06/data/profiles/community/Index.cfm?Lang=E>

**Table 4: Aboriginal Identity: Territory and Regions: 1996, 2001, 2006**

Identity	Nunavut			Kitikmeot			Keewatin			Baffin		
	1996	2001	2006	1996	2001	2006	1996	2001	2006	1996	2001	2006
Total Population (Aboriginal & Non - Aboriginal)	24,665	26,665	29,325	5,055	4,815	5,350	6,850	7,525	8,310	13,180	14,325	15,665
Total Aboriginal Identity Population	83.9	85.2	85.0	88.5	90.0	89.7	88.5	90.7	90.4	80.1	80.7	80.5
• North American Indian - Single Response	--	0.4	0.3	0.0	0.2	0.6	--	0.5	0.2	--	0.3	0.4
• Dene <sup>1</sup>	0.4	--	--	0.3	--	--	0.5	--	--	0.3	--	--
• Métis - Single Response	0.3	0.2	0.4	0.6	0.2	0.7	0.4	0.3	0.4	0.2	0.1	0.4
• Inuit - Single Response	83.0	84.6	84.0	87.6	89.5	88.3	87.3	89.9	89.6	79.4	80.2	79.6
• Multiple Aboriginal Identity Responses	0.1	0.0	0.1	0.2	0.0	0.2	0.2	0.0	0.1	0.1	0.0	0.1
• Aboriginal Responses Not Included Elsewhere	0.0	0.0	0.1	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
• Non-Aboriginal Identity Population	16.1	14.8	15.0	11.5	9.9	10.3	11.5	9.3	9.6	20.0	19.3	19.5

<sup>1</sup>For the 1996 census, Statistics Canada did not include the category 'North American Indian – single response'.

<sup>2</sup>For the 2001 and 2006 censuses, Statistics Canada did not include the category 'Dene'.

Source: Statistics Canada. 2006, 2001 Aboriginal Profiles. 2006, 2001 Census

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Index.cfm?Lang=E>

<http://www.census2006.ca/english/Profil01/AP01/Index.cfm?Lang=E>

Source: NWT Bureau of Statistics. 1996 Aboriginal Identity. 1996 Census

<http://www.stats.gov.nt.ca/Statinfo/Census/census96/aboriginal/aboriginal.html>

Table 4 highlights the breakdown of the Aboriginal population composition by territory and regions for census years 1996 through to 2006. What is important to note here, is that the 'Total Aboriginal Identity Population' category is almost identical to the 'Inuit – Single Response' category. This means that the overwhelming majority of Aboriginal people in Nunavut and the regions identify themselves as Inuit. This is a key finding given that Statistics Canada presents most of its Aboriginal population data under the single heading 'Aboriginal'. Based on this table, we can reliably conclude that when Aboriginal statistics are presented for Nunavut, the regions and communities that they refer to are almost entirely Inuit.

Table 5 shows, for the 1996, 2001, and 2006 census periods, the Aboriginal composition of each region and community, as a percentage of each region's and community's total census population, respectively. In 2006, Aboriginal people represented 84.5% of the total census population in Nunavut, up from 1996 when the proportion was 83.7% and down slightly from 2001 when it was 85.0%. A comparison of the regions reveals that from 1996 to 2006 Baffin Region consistently had approximately 10% less Aboriginal people residing there than the other two regions. This variability is principally due to the population structure of Iqaluit (the capital of Nunavut). In 2006, only 59.0% of the capital was Aboriginal. The communities with the greatest Aboriginal composition (96% in each community) in the 2006 census years include: Coral Harbour, Repulse Bay, Whale Cove, Clyde River, and Hall Beach.

**Table 5: Aboriginal Census Population Composition of the Regions and Communities as a Percentage of the Total Census Population in each Region and Community: 1996, 2001, and 2006**

Location	Percent (%) Aboriginal		
	1996	2001	2006
<b>Nunavut</b>	83.7%	85.0%	84.5%
<b>Kitikmeot Region</b>	96.4%	90.0%	89.5%
Cambridge Bay	75.9%	79.1%	82.3%
Gjoa Haven	95.0%	96.4%	93.5%
Kingak (Bathurst Inlet)	N/A	N/A	N/A
Kugaaruk (Pelly Bay)	94.8%	95.0%	92.3%
Kugluktuk (Coppermine)	89.1%	92.4%	91.8%
Taloyoak	93.4%	93.8%	92.1%
Umingmaktok (Bay Chimo)	N/A	N/A	N/A
Kitikmeot, Unorganized	N/A	N/A	N/A
<b>Keewatin Region</b>	88.3%	90.3%	90.0%
Arviat	94.6%	94.3%	93.0%
Baker Lake	92.1%	93.9%	90.3%
Chesterfield Inlet	90.5%	94.2%	88.9%
Coral Harbour	93.4%	97.6%	95.6%
Rankin Inlet	76.5%	79.0%	82.9%
Repulse Bay	94.8%	96.4%	95.6%
Whale Cove	93.4%	98.0%	96.3%
Keewatin, Unorganized	N/A	N/A	N/A
<b>Baffin Region</b>	79.9%	80.4%	80.0%
Arctic Bay	92.3%	94.4%	92.8%
Cape Dorset	90.3%	93.2%	91.4%
Clyde River	93.9%	95.5%	96.3%
Grise Fiord	91.2%	92.0%	85.1%
Hall Beach	92.1%	96.1%	96.3%
Igloolik	91.6%	95.3%	94.0%
Iqaluit	61.6%	58.5%	59.0%
Kimmirut (Lake Harbour)	90.7%	93.5%	93.7%
Pangnirtung	93.3%	94.8%	93.6%
Pond Inlet	94.0%	93.9%	92.4%
Qikiqtarjuaq (Broughton Island)	96.3%	95.4%	94.1%
Resolute	78.3%	79.1%	87.3%
Sanikiluaq	94.3%	94.3%	95.4%
Nanisivik (Mine closed 2002)	N/A	N/A	N/A
Baffin, Unorganized	N/A	N/A	N/A

Source: Statistics Canada. 2006, 2001 Aboriginal Profiles. 2006, 2001 Census

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Index.cfm?Lang=E>

<http://www.census2006.ca/english/Profile01/AP01/Index.cfm?Lang=E>

Source: NWT Bureau of Statistics. 1996 Aboriginal Identity. 1996 Census

<http://www.stats.gov.nt.ca/Statinfo/Census/census96/aboriginal/aboriginal.html>

***Jurisdictional Comparisons: National, Territorial and Provincial Comparisons (Canada, Nunavut, Alberta, Saskatchewan, Manitoba and NWT)***

Table 6 presents total, Aboriginal and non-Aboriginal population percentages for 1996 to 2006 for Canada and selected territories and provinces. The Table reveals that while the number of males to females is relatively even (50.1/49.9) in Alberta from 1996 to 2006, there are consistently more females in Canada as a whole as well as in Saskatchewan and Manitoba. However, Nunavut and the NWT consistently have a higher number of males over the same time period.

This Table also shows that Nunavut has by far the greatest proportion of Aboriginal people relative to its total Territorial population (~85%). In 2006, the NWT had the second highest proportion (50.3%), followed by Manitoba (15.5%) and Saskatchewan (14.9%). Conversely, Canada, as a whole, had the highest proportion of non-Aboriginal residents (96.2%) in 2006 followed by Alberta (94.2%). The same trends also occurred in 2001 and 1996

**Table 6: Total Census Population Percentages based on Aboriginal and Non-Aboriginal Identity by Selected Territory and Province: Canada – 1996, 2001, and 2006**

Geographic Location			Canada	Nunavut	Alberta	Saskatchewan	Manitoba	NWT
1996	Total Population	Total	100.0	100.0	100.0	100.0	100.0	100.0
		Male	49.2	52.2	50.1	49.5	49.3	51.8
		Female	50.8	47.8	49.9	50.5	50.7	48.2
	Aboriginal Identity	Total	2.8	83.9	4.6	11.4	11.7	61.9
		Male	1.4	-	2.2	5.6	5.8	31.3
		Female	1.4	-	2.4	5.8	5.9	30.6
	Non-Aboriginal Identity	Total	97.2	16.1	95.4	88.6	88.3	38.1
		Male	47.9	-	47.8	44.0	43.5	20.5
		Female	49.3	-	47.6	44.6	44.8	17.6
2001	Total Population	Total	100.0	100.0	100.0	100.0	100.0	100.0
		Male	49.1	51.6	50.1	49.3	49.2	51.2
		Female	50.9	48.4	49.9	50.7	50.8	48.8
	Aboriginal Identity	Total	3.3	85.2	5.3	13.5	13.6	50.5
		Male	1.6	43.2	2.6	6.6	6.6	25.2
		Female	1.7	42.0	2.7	6.9	7.0	25.3
	Non-Aboriginal Identity	Total	96.7	14.8	94.7	86.5	86.4	49.5
		Male	47.5	8.4	47.5	42.7	42.6	26.0
		Female	49.2	6.4	47.2	43.7	43.8	23.5
2006	Total Population	Total	100.0	100.0	100.0	100.0	100.0	100.0
		Male	49.1	51.2	50.1	49.2	49.1	51.0
		Female	50.9	48.8	49.9	50.8	50.9	49.0
	Aboriginal Identity	Total	3.8	85.0	5.8	14.9	15.5	50.3
		Male	1.8	42.8	2.8	7.3	7.6	24.8
		Female	1.9	42.1	3.0	7.6	7.9	25.5
	Non-Aboriginal Identity	Total	96.2	15.0	94.2	85.1	84.5	49.7
		Male	47.2	8.3	47.3	41.9	41.6	26.3
		Female	49.0	6.7	47.0	43.2	43.0	23.5

Source: Statistics Canada. Aboriginal Population Profile, 2006.

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Index.cfm?Lang=E>

Source: Statistics Canada. 2001 Census Aboriginal Population Profile. <http://www12.statcan.ca/english/profil01/AP01/Index.cfm?Lang=E>

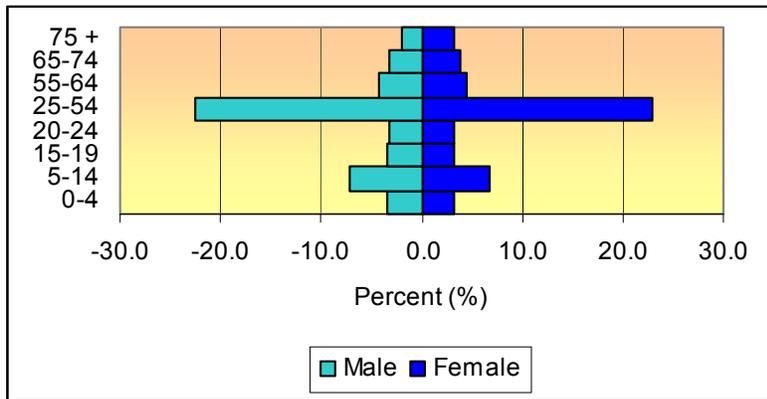
Source: Statistics Canada. Population by Aboriginal Groups and Sex, Showing Age Groups, for Canada, Provinces and Territories, 1996 Census.

<http://www.statcan.ca/english/census96/jan13/abor1.htm>

Figures 6 through 23 illustrate the male/female population distribution for Canada and the selected provinces and territories for the years 1996, 2001 and 2006, respectively<sup>5</sup>. Generally speaking, the composition of the population pyramids for Canada, Alberta, Saskatchewan and Manitoba are relatively similar with respect to percentage of males and females and age distribution. By contrast, the population pyramids for Nunavut and the NWT are quite different. In both territories there are a greater number of males in the population and there are significantly more individuals in the 0-4 and 5-14 age groups and significantly less in the 75 years and above category.

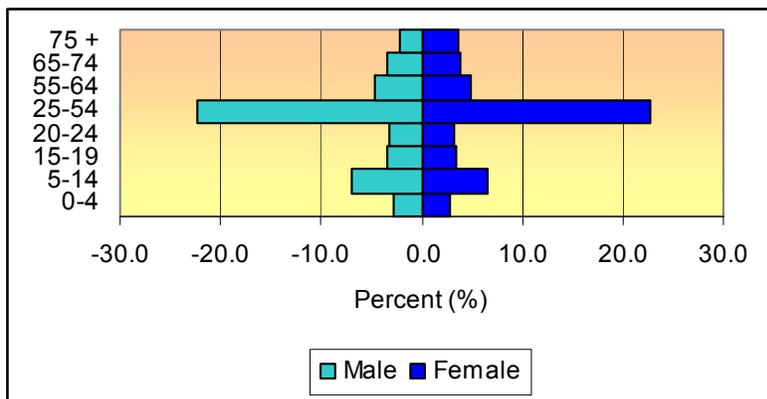
<sup>5</sup> It should be noted that the 25-54 age category is comprised of a number of age groupings (25-29, 30-34, 35-39, 40-44, 45-49, 50-54) and thus explains its large proportion relative to the other age categories. The age groupings in the 1996 census are reported in this way so, as to facilitate comparison across years, similar groups were constructed for 2001 and 2006.

**Figure 6: Canada – Total Census Population by Age and Gender (1996)**



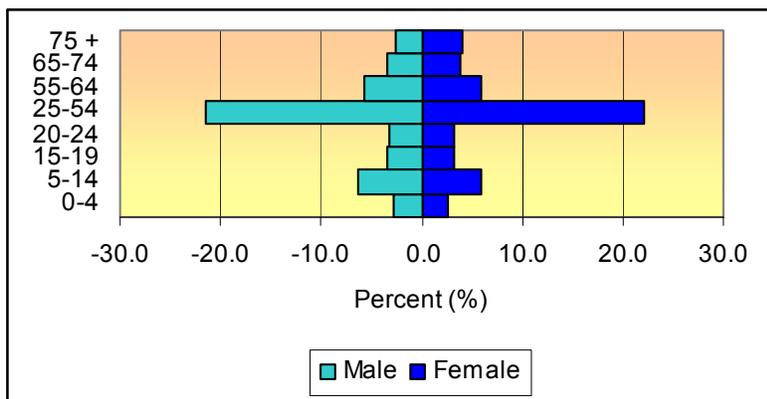
Source: Statistics Canada. Profile of Federal Electoral Districts (1996 Representation Order), 1996 Census  
<http://www12.statcan.ca/english/census96/data/profiles/DataTable.cfm?YEAR=1996&LANG=E&PID=35257&S=A>

**Figure 7: Canada – Total Census Population by Age and Gender (2001)**



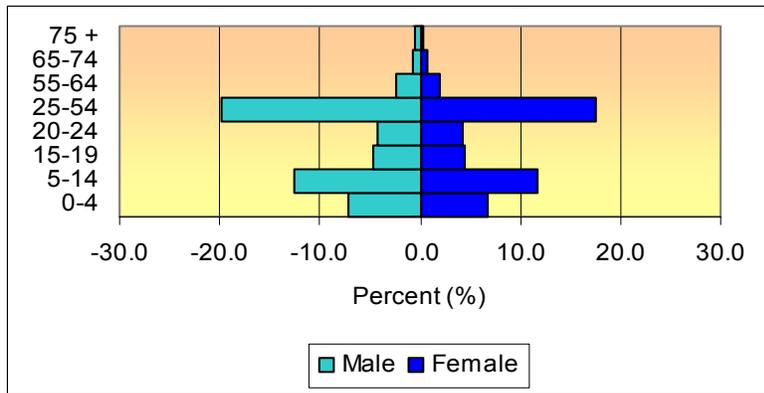
Source: Statistics Canada. 2001 Community Profiles, 2001 Census.  
<http://www12.statcan.ca/english/profil01/CP01/Details/Page.cfm?Lang=E&Geo1=PR&Code1=01&Geo2=PR&Code2=01&Data=Count&SearchText=Northwest%20Territories&SearchType=Begin&SearchPR=01&B1=Population>

**Figure 8: Canada – Total Census Population by Age and Gender (2006)**



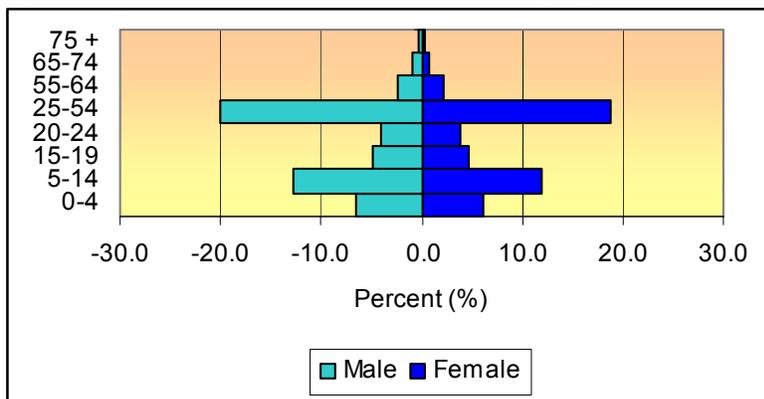
Source: Statistics Canada. 2006 Community Profiles. 2006 Census.  
<http://www12.statcan.ca/english/census06/data/profiles/community/index.cfm?Lang=E>

**Figure 9: Nunavut - Population by Age and Gender (1996)**



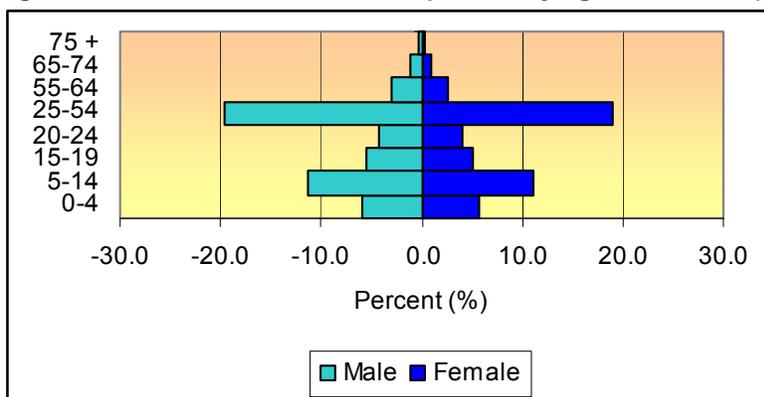
Source: Statistics Canada. Profile of Federal Electoral Districts (1996 Representation Order), 1996 Census  
<http://www12.statcan.ca/english/census96/data/profiles/DataTable.cfm?YEAR=1996&LANG=E&PID=35257&S=A>

**Figure 10: Nunavut – Total Census Population by Age and Gender (2001)**



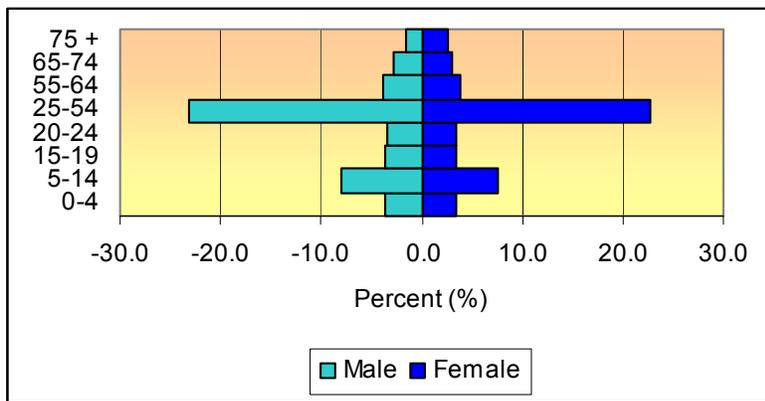
Source: Statistics Canada. 2001 Community Profiles, 2001 Census.  
<http://www12.statcan.ca/english/Profil01/CP01/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=&GeoCode=62>

**Figure 11: Nunavut – Total Census Population by Age and Gender (2006)**



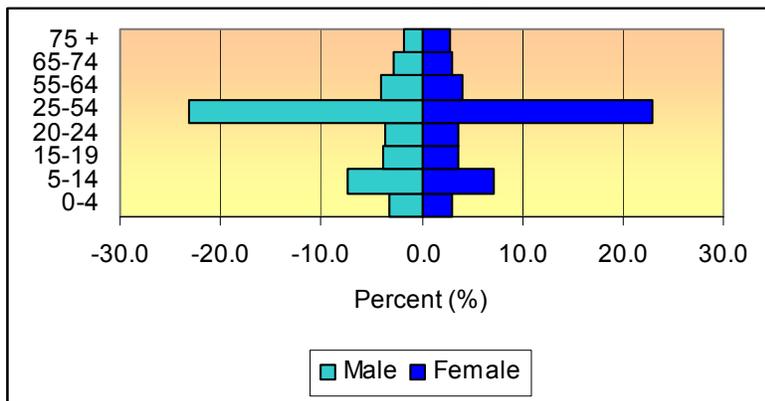
Source: Statistics Canada. 2006 Community Profiles. 2006 Census.  
<http://www12.statcan.ca/english/census06/data/profiles/community/index.cfm?Lang=E>

**Figure 12: Alberta – Total Population by Age and Gender (1996)**



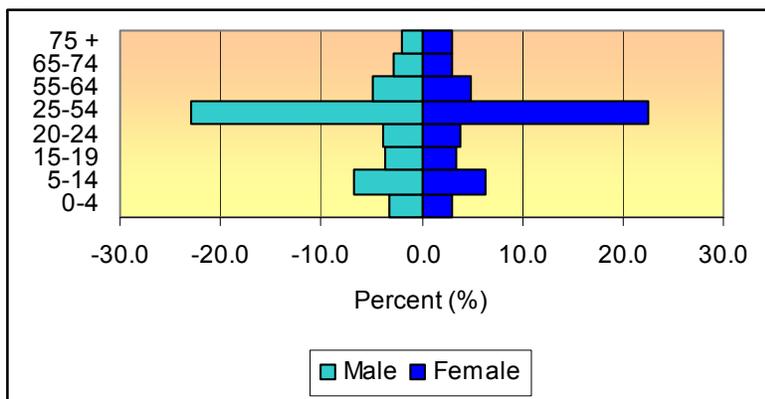
Source: Statistics Canada. Profile of Federal Electoral Districts (1996 Representation Order), 1996 Census  
<http://www12.statcan.ca/english/census96/data/profiles/DataTable.cfm?YEAR=1996&LANG=E&PID=35257&S=A>

**Figure 13: Alberta – Total Population by Age and Gender (2001)**



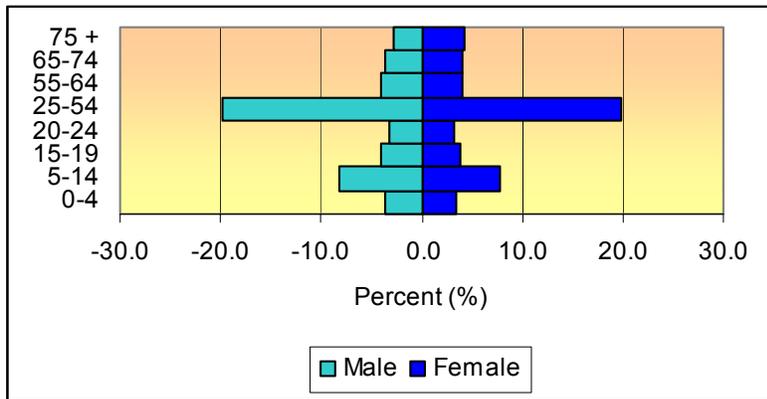
Source: Statistics Canada. 2001 Community Profiles, 2001 Census.  
<http://www12.statcan.ca/english/Profile01/CP01/Details/Page.cfm?Lang=E&Geo1=PR&Code1=48&Geo2=PR&Code2=01&Data=Count&SearchText=Alberta&SearchType=Begin&SearchPR=01&B1=All&GeoLevel=&GeoCode=48>

**Figure 14: Alberta – Total Population by Age and Gender (2006)**



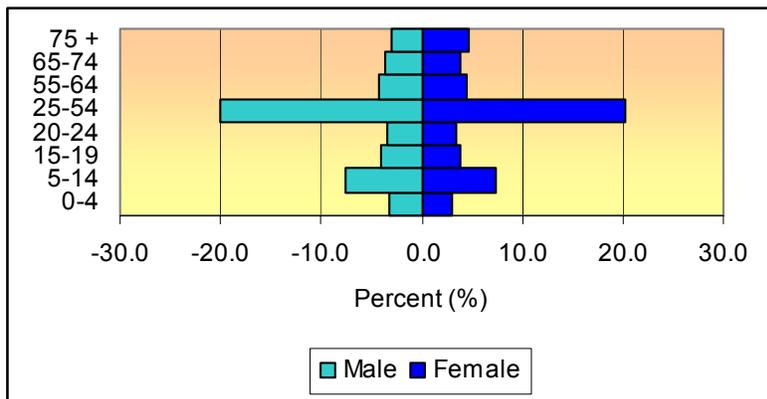
Source: Statistics Canada. 2006 Community Profiles, 2006 Census.  
<http://www12.statcan.ca/english/census06/data/profiles/community/index.cfm?Lang=E>

**Figure 15: Saskatchewan – Total Population by Age and Gender (1996)**



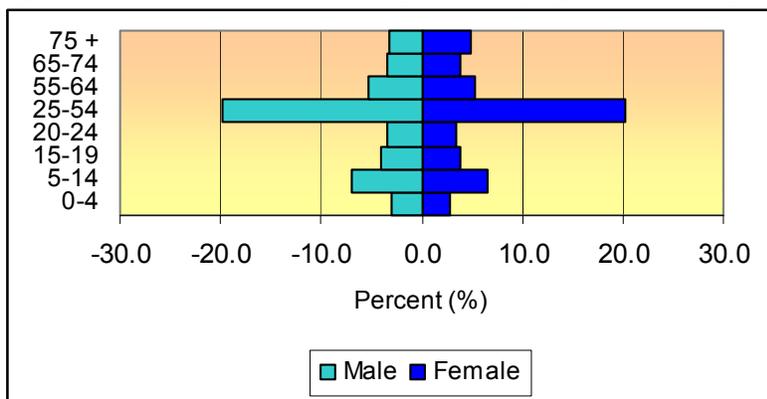
Source: Statistics Canada. Profile of Federal Electoral Districts (1996 Representation Order), 1996 Census  
<http://www12.statcan.ca/english/census96/data/profiles/DataTable.cfm?YEAR=1996&LANG=E&PID=35257&S=A>

**Figure 16: Saskatchewan – Total Population by Age and Gender (2001)**



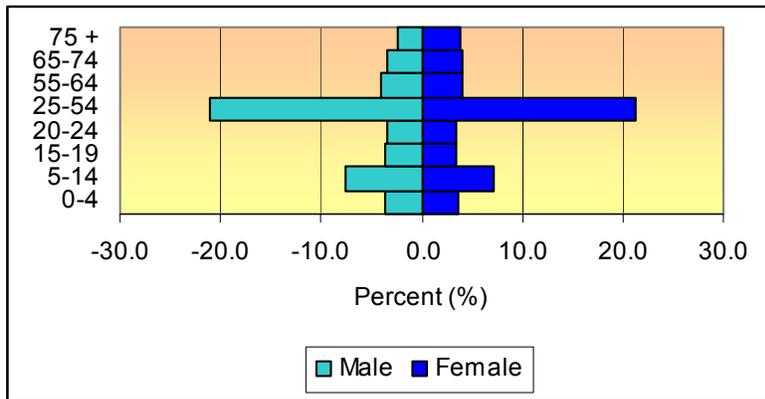
Source: Statistics Canada. 2001 Community Profiles, 2001 Census.  
<http://www12.statcan.ca/english/Profile01/CP01/Details/Page.cfm?Lang=E&Geo1=PR&Code1=47&Geo2=PR&Code2=01&Data=Count&SearchText=Saskatchewan&SearchType=Begins&SearchPR=01&BI=All&GeoLevel=&GeoCode=47>

**Figure 17: Saskatchewan – Total Population by Age and Gender (2006)**



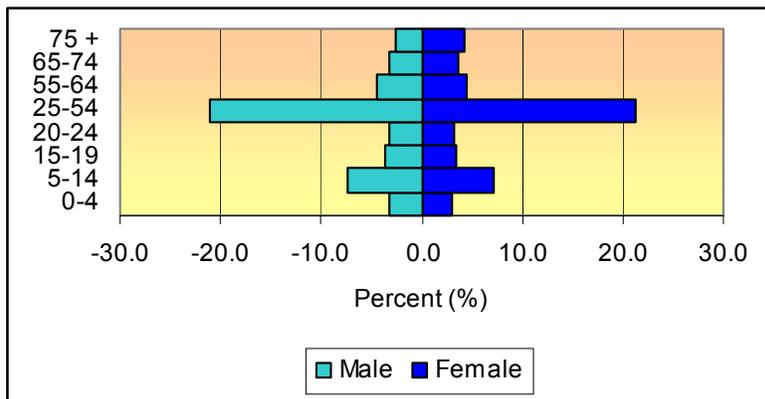
Source: Statistics Canada. 2006 Community Profiles. 2006 Census.  
<http://www12.statcan.ca/english/census06/data/profiles/community/index.cfm?Lang=E>

**Figure 18: Manitoba – Total Population by Age and Gender (1996)**



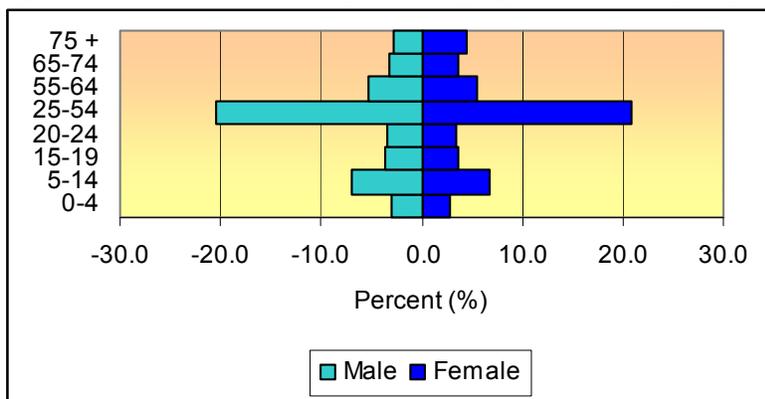
Source: Statistics Canada. Profile of Federal Electoral Districts (1996 Representation Order), 1996 Census  
<http://www12.statcan.ca/english/census96/data/profiles/DataTable.cfm?YEAR=1996&LANG=E&PID=35257&S=A>

**Figure 19: Manitoba – Total Population by Age and Gender (2001)**



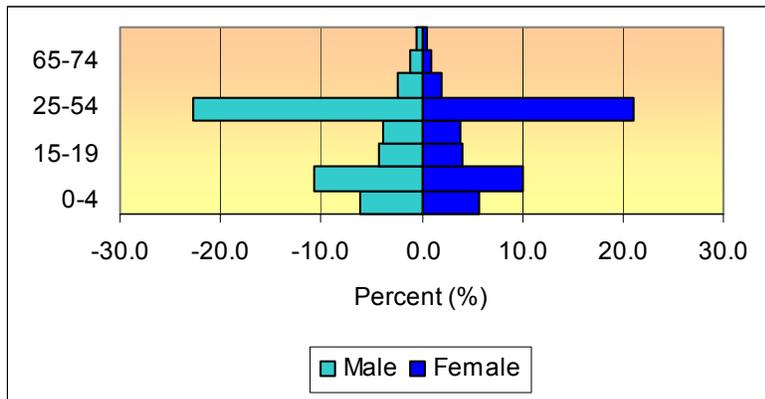
Source: Statistics Canada. 2001 Community Profiles, 2001 Census.  
<http://www12.statcan.ca/english/Profil01/CP01/Details/Page.cfm?Lang=E&Geo1=PR&Code1=46&Geo2=PR&Code2=01&Data=Count&SearchText=Manitoba&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=&GeoCode=46>

**Figure 20: Manitoba – Total Population by Age and Gender (2006)**



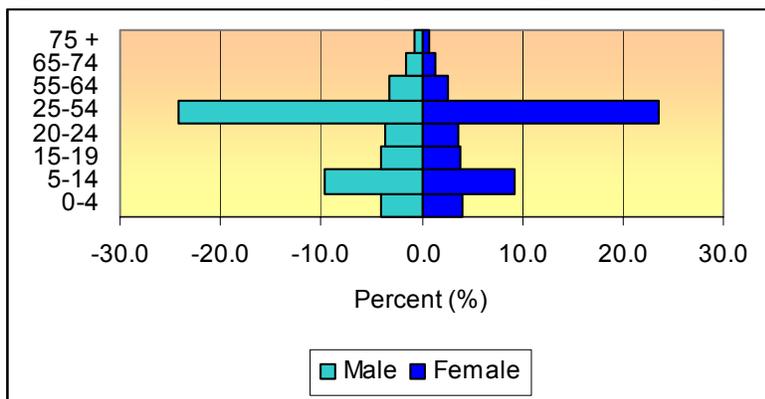
Source: Statistics Canada. 2006 Community Profiles. 2006 Census.  
<http://www12.statcan.ca/english/census06/data/profiles/community/index.cfm?Lang=E>

**Figure 21: NWT – Total Population by Age and Gender (1996)**



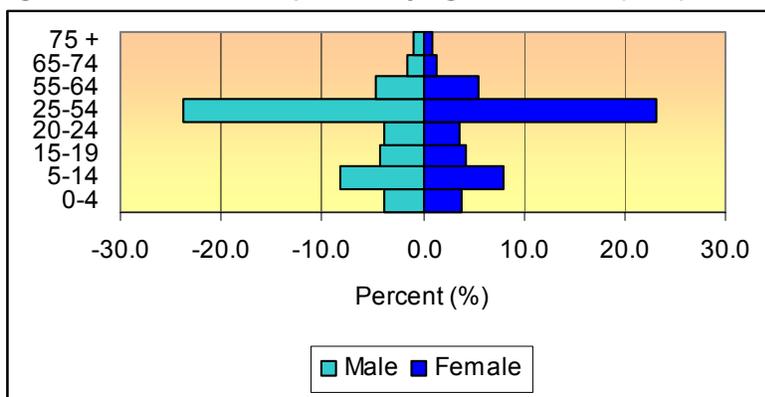
Source: Statistics Canada. Profile of Federal Electoral Districts (1996 Representation Order), 1996 Census  
<http://www12.statcan.ca/english/census96/data/profiles/DataTable.cfm?YEAR=1996&LANG=E&PID=35257&S=A>

**Figure 22: NWT – Total Census Population by Age and Gender (2001)**



Source: Statistics Canada. 2001 Community Profiles, 2001 Census.  
<http://www12.statcan.ca/english/profil01/CP01/Details/Page.cfm?Lang=E&Geo1=PR&Code1=61&Geo2=PR&Code2=01&Data=Count&SearchText=Northwest%20Territories&SearchType=Begins&SearchPR=01&B1=Population&Custom=>

**Figure 23: NWT – Total Population by Age and Gender (2006)**



Source: Statistics Canada. 2006 Community Profiles. 2006 Census.  
<http://www12.statcan.ca/english/census06/data/profiles/community/index.cfm?Lang=E>

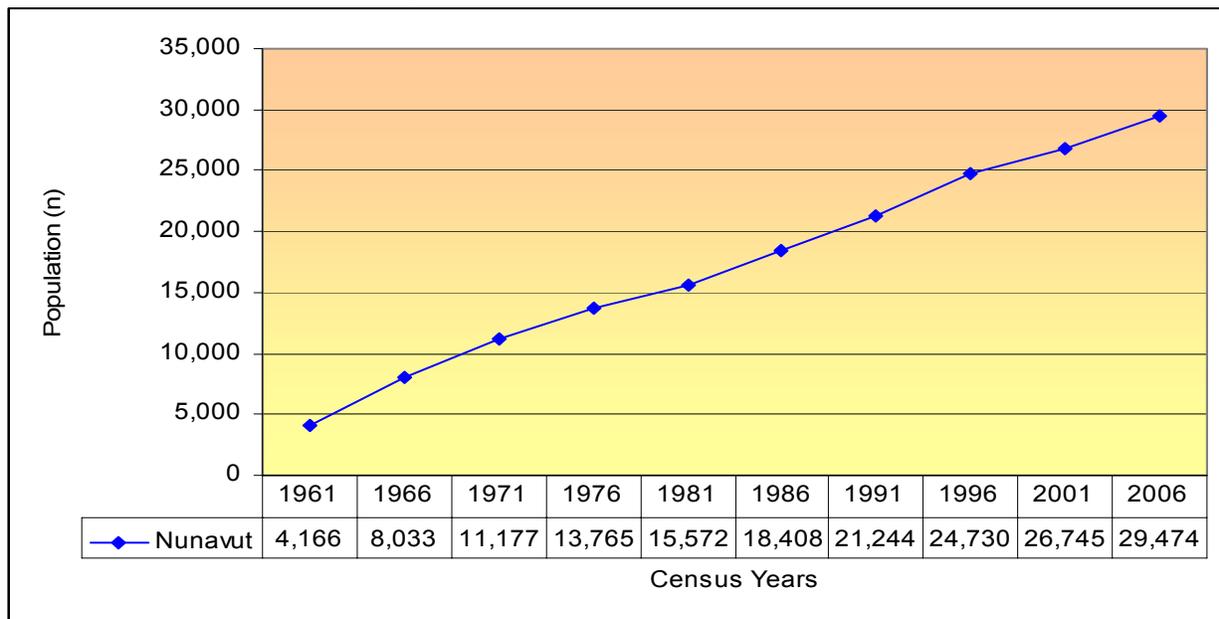
### 3.1.2 Historic Population Growth 1961 -2006

A brief summary of historic population trends in Nunavut, covering the years from 1961 to 2006 is included below. The data was derived from Statistics Canada and the NWT Bureau of Statistics.

Nunavut’s population has increased steadily from a population size of 4,166 in 1961 to 29,474 residents in 2006. In recent years, however, the population in Nunavut has grown at a much slower rate than in earlier years.

Since 1961, Nunavut (which was part of the NWT until 1999) has displayed a relatively steady increase in population size (Figure 24).

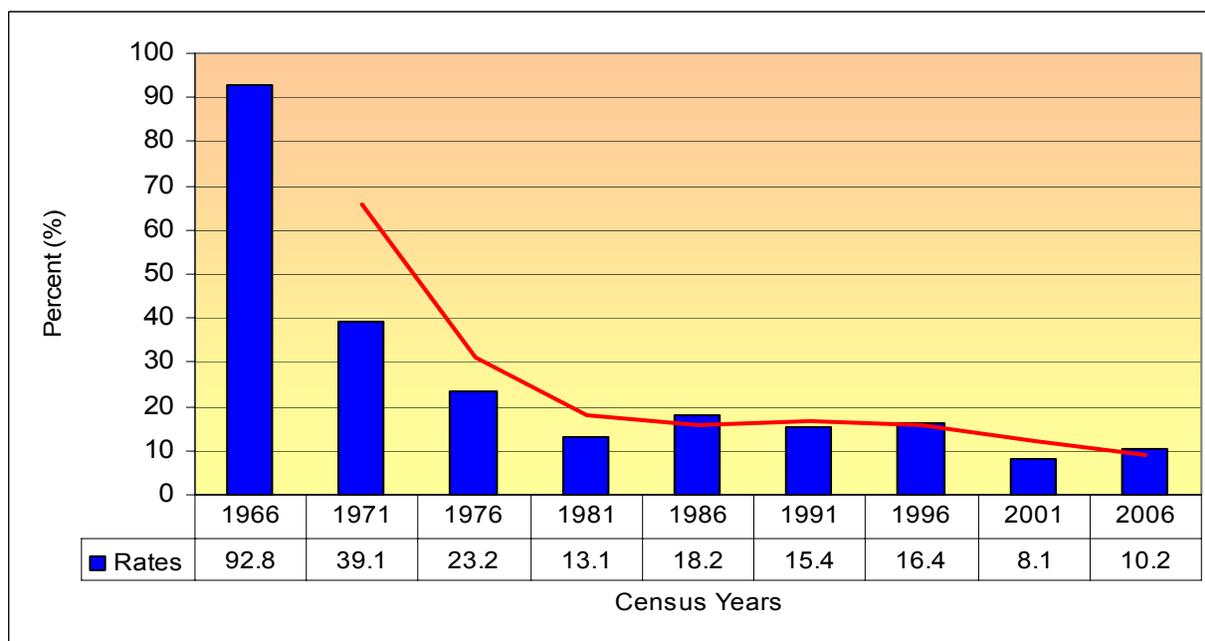
**Figure 24: Nunavut Total Census Population: 1961 – 2006**



Source: Statistics Canada. 2006, 2001, 1996 Community Profiles; NWT Bureau of Statistics. 2006, 2001, 1996 Census, accessed April 2008 <http://www12.statcan.ca/english/census06/data/profiles/community/index.cfm?Lang=E> ; 1961-1996 data – NWT Bureau of Statistics Aboriginal Identity 1996 Census Results, May 1998.

Figure 25 (below) reveals, however, that from 1996 to 2001, Nunavut experienced a decrease in its growth rate from 16.4% to 8.1%. In 2006, the growth rate showed a slight increase (10.2%) but was still well below the rates previously experienced. For example, the rate of growth shows a considerable decline from 1966 to 1981, followed by a levelling off from 1981 to 1996, and a slight decrease from 1996 to 2006 (this is depicted by the red linear trend line).

**Figure 25: Nunavut Five- Year Total Census Population Percent Growth Rates: 1966 – 2006**



Source: Statistics Canada. Population and dwelling counts, for Canada, provinces and territories, 2006 and 2001 Censuses

<http://www12.statcan.ca/english/census06/data/popdwel/Table.cfm?T=101&SR=1&S=5&O=D>

<http://www12.statcan.ca/english/census01/products/standard/popdwel/Table-PR.cfm>

Source: NWT Bureau of Statistics. Population and Dwelling Count, 1996 Census

<http://www.stats.gov.nt.ca/Stainfo/Census/census96/april/green.html>

### **3.1.3 Population Projections 2006 to 2031**

A brief explanation of the availability of population forecasting information for Nunavut and its communities/outposts for 2006-2031 is provided below.

A population projection was to be developed for each community and outpost, and for Nunavut as a whole, for the years 2006 to 2031. Given the current status of the data available from the Nunavut Bureau of Statistics and Statistics Canada, developing population projections from 2006 – 2031 with a reasonable degree of confidence, is not possible at this time.

The Nunavut Bureau of Statistics recently began preliminary research to prepare population projections for the territory; however this work is at a preliminary stage and is not able to be used to develop the required projections at this time.

In September 2008, Statistics Canada is expected to release its population projections incorporating 2006 census data. Once this data becomes available, additional research would need to be conducted regarding methodology and data inputs to ensure the projections are appropriate to the demographic conditions in Nunavut.

Terriplan recommends that, in order to develop projections with a sound degree of confidence, the task of developing the population projections to 2031, be postponed until the Nunavut Bureau of Statistics has completed its work on the population projections and the estimates from Statistics Canada have been published.

The following section discusses the limitations of existing population projections for Nunavut.

### ***Nunavut Bureau of Statistics Population Projections***

In March 2000, the Nunavut Bureau of Statistics published community population projections in five-year increments at community and territorial levels for the period 2000 to 2020.<sup>6</sup> These projections have several limitations:

- The 2000 projections are now comparatively dated, since 2001 and 2006 census data are not included;
- Assumptions used to develop the projections are not described;
- The growth rates are too high, given current demographic trends in Nunavut (for example, the report forecasts that by 2005 the population for Nunavut will be 31,317; the 2006 census data reports a population size of 29,474); and,
- The projections present no Aboriginal/non-Aboriginal detail.

Current work by the Nunavut Bureau of Statistics will enable updated projections to be made at the community level; however completion of this work is estimated to be approximately one year from the present time.

### ***Statistics Canada Population Projections***

Statistics Canada has published population projections for 2005 to 2031 presenting national, provincial and territorial level information.<sup>7</sup> Terriplan's analysis indicated the following limitations for the reliability of these projections:

- Growth rates in the six scenarios use migration assumptions based on national migration trends, not those reflecting trends in Nunavut, resulting in the projections for Nunavut's growth being too low in all six scenarios;
- No details are provided regarding Aboriginal/non-Aboriginal populations; and,
- Regional or community level projections are not included.

Statistics Canada also published Aboriginal identity population projections for Canada, provinces and territories, at five-year intervals, covering the period 2001-2017.<sup>8</sup> Several limitations in these projections were identified:

- The territorial-level population projections are provided only for Aboriginal Identity populations and not for the overall Aboriginal/non-Aboriginal population;
- The five projections do not include regional or community level projections; and,
- Although the projections provided by the five Aboriginal population projection scenarios appear to be consistent with observed demographic trends for Nunavut, the projections only extend out to 2017.

### ***Analysis of the Situation***

The existing published population projections developed by Statistics Canada and the Nunavut Bureau of Statistics will require updating and analysis to ensure that population projections for Nunavut from 2006 to 2031 are reliable and representative of current demographic trends in Nunavut. Such projections should be informed by additional Statistics Canada population estimates, incorporating 2006 census information, which is expected to be available in September 2008.

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<sup>6</sup> Nunavut Bureau of Statistics. "Nunavut: Community Population Projections 2000-2020".

<sup>7</sup> Statistics Canada. "Population Projections for Canada, Provinces and Territories", 2005-2031 (Catalogue no. 91-520-XIE).

<sup>8</sup> Statistics Canada. "Projections of the Aboriginal Populations, Canada, Provinces and Territories", 2001-2017 (Catalogue no. 91-547-XIE).

Terriplan recommends that the task of developing the population projections to 2031 be postponed until the Nunavut Bureau of Statistics has completed its work on the population projections and the estimates from Statistics Canada have been published.

### **3.2 CURRENT SOCIO-ECONOMIC PROFILE 2006**

The current socio-economic profile is focused on the regional and territorial levels. Detailed community profiles are provided in Appendix E.

A brief overview of the current socio-economic profile in Nunavut is provided below. The data included in this section was obtained from Statistics Canada's 2006 census.

- More than half of Nunavut's total census population (57.3%) and more than two-thirds of the Aboriginal census population (68.7%), had no educational certificate, diploma or degree.
- Only a very small percent of the total census population in Nunavut (9.0%), and even a smaller percent in the Aboriginal population (2.0%), had attained a university certificate, diploma or degree.
- Those individuals who were involved in academic pursuits were primarily engaged in the fields of 'architecture, engineering, and related technologies' and 'business management and public administration'.
- Based on the total census population, Nunavut had lower participation and employment rates (65.3% and 55.2%, respectively) and higher unemployment rates (15.6%) than the national average (66.8%, 62.4% and 6.6%, respectively).
- The participation and employment rates (59.1% and 47.2%, respectively) for the Aboriginal census population in Nunavut were lower and the unemployment rate (20.1%) was higher (20.1%) than national Aboriginal averages (63.0%, 53.7%, and 14.8%, respectively).
- The average median income (money received from all sources) for the total census population, 15 years and older, living in Nunavut was \$20,982, approximately \$5,000 less than the national average.
- The average median income for the Aboriginal census population, 15 years and older, living in Nunavut (\$16,069) was similar to that for Aboriginal people nationally (\$16,752).
- The median earnings (money received from paid employment), for the total census population, 15 years and older, living in Nunavut (\$26,848) were very similar to the national average (\$26,850).
- For the Aboriginal census population in Nunavut, 15 years and older, the median earnings (\$17,959) were a \$1000 less than the national average for Aboriginal people.
- In Nunavut, individuals (Aboriginal and non-Aboriginal) in the workforce participated primarily in industries such as 'other services', 'educational services', 'business services', and 'retail services' as well as a range of other types of services.
- In Nunavut, individuals (Aboriginal and non-Aboriginal) in the workforce were typically engaged in occupations such as 'sales and service occupations', 'trades; transport and equipment operators and related occupations', 'occupations in social science; education; government service and religion', and 'business; finance and administration occupations'.
- There is a direct relationship between an individual's education level and his/her average employment income.

### **3.2.1 Labour Force Participation**

#### ***Participation Rates – Total and Aboriginal Populations***

Table 7 outlines the labour force characteristics for both total and Aboriginal census populations for 2006. The total participation rate for Canada (66.8%) was slightly higher than that for Nunavut (65.3%). The total participation rates of males in Canada (72.3%), Nunavut (67.9%) and the Regions (Kitikmeot – 66.9%, Keewatin – 63.7%, Baffin – 70.4%) were consistently higher than those for females (61.6%, 62.6% and 59.3%, 59.5%, and 65.3%, respectively). Comparing the Regions, Baffin had the highest rate of total participation, even higher than the territory as a whole.

The total Aboriginal participation rate for Canada (63.0%) for the 2006 census period was higher than that for Nunavut (59.1%). Compared to the total participation rates, the total Aboriginal participation rates were consistently lower across the nation, in Nunavut and its Regions. Following the same trend as the total participation rates for males, the Aboriginal rates for males in Canada (67.3%), Nunavut (61.2%) and the Regions (Kitikmeot – 63.5%, Keewatin – 59.4%, Baffin – 61.6%) were consistently higher than those for females (59.1%, 57.0%, 55.6%, 55.7%, and 58.3%, respectively).

#### ***Employment Rates – Total and Aboriginal Populations***

Employment rates for the total census population were considerably higher in Canada (62.4%) compared to Nunavut (55.2%) and its three Regions (Kitikmeot – 50.3%, Keewatin – 52.0%, Baffin – 59.0%) (refer to Table 7). In Canada, males had employment rates that are 10% higher than females, while in Nunavut, the rates were very similar (55.8% - males and 54.5% - females). Males (59.0%) and females (57.7%) in Baffin Region had the highest employment rates in the Territory.

Table 7 also highlights the considerable difference between Aboriginal employment rates and those of the total population. The Aboriginal employment rates were higher in Canada (53.7%) than they are in Nunavut (47.2%) and its three Regions (Kitikmeot – 45.6%, Keewatin – 46.7%, Baffin – 48.1%). Unlike in Canada as a whole (male (56.5%) – female (51.1%)), the Aboriginal employment rates in Nunavut were higher for females than for males (male (46.8%) – female (47.7%)). The highest employment rates in Nunavut were found in the female population in Baffin Region (49.1%).

#### ***Unemployment Rates – Total and Aboriginal Populations***

Unemployment rates in Nunavut (15.6%) were more than twice as high as the national average (6.6%) (refer to Table 7). In Canada unemployment rates for men (6.5%) and women (6.6%) were almost identical, while in Nunavut and its Regions, men had unemployment rates that were 4.2-6.6% higher than rates for women. Comparing the Regions, Kitikmeot had the highest total unemployment rate (20.2%), followed by Keewatin (15.7%) and Baffin (14.0%).

Table 7 highlights the substantial difference between Aboriginal unemployment rates and those of the total population. The unemployment rate for Aboriginal people across Canada (14.8%) was more than twice as high as the national average (6.6%) and in Nunavut (20.1%) the unemployment rate was more than three times higher than the Canadian average. Aboriginal females had consistently lower unemployment rates than their male counterparts.

**Table 7: Participation, Employment and Unemployment Rates for the Total Census Population and the Total Aboriginal Identity Population: 2006**

Population Type	Gender	Canada	Nunavut	Kitikmeot	Keewatin	Baffin
<b>Total Population (2006)</b>						
Participation Rates	Total	Percent (%)				
		<b>66.8</b>	<b>65.3</b>	<b>63.0</b>	<b>61.7</b>	<b>67.9</b>
	Male	72.3	67.9	66.9	63.7	70.4
	Female	61.6	62.6	59.3	59.5	65.3
Employment Rates	Total	Percent (%)				
		<b>62.4</b>	<b>55.2</b>	<b>50.3</b>	<b>52.0</b>	<b>58.4</b>
	Male	67.6	55.8	52.3	51.7	59.0
	Female	57.5	54.5	48.8	52.2	57.7
Unemployment Rates	Total	Percent (%)				
		<b>6.6</b>	<b>15.6</b>	<b>20.2</b>	<b>15.7</b>	<b>14.0</b>
	Male	6.5	17.8	22.4	18.9	16.0
	Female	6.6	13.0	17.6	12.3	11.7
<b>Aboriginal Population (2006)</b>						
Participation Rates	Total	Percent (%)				
		63.0	59.1	59.5	57.5	59.9
	Male	67.3	61.2	63.5	59.4	61.6
	Female	59.1	57.0	55.6	55.7	58.3
Employment Rates	Total	Percent (%)				
		53.7	47.2	45.6	46.7	48.1
	Male	56.5	46.8	46.7	45.9	47.2
	Female	51.1	47.7	44.4	47.6	49.1
Unemployment Rates	Total	Percent (%)				
		14.8	20.1	23.5	18.8	19.7
	Male	16.1	23.7	25.9	22.4	23.3
	Female	13.5	16.2	20.1	14.6	15.8

Source: Statistics Canada. Community Profiles: Labour, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/community/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Labour&Custom=>

Source: Statistics Canada. Aboriginal Population Profile: Labour, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Labour>

### 3.2.2 Educational Levels

#### *Educational Attainment - Total and Aboriginal Populations*

Table 8 shows that 57.3% of the total Nunavut census population did not have an educational certificate, diploma or degree, while 23.8% of the total Canadian census population was without this level of educational attainment. This Table also shows that 10.9% of the total Nunavut census population had a high school certificate or equivalent, compared to 25.5% of the total national population. Of the total Nunavut population, 9.0% had a university certificate, diploma or degree, compared to 18.1% of the Canadian population.

Comparing Canada and Nunavut, there is much more similarity in the total percentage of individuals who received an apprenticeship or trades certificate or diploma (10.9% versus 7.0%, respectively) and those who received a college, CEGEP or other non-university certificate or diploma (17.3% versus 14.2%). Comparing the educational attainment of the total census populations for the three Regions reveals that in Baffin Region 11.1% of the population had a university certificate, diploma or degree compared to 6.7% in Kitikmeot and 6.4% in Keewatin. Conversely, these two Regions also had a higher percentage of individuals who had no certificate, diploma or degree (61.4% and 64.6%, respectively) compared to Baffin (52.3%). Table 10 also shows that the educational attainment of males and females was fairly

similar except with respect to the apprenticeship or trades certificate or diploma. In Canada, Nunavut and the three Regions, males are typically 2 to 4 times more likely to have been awarded this particular educational qualification.

Table 8 also reveals that 68.7% of the total Aboriginal population in Nunavut did not have an educational certificate, diploma or degree, while 43.7% of the total Canadian Aboriginal population was without this level of educational attainment. This table shows that 9.6% of the total Aboriginal population in Nunavut had a high school certificate or equivalent, compared to 21.8% of the total national Aboriginal population, and that 2.0% of the total Aboriginal population in Nunavut had a university certificate, diploma or degree compared to 5.8% of the Canadian Aboriginal population. Comparing Aboriginal populations in Canada and Nunavut reveals that there is much more similarity in the total percentage of individuals who received a college, CEGEP or other non-university certificate or diploma (14.5% versus 12.1%). Comparing the educational attainment of the total Aboriginal populations for the three Regions reveals that in Baffin Region 2.7% of the population had a university certificate, diploma or degree compared to only 1.5% in Kitikmeot and 1.1% in Keewatin.

### ***Major Fields of Study – Total and Aboriginal Populations***

Table 9 shows that the two major fields of study pursued by the total census populations in Canada, Nunavut and Kitikmeot, Keewatin and Baffin Regions for the 2006 census period were ‘Architecture, Engineering, and Related Technologies’ (11.4%, 6.9%, 8.0%, 5.9% and 7.0%, respectively) followed by ‘Business Management, and Public Administration’ (10.9%, 6.4%, 7.0%, 5.4%, and 6.8%, respectively). Comparing the major fields of study for males and females, Table 9 reveals that more males pursued studies in the field of ‘Architecture, Engineering, and Related Technologies’ while more females pursued the field of ‘Business Management, and Public Administration’.

Table 9 also highlights that the two major fields of study pursued by the total Aboriginal population in Canada, Nunavut and Kitikmeot, Keewatin and Baffin Regions for the 2006 census period, was ‘Architecture, Engineering, and Related Technologies’ (8.0%, 5.6%, 7.7%, 5.1%, and 5.1%, respectively) followed by ‘Business Management, and Public Administration’ (7.3%, 4.7%, 6.3%, 4.3%, and 4.4%, respectively). Comparing the major fields of study for Aboriginal males and females reveals that more males pursued studies in the field of ‘Architecture, Engineering, and Related Technologies’ while more females pursued the field of ‘Business Management, and Public Administration’. These are the same trends noted in the total census population.

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**Table 8: Educational Attainment – Total Census Population and Total Aboriginal Identity Population (2006)**

Educational Attainment	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Number (n)															
<b>Total Population 15 Years and Over</b>	<b>25,664,220</b>	<b>12,470,785</b>	<b>13,193,440</b>	<b>19,340</b>	<b>9,930</b>	<b>9,410</b>	<b>3,495</b>	<b>1,770</b>	<b>1,720</b>	<b>5,255</b>	<b>2,660</b>	<b>2,595</b>	<b>10,590</b>	<b>5,500</b>	<b>5,095</b>
Percent (%)															
No Certificate, Diploma, or Degree	23.8	24.1	23.4	57.3	56.1	58.6	61.4	58.5	64.5	64.6	63.5	65.7	52.3	51.8	52.8
High School Certificate or Equivalent	25.5	24.3	26.7	10.9	10.6	11.2	7.7	8.5	6.7	10.1	9.0	11.0	12.4	12.0	12.8
Apprenticeship or Trades Certificate or Diploma	10.9	14.3	7.6	7.0	10.5	3.2	10.9	15.5	6.1	6.4	10.2	2.5	5.9	9.1	2.6
College, CEGEP or Other Non-University Certificate or Diploma	17.3	15.3	19.2	14.2	13.1	15.3	12.4	11.6	13.4	10.8	9.8	11.8	16.4	15.1	17.8
University Certificate or Diploma below the Bachelor Degree Level	4.4	3.8	5.0	1.6	1.5	1.8	0.7	0.8	0.6	1.9	1.9	1.9	1.8	1.6	2.1
University Certificate, Diploma, or Degree	18.1	18.2	18.1	9.0	8.1	10.0	6.7	5.1	8.1	6.4	5.6	7.1	11.1	10.3	12.0
<b>Total Aboriginal Identity Population 15 Years and Over</b>	<b>823,890</b>	<b>393,680</b>	<b>430,205</b>	<b>15,510</b>	<b>7,785</b>	<b>7,720</b>	<b>3040</b>	<b>1520</b>	<b>1520</b>	<b>4570</b>	<b>2290</b>	<b>2280</b>	<b>7895</b>	<b>3975</b>	<b>3920</b>
Percent (%)															
No Certificate, Diploma, or Degree	43.7	46.3	41.2	68.7	68.2	69.2	68.1	65.1	71.1	72.4	71.8	73.0	66.8	67.4	66.3
High School Certificate or Equivalent	21.8	20.6	22.9	9.6	9.1	10.0	7.1	7.9	5.9	9.3	7.9	10.5	10.7	10.2	11.4
Apprenticeship or Trades Certificate or Diploma	11.4	14.9	8.2	6.7	10.1	3.4	11.0	15.8	6.6	6.3	10.0	2.6	5.3	7.9	2.6
College, CEGEP or Other Non-University Certificate or Diploma	14.5	11.6	17.2	12.1	10.5	13.7	11.8	10.2	13.8	9.6	8.3	11.2	13.6	11.7	15.3
University Certificate or Diploma below the Bachelor Degree Level	2.8	2.1	3.4	0.9	0.9	1.0	0.5	0.7	0.7	1.2	1.3	1.1	0.9	0.9	1.0
University Certificate, Diploma, or Degree	5.8	4.5	7.1	2.0	1.2	2.8	1.5	0.7	2.3	1.1	0.7	1.5	2.7	1.9	3.6

Source: Statistics Canada. Community Profiles: Education, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/community/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begin&SearchPR=01&B1=Education&Custom=>

Source: Statistics Canada. Aboriginal Population Profile: Education, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begin&SearchPR=01&B1=Education&Custom=>

**Table 9: Major Fields of Study – Total Census Population and Total Aboriginal Identity Population (2006)**

Major Field of Study	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Number (n)															
<b>Total Population 15 Years and Over</b>	<b>25,664,220</b>	<b>12,470,785</b>	<b>13,193,440</b>	<b>19,340</b>	<b>9,930</b>	<b>9,410</b>	<b>3,495</b>	<b>1,775</b>	<b>1,725</b>	<b>5,250</b>	<b>2,660</b>	<b>2,595</b>	<b>10,590</b>	<b>5,495</b>	<b>5,095</b>
Percent (%)															
No Post-Secondary Certificate, Diploma, or Degree	49.3	48.4	50.1	68.2	66.7	69.8	69.0	66.8	71.0	74.7	72.6	76.7	64.7	63.9	65.7
Education	3.9	2.0	5.7	4.1	2.6	5.8	3.4	2.0	4.9	4.5	3.0	6.0	4.2	2.5	6.0
Visual and Performing Arts, and Communications Technologies	1.9	1.8	2.0	0.9	1.0	0.7	0.4	0.6	0.0	0.8	0.8	0.8	1.0	1.3	0.8
Humanities	2.8	2.3	3.3	1.7	1.3	2.1	1.1	0.6	1.4	1.2	0.9	1.5	2.0	1.6	2.6
Social and Behavioural Sciences and Law	5.0	3.6	6.3	3.5	2.5	4.6	2.3	1.1	3.5	2.0	1.3	2.7	4.8	3.5	6.2
Business, Management, and Public Administration	10.9	8.2	13.5	6.4	4.5	8.3	7.0	4.2	9.6	5.4	4.1	6.7	6.8	4.9	8.8
Physical and Life Sciences and Technologies	1.8	2.0	1.6	1.1	1.4	0.7	1.1	1.7	0.6	0.6	0.8	0.4	1.3	1.5	1.0
Mathematics, Computer, and Information Sciences	2.2	2.8	1.7	1.0	1.0	1.0	0.6	0.0	0.6	0.9	0.6	1.2	1.1	1.4	0.9
Architecture, Engineering, and Related Technologies	11.4	21.7	1.7	6.9	12.4	1.1	8.0	14.9	1.2	5.9	10.9	0.6	7.0	12.4	1.3
Agriculture, Natural Resources, and Conservation	1.1	1.6	0.7	0.7	1.0	0.4	0.6	0.6	0.6	0.5	0.9	0.0	0.8	1.2	0.5
Health, Parks, Recreation, and Fitness	6.7	2.6	10.6	2.7	1.5	4.1	2.7	1.4	4.1	1.8	1.1	2.5	3.3	1.5	4.9
Personal, Protective, and Transportation Services	3.0	3.1	2.9	2.8	4.1	1.4	3.7	5.6	1.7	1.9	2.8	0.8	3.0	4.3	1.7
Other	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
<b>Total Aboriginal Identity Population 15 Years and Over</b>	<b>823890</b>	<b>393680</b>	<b>430205</b>	<b>15505</b>	<b>7790</b>	<b>7725</b>	<b>3040</b>	<b>1520</b>	<b>1520</b>	<b>4575</b>	<b>2285</b>	<b>2285</b>	<b>7895</b>	<b>3975</b>	<b>3925</b>
Percent (%)															
No Post-Secondary Certificate, Diploma, or Degree	65.5	67.0	64.1	78.3	77.2	79.3	75.0	73.4	77.0	81.6	79.9	83.6	77.5	77.5	77.5
Education	2.4	1.2	3.5	2.3	0.8	3.7	1.8	0.7	3.0	2.3	0.9	3.3	2.5	0.8	4.2

Major Field of Study	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Visual and Performing Arts, and Communications Technologies	0.9	0.9	0.9	0.7	0.8	0.6	0.3	0.7	0.0	0.7	0.7	0.7	0.8	0.9	0.5
Humanities	1.3	1.0	1.5	1.0	0.5	1.5	0.7	0.0	1.0	0.7	0.4	1.1	1.4	0.8	1.9
Social and Behavioural Sciences and Law	3.2	1.7	4.5	2.4	1.2	3.6	1.6	0.7	3.0	1.5	0.9	2.2	3.2	1.6	4.7
Business, Management, and Public Administration	7.3	3.6	10.6	4.7	2.6	6.9	6.3	3.0	9.5	4.3	3.1	5.3	4.4	2.4	6.6
Physical and Life Sciences and Technologies	0.4	0.4	0.4	0.3	0.6	0.0	0.7	1.3	0.0	0.0	0.4	0.0	0.3	0.6	0.0
Mathematics, Computer, and Information Sciences	1.1	1.1	1.2	0.6	0.6	0.7	0.3	0.0	0.7	0.8	0.0	1.3	0.6	0.9	0.4
Architecture, Engineering, and Related Technologies	8.0	15.4	1.3	5.6	10.4	0.8	7.7	14.1	1.0	5.1	9.8	0.4	5.1	9.3	0.8
Agriculture, Natural Resources, and Conservation	1.0	1.5	0.6	0.4	0.7	0.1	0.3	0.0	0.7	0.3	0.9	0.0	0.4	0.9	0.0
Health, Parks, Recreation, and Fitness	5.0	1.6	8.0	1.3	1.0	1.7	1.8	1.3	2.3	0.9	0.7	1.1	1.5	1.0	1.8
Personal, Protective, and Transportation Services	3.9	4.5	3.3	2.3	3.5	1.2	3.6	5.3	1.6	1.6	2.6	0.7	2.3	3.3	1.3
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Statistics Canada. Community Profiles: Education, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/community/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begin&SearchPR=01&B1=Education&Custom=>

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### **3.2.3 Average Income Levels**

#### ***Income – Total and Aboriginal Populations***

The figures outlined in Table 10 show that in terms of income, the median for the total census population of individuals 15 years and older in Nunavut (\$20,982) was approximately \$5000 less than the national median (\$25,615). Within Nunavut, Baffin Region (\$24,518) had a median income level most comparable to Canada, while the medians of Kitikmeot (\$18,944) and Keewatin (\$17,440) were considerably lower. With the exception of Keewatin Region, females had a consistently lower median income than males. This difference is most significant in Canada where females have a median income approximately \$12,000 less than that of their male counterparts.

With respect to the Aboriginal population, Table 10 shows that the median income for the total Aboriginal population of individuals 15 years and older was very similar in Nunavut (\$16,069) and Canada (\$16,752). Aboriginal females in Nunavut and in Keewatin and Baffin Regions had median incomes that were higher than their male counterparts.

#### ***Earnings – Total and Aboriginal Populations***

Nunavut's median earnings (\$26,848) for the total census population in the category *Median earnings – Persons 15 years and over*, were almost identical to that of Canada (\$26,850). However, within this same category, the median earnings for the total census population in Baffin Region were higher than both the national and territorial medians (\$30,079). Within this category, males consistently had higher median earnings than females. In the category *Median earnings – Persons 15 years and over who worked full year; full time*, the median earnings of the total census population in Nunavut (\$58,088) was significantly higher than the national figure (\$41,401). The highest median earnings in this category were found in Baffin Region (\$60,060), where males (\$60,111) and females (\$60,006) had very similar earnings.

Nunavut's median earnings (\$17,959) for the total Aboriginal population in the category *Median earnings – Persons 15 years and over* were only \$1000 less than that of Canada's Aboriginal population (\$18,962). Within this category, males had consistently higher median earnings than females, although for Baffin Region the difference between Aboriginal males and females was quite small. In the category *Median earnings – Persons 15 years and over who worked full year; full time*, the median earnings of the total Aboriginal population in Nunavut (\$46,020) were significantly higher than the national Aboriginal median (\$34,940).

#### ***Composition of Total Income – Total and Aboriginal Populations***

Table 11 outlines the sources contributing to the composition of the total income for the 2006 census period. With respect to the total census population, Nunavut (86.5%) had a higher percent of income originating from earnings than did the nation (76.2%). Within Nunavut, Baffin Region (88.2%) had the highest proportion of its income derived from earnings. Males consistently had a much higher percent of their income coming from earnings than did their female counterparts. Table 11 also reveals that for the total 2006 census population, income originating from government transfers was very similar for Canada (11.1%) and Nunavut (11.2%). Within Nunavut, Kitikmeot (14.1%) and Keewatin (14.2) Regions had the highest proportion of their income derived from government transfers. Females had approximately twice as much of their income coming from government transfers than males.

The Canadian population as a whole (12.7%), had significantly more of its income derived from 'other money' than did Nunavut (2.3%). The Regions had similar proportions of their income derived from 'other money' and there was little difference between the percentages of males and females.

With respect to the total Aboriginal population, Table 11 shows that Nunavut (80.6%) had a slightly higher percent of income originating from earnings than did the nation (76.9%). Aboriginal males consistently had a significantly higher percent of their income coming from earnings than did their female counterparts. Table 13 also shows that for the total Aboriginal population, income originating from government transfers was very similar for Canada (18.1%) and Nunavut (17.5%). Females consistently had approximately twice as much of their income coming from government transfers than males.

Table 10: Income and Earnings – Total Census Population and Total Aboriginal Identity Population (2006 Census Data)

Income / Earnings	Income Category Groupings	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
		Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Income		<b>Total Population</b>														
	Persons 15 years and over with income (counts)	24,423,165	11,952,155	12,471,005	17,310	8,870	8,445	3,125	1,600	1,520	4,575	2,310	2,270	9,610	4,955	4,655
		<b>Dollars (\$)</b>														
	Median income - Persons 15 years and over (\$)	25,615	32,224	20,460	20,982	22,552	20,047	18,944	20,971	16,928	17,440	16,832	17,760	24,518	26,176	22,816
Earnings	Persons 15 years and over with earnings (counts)	18,201,265	9,480,550	8,720,710	13,470	7,195	6,280	2,470	1,345	1,125	3,325	1,740	1,585	7,675	4,110	3,565
		<b>Dollars (\$)</b>														
	Median earnings - Persons 15 years and over (\$)	26,850	32,874	21,543	26,848	29,235	24,973	20,041	23,984	16,969	23,232	24,040	21,909	30,079	32,090	30,010
	Persons 15 years and over with earnings who worked full year; full time (counts)	9,275,770	5,332,040	3,943,725	6,525	3,625	2,895	1,035	585	450	1,610	895	725	3,875	2,150	1,730
		<b>Dollars (\$)</b>														
	Median earnings - Persons 15 years and over who worked full year; full time (\$)	41,401	46,778	35,830	58,088	59,915	56,005	56,864	60,000	50,816	50,104	50,159	50,033	60,060	60,111	60,006
Income		<b>Total Aboriginal Identified Population</b>														
	Persons 15 years and over with income (counts)	760,910	364,155	396,760	13,575	6,765	6,805	2,690	1,360	1,330	3,910	1,945	1,965	6,975	3,460	3,515
		<b>Dollars (\$)</b>														
	Median income - Persons 15 years and over (\$)	16,752	18,714	15,654	16,069	15,875	16,250	16,395	18,192	15,008	14,970	13,776	15,607	16,768	16,499	17,017
Earnings	Persons 15 years and over with earnings (counts)	538,290	270,415	267,875	9,945	52,05	4,740	2,070	1,115	950	2,705	1,400	1,300	5,175	2,690	2,485
		<b>Dollars (\$)</b>														
	Median earnings - Persons 15 years and over (\$)	18,962	22,386	16,079	17,959	18,696	16,960	15,712	18,019	12,017	17,008	17,088	16,981	19,320	19,541	19,216
	Persons 15 years and over with earnings who worked full year; full time (counts)	227,810	120,430	107,385	4,005	2,135	1,875	770	425	345	1,150	620	535	2,085	1,095	990

Income Category Groupings	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
	Dollars (\$)														
Median earnings - Persons 15 years and over who worked full year; full time (\$)	34,940	39,501	30,938	46,020	45,015	46,720	48,939	52,000	43,968	42,112	40,832	44,288	47,488	44,749	49,954

Source: Statistics Canada. Community Profiles: Income and Earnings, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/community/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Income%20and%20earnings&Custom=>

Source: Statistics Canada. Aboriginal Population Profile: Income and Earnings, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Details/Page.cfm?Lang=E&Geo1=PR&Code1=01&Geo2=PR&Code2=62&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Income%20and%20earnings>

**Table 11: Composition of Total Income – Total Census Population and Total Aboriginal Identity Population (2006 Census Data)**

Income Sources	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female												
<b>Number (n)</b>															
<b>Composition of Total Income (100%)</b>	<b>100</b>														
<b>Total Population</b>															
<b>Percent (%)</b>															
Earnings - As a Percent (%) of Total Income	76.2	79.7	71	86.5	90	82.3	83.8	88.3	78.7	84.1	88.9	78.9	88.2	90.9	84.7
Government Transfers - As a Percent (%) of Total Income	11.1	7.9	15.9	11.2	7.4	15.8	14.1	9.5	19.9	14.2	9.2	19.6	9.3	6.1	13.2
Other Money - As a Percent (%) of Total Income	12.7	12.5	13.1	2.3	2.6	1.9	2	2.3	1.7	1.8	2	1.6	2.5	2.9	2
<b>Total Aboriginal Identity Population</b>															
<b>Percent (%)</b>															
Earnings - As a Percent (%) of Total Income	76.9	82.4	70.3	80.6	86	75.2	79.7	85.4	72.5	79.3	85.8	73	81.7	86.3	77.2
Government Transfers - As a Percent (%) of Total Income	18.1	12.5	24.8	17.5	12.1	23	18.6	12.7	25.7	19.4	13	25.5	16.2	11.4	20.9
Other Money - As a Percent (%) of Total Income	5	5.1	4.9	1.8	1.9	1.7	1.8	1.8	1.8	1.2	1.2	1.3	2.1	2.3	1.9

Source: Statistics Canada. Community Profiles: Income and Earnings, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/community/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Income%20and%20earnings&Custom=>

Source: Statistics Canada. Aboriginal Population Profile: Income and Earnings, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Details/Page.cfm?Lang=E&Geo1=PR&Code1=01&Geo2=PR&Code2=62&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Income%20and%20earnings>

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### **3.2.4 Workforce by Industry Sector**

#### ***Total and Aboriginal Populations***

Table 12 highlights that in the total census population (those 15 years and older) for both Nunavut and Canada for the 2006 census period, the most frequently reported workforce industry was ‘other services’ (37.3% and 19.4%, respectively). In Nunavut, this was followed by ‘educational services’ (12.7%), ‘business services’ (12.4%), and ‘retail trade’ (11.6%). In Canada, this was followed by ‘business services’ (18.4%), ‘manufacturing industries’ (11.9%), and ‘retail trade’ (11.4%). For the total census population, Baffin Region (41.2%) had the highest percentage of individuals working in ‘other services’ and Kitikmeot had the highest percentage working in the ‘agriculture and other resource-based industries’. Table 12 also reveals that for both males and females the most commonly reported workforce industry was ‘other services’. The exception to that is Canada, where males reported ‘business services’ most frequently followed by ‘other services’, and ‘construction industries’. In Nunavut the other frequently reported workforce industries for males included – ‘business services’, ‘retail trade’, and ‘construction industries’ – and for females – ‘educational services’, ‘health care and social services’, and ‘retail trade’.

Table 12 also shows that for the total Aboriginal population (those 15 years and older) for both Nunavut and Canada for the 2006 census period, the most frequently reported workforce industry was ‘other services’ (36.0% and 27.0%, respectively). In Nunavut, for the total Aboriginal population, this was followed by ‘retail trade’ (13.5%), ‘business services’ (11.5%) and ‘educational services’ (11.4%). In Canada, for the total Aboriginal population, this was followed by ‘business services’ (14.1%), ‘health care and social services’ (11.7%), and ‘retail trade’ (10.3%). Baffin Region (39.6%) had the highest percentage of Aboriginal individuals working in ‘other services’.

Table 12 also shows that for both Aboriginal males and females the most commonly reported workforce industry was ‘other services’. In Canada, the other frequently reported workforce industries for Aboriginal males were - ‘business services’, ‘construction industries’, ‘agriculture and other resource-based industries’, and ‘manufacturing industries’ - and for Aboriginal females they were - ‘health care and social services’, ‘retail trade’, and ‘business services’. In Nunavut the other frequently reported workforce industries for Aboriginal males included – ‘business services’, ‘retail trade’, ‘construction industries’ and ‘agriculture and other resource-based industries’ – and for Aboriginal females – ‘educational services’, ‘health care and social services’, and ‘retail trade’.

### **3.2.5 Workforce by Occupation**

#### ***Total and Aboriginal Populations***

In Table 12, the most frequently reported occupation for the total 2006 census population (15 years and over) for Canada (23.9%), Nunavut (26.3%) and the Regions (Kitikmeot – 28.7%, Keewatin – 29.0%, and Baffin – 24.3%) was ‘sales and service occupations’. In Canada this was followed by ‘business; finance and administration occupations’ and ‘trades; transport and equipment operators and related occupations’. In Nunavut this was followed by ‘trades; transport and equipment operators and related occupations’, ‘occupations in social science; education; government service and religion’, and ‘business; finance and administration occupations’. While the second most frequent occupation in Kitikmeot (19.6%) and Keewatin (17.5%) Regions was ‘trades; transport and equipment operators and related occupations’, in Baffin it was ‘business; finance and administration occupations’ which accounted for 17.1% of all occupations in this Region. For males in Canada and Nunavut, the most commonly reported occupations

included: 'trades; transport and equipment operators and related occupations', 'sales and service occupations', and 'management occupations'. For females in Canada and Nunavut, the most commonly reported occupations included: 'sales and service occupations', 'business; finance and administration occupations', and 'occupations in social science; education; government service and religion'. These same trends were also noted at the Regional levels.

In Table 13, the most frequently reported occupation for the total Aboriginal 2006 population (15 years and over) for Canada (28.5%), Nunavut (30.7%) and the Regions (Kitikmeot – 32.2%, Keewatin – 33.1%, and Baffin – 28.7%) was 'sales and service occupations'. In Canada, for the Aboriginal population, this was followed by 'trades; transport and equipment operators and related occupations' and 'business; finance and administration occupations'. In Nunavut, for the Aboriginal population, this was followed by 'trades; transport and equipment operators and related occupations', 'business; finance and administration occupations' and 'occupations in social science; education; government service and religion'.

For Aboriginal males in Canada and Nunavut, the most commonly reported occupations included: 'trades; transport and equipment operators and related occupations', and 'sales and service occupations'. For Aboriginal females in Canada and Nunavut, the most commonly reported occupations included: 'sales and service occupations', 'business; finance and administration occupations', and 'occupations in social science; education; government service and religion'. These same trends were also noted in the Aboriginal population at the Regional levels.

**Table 12: Workforce by Industry - Total Census Population and Total Aboriginal Identity Population (2006 Census Data)**

Industry	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Total Experienced Labour Force 15 Years and Over (n)</b>	16,861,180	8,884,805	7,976,370	12,080	6,445	5,630	2,090	1,130	960	3,065	1,590	1,470	6,930	3,725	3,205
	Percent (%)														
Agriculture and other resource-based industries	5.3	7.5	2.9	4.8	7.9	1.4	10.5	17.7	2.6	4.1	5.7	2.0	3.5	5.6	0.6
Construction industries	6.3	10.6	1.6	6.0	10.2	1.2	7.4	12.4	1.6	6.2	11.3	0.7	5.6	9.3	1.2
Manufacturing industries	11.9	16	7.3	1.3	1.5	1.1	1.4	1.3	1.6	1.8	1.9	1.7	1.0	1.2	0.6
Wholesale trade	4.4	5.6	3.1	0.8	1.2	0.4	0.0	0.9	0.0	1.6	2.2	0.7	0.6	0.9	0.0
Retail trade	11.4	9.7	13.3	11.6	10.4	13.1	12.2	10.6	14.1	12.7	11.6	13.9	11.0	9.9	12.3
Finance and real estate	5.9	4.7	7.2	3.8	4.8	2.8	3.3	3.5	3.1	4.7	6.6	3.1	3.6	4.4	2.7
Health care and social services	10.2	3.5	17.7	9.1	2.9	16.2	8.4	2.7	15.1	10.9	3.5	19.0	8.4	2.8	15.0
Educational services	6.8	4.3	9.7	12.7	7.4	18.7	12.0	6.2	18.8	14.7	9.4	20.7	12.0	6.7	18.1
Business services	18.4	21.1	15.4	12.4	15.9	8.4	10.8	14.2	6.8	11.7	15.7	7.5	13.2	16.4	9.5
Other services	19.4	17.2	21.9	37.3	37.9	36.8	33.5	30.5	37.0	31.3	32.1	30.6	41.2	42.6	39.6
<b>Total Experienced Labour Force 15 Years and Over (n) with an Aboriginal Identity</b>	497280	253825	243455	8640	4485	4155	1695	910	790	2455	1265	1200	4485	2315	2170
	Percent (%)														
Agriculture and other resource-based industries	8.0	12.6	3.2	6.0	10.1	1.4	12.1	20.9	2.5	4.5	6.7	2.1	4.5	8.0	0.7
Construction industries	8.8	15.4	1.9	6.5	11.4	1.2	8.3	13.7	1.3	6.7	12.3	0.8	5.7	9.9	1.2
Manufacturing industries	8.0	11.4	4.4	1.5	1.8	1.3	1.5	1.1	1.3	2.0	2.0	2.1	1.3	1.7	0.9
Wholesale trade	2.4	3.3	1.5	0.8	1.0	0.4	0.6	0.0	0.0	1.4	2.0	0.8	0.4	0.9	0.0
Retail trade	10.3	8.2	12.6	13.5	11.5	15.8	13.3	11.0	15.8	13.8	11.9	15.8	13.4	11.2	15.7
Finance and real estate	3.0	2.1	3.9	3.8	4.9	2.5	3.5	3.8	3.2	4.9	6.7	2.9	3.2	4.3	2.3
Health care and social services	11.7	4.0	19.7	9.1	2.8	16.0	8.6	2.2	15.8	10.8	3.2	18.8	8.5	2.8	14.5
Educational services	6.6	3.6	9.8	11.4	5.8	17.4	9.7	4.4	15.8	12.2	6.7	17.5	11.7	5.8	18.0
Business services	14.1	16.1	11.9	11.5	15.1	7.7	10.3	13.2	6.3	11.6	16.2	6.7	11.7	14.9	8.5
Other services	27.0	23.2	31.1	36.0	35.9	36.1	32.4	28.6	36.7	32.2	32.0	31.7	39.6	41.0	38.2

Source: Statistics Canada. Community Profiles: Labour, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/community/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Labour&Custom=>

Source: Statistics Canada. Aboriginal Population Profile: Labour, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Labour>

**Table 13: Workforce by Occupation – Total Census Population (2006 Census Data)**

Occupation	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Total Experienced Labour Force 15 Years and Over (n)</b>	16,861,180	8,884,805	7,976,370	12,080	6,445	5,635	2,090	1,130	960	3,065	1,595	1,475	6,925	3,725	3,205
	<b>Percent (%)</b>														
Management Occupations	9.7	11.6	7.5	10.6	12.6	8.3	9.1	10.6	7.3	10.4	12.2	8.5	11.1	13.4	8.4
Business; finance and administration occupations	17.9	9.7	27.1	15.6	8.7	23.4	12.7	6.2	20.3	14.0	8.2	20.3	17.1	9.7	25.7
Natural and applied sciences and related occupations	6.6	9.7	3	3.4	5.1	1.5	3.8	5.8	1.6	2.8	4.1	1.4	3.6	5.4	1.6
Health occupations	5.6	2.1	9.5	2.6	0.9	4.4	1.9	0.9	3.6	2.6	0.6	4.7	2.7	1.1	4.7
Occupations in social science; education; government service and religion	8.4	5.1	12.1	16.4	8.8	25.2	16.0	7.1	27.1	15.7	8.5	23.7	16.9	9.5	25.3
Occupations in art; culture; recreation and sport	3	2.5	3.5	5.3	5	5.7	3.3	2.2	4.7	5.1	4.4	5.4	6.1	6.2	5.9
Sales and service occupations	23.9	19.3	29.1	26.3	23.7	29.2	28.7	25.2	32.8	29.0	24.8	33.6	24.3	22.8	25.9
Trades; transport and equipment operators and related occupations	15.1	26.7	2.2	16.9	30.5	1.4	19.6	35.0	1.0	17.5	32.6	1.4	15.9	28.2	1.4
Occupations unique to primary industry	3.8	5.7	1.8	1.8	3.2	0.2	3.1	5.8	0.0	1.6	3.1	0.7	1.4	2.4	0.0
Occupations unique to processing; manufacturing and utilities	5.9	7.5	4.1	1.2	1.6	0.9	1.7	1.8	1.6	1.5	1.9	1.0	0.9	1.2	0.6
<b>Total Experienced Labour Force 15 Years and Over (n) with an Aboriginal Identity</b>	497280	253825	243455	8640	4485	4155	1695	910	785	2460	1265	1195	4485	2315	2170
	<b>Percent (%)</b>														
Management Occupations	6.4	6.8	6.0	6.4	7.0	5.7	5.9	6.0	5.1	6.7	7.5	5.9	6.5	7.3	5.5
Business; finance and administration occupations	14.5	6.3	23.0	15.6	7.8	23.8	13.0	5.5	21.7	14.4	7.5	21.8	17.2	8.9	26.0
Natural and applied sciences and related occupations	3.3	4.8	1.7	2.2	3.5	0.8	2.7	4.4	1.3	2.0	3.2	0.8	2.0	3.2	0.7
Health occupations	4.0	1.2	7.0	1.2	0.4	2.0	0.9	1.1	1.9	1.8	0.8	3.3	1.0	0.4	1.8
Occupations in social science; education; government service and religion	9.6	4.7	14.7	14.2	5.9	23.2	13.3	3.8	24.8	12.8	5.1	20.9	15.4	7.3	24.0
Occupations in art; culture; recreation and sport	2.2	2.1	2.4	6.3	6.1	6.3	3.5	2.2	5.1	5.3	5.1	5.9	7.6	8.4	6.7
Sales and service occupations	28.5	20.9	36.5	30.7	26.4	35.1	32.2	27.5	37.6	33.1	27.7	38.5	28.7	25.3	32.3
Trades; transport and equipment operators and related occupations	20.1	36.0	3.6	19.6	36.3	1.6	22.7	41.2	1.3	20.1	37.5	1.7	18.2	33.5	1.8
Occupations unique to primary industry	6.1	10.0	2.0	2.4	4.5	0.2	3.8	6.6	0.0	2.0	3.6	0.0	2.1	4.1	0.0
Occupations unique to processing; manufacturing and utilities	5.2	7.2	3.1	1.5	1.9	1.1	1.8	2.2	1.3	1.6	2.0	1.3	1.2	1.7	0.9

Source: Statistics Canada. Community Profiles: Labour, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/community/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Labour&Custom=>

Source: Statistics Canada. Aboriginal Population Profile: Labour, 2006 Census.

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Labor>

### **3.2.6 Income Level by 1) Education Levels, 2) Occupation, and 3) Industry Sector**

#### ***Income by Education***

Table 14 highlights the median and average employment income for Canada and Nunavut based on 2006 census data (2005 constant dollars). This Table reveals that for the total census population, Nunavut (\$58,088) had a much higher median employment income level than did Canada (\$41,401). It also shows that the higher the level of education, the higher the median employment income, such that individuals with a university certificate, diploma or degree above the bachelor's level had the highest median employment income. Overall, males consistently had higher median employment incomes than females in their specific educational category.

Table 14 also shows that Nunavut had an average employment income (\$59,617) that was \$8000 higher than the Canadian average (\$51,221). As with the median employment income, the higher the level of education, the higher the average employment income. Overall, males consistently had higher average employment incomes than females in their specific educational category.

Table 15, which displays the median 2005 earnings for full-year, full-time earners aged 25-64 years, reveals that overall, the higher the level of education the higher the median earnings. It also shows that Nunavut (\$88,849) had median earnings in 2005 that were significantly greater (> \$23,000) than in Canada (\$66,535) as a whole. Once again, males consistently earned more than females with the same educational background.

#### ***Income by Occupation***

Table 16 outlines median 2005 earnings for full-year, full-time earners based on selected occupations. There is very little information available from Statistics Canada at the territorial and regional level due to the fact that: (1) the data was too unreliable to publish; or (2) the data had to be suppressed to meet the confidentiality requirements of the Statistics Act. Thus, it is not possible to descriptively compare Canada to Nunavut and its three Regions.

#### ***Income by Industry Sector***

There is no current information available on this topic at this time.

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**Table 14: Employment Income in Constant (2005) Dollars for Full-Year, Full-Time Earners by Educational Category for Age Group 15 years and older (20% Sample Data)**

Income	Educational Category	Canada			Nunavut		
		Total	Male	Female	Total	Male	Female
2005 Constant Dollars (\$)							
<b>Median Employment Income</b>	<b>Total – All Categories</b>	41,401	46,778	35,830	58,088	59,915	56,005
	Certificate or Diploma Below Bachelor Level	37,484	42,713	32,004	50,071	50,368	48,973
	University Certificate or Degree	59,339	65,547	52,778	85,410	89,950	82,176
	Bachelor's Degree	55,112	61,966	49,456	84,480	88,320	80,368
	University Certificate, Diploma or Degree Above Bachelor Level	66,262	72,937	60,636	89,828	0	0
<b>Average Employment Income</b>	<b>Total – All Categories</b>	51,221	58,537	41,331	59,617	61,801	56,887
	Certificate or Diploma Below Bachelor Level	43,681	49,603	35,372	53,451	55,600	50,642
	University Certificate or Degree	74,635	88,151	58,332	86,171	91,602	80,569
	Bachelor's Degree	68,689	81,364	54,319	83,956	88,208	80,083
	University Certificate, Diploma or Degree Above Bachelor Level	85,532	99,638	66,421	90,578	0	0

Source: Statistics Canada. Income and Earnings, 2006 Census.

<http://www12.statcan.ca/english/census06/data/topics/RetrieveProductTable.cfm?TPL=RETR&ALEVEL=3&APATH=3&CATNO=&DETAIL=0&DIM=&DS=99&FL=0&FREE=0&GAL=0&GC=99&GK=NA&GRP=1&IPS=&METH=0&ORDER=1&PID=94595&PTYPE=88971&RL=0&S=1&ShowAll=No&StartRow=1&SUB=0&Temporal=2006&Theme=81&VID=0&VNAMEE=&VNAMEF=>

**Table 15: Median 2005 Earnings for Full-Year, Full-Time Earners by Education for Age Group 25-64 (20% Sample)**

Education	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
2005 Constant Dollars (\$)															
Less than High School	32,029	37,116	24,442	37,760	38,958	36,565	36,949	F	F	34,960	35,017	F	39,962	38,976	40,183
High School	37,403	42,608	32,380	60,036	60,115	59,957	F	F	F	F	F	F	60,800	64,933	F
Trades or Apprenticeship	39,996	46,474	28,881	59,936	60,068	*	F	F	F	F	F	F	60,109	F	F
College	42,937	50,811	37,182	64,852	69,659	60,112	F	F	F	60,142	F	F	64,934	69,655	61,184
University below Bachelor	47,253	52,944	43,005	*	*	*	F	F	x	F	F	F	F	F	F
Bachelor	56,048	62,723	50,149	84,999	88,832	80,352	F	F	F	F	F	F	84,082	88,678	80,198
Post-Bachelor	66,535	73,284	60,942	89,849	*	*	F	F	F	F	F	F	89,882	F	F

F- Too unreliable to be published

x- Suppressed to meet the confidentiality requirements of the Statistics Act.

Source: Statistics Canada. Income and Earnings Highlight Tables, 2006 Census.

<http://www12.statcan.ca/english/census06/data/highlights/earnings/Table803.cfm?Lang=E&T=803&GH=6&GF=62&G5=1&SC=1&SO=0&O=A>

**Table 16: Median 2005 Earnings for Full-Year, Full-Time Earners, Selected Occupations (20% Sample)**

Selected Occupations	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Median earnings, full-year, full-time earners - 2005 Constant Dollars (\$)</b>															
A0 Senior management occupations	\$80,027	\$85,522	\$65,916	F	F	F	F	F	x	F	F	F	F	\$59,915	\$60,006
A1 Specialist managers	\$69,673	\$75,239	\$60,043	\$89,618	F	F	F	F	F	F	F	F	F	F	F
A2 Managers in retail trade, food and accommodation services	\$33,979	\$39,610	\$28,054	F	F	F	F	F	x	F	F	F	F	F	F
A3 Other managers, n.e.c.	\$65,228	\$70,023	\$57,519	\$89,088	F	F	F	F	F	F	F	F	\$90,368	F	F
B0 Professional occupations in business and finance	\$55,614	\$64,158	\$50,450	F	F	F	F	x	x	F	F	F	F	F	F
B1 Finance and insurance administration occupations	\$39,377	\$48,461	\$37,197	F	x	F	F	x	x	F	x	x	F	F	F
B2 Secretaries	\$32,505	\$40,246	\$32,455	F	x	F	F	x	F	F	x	F	F	x	F
B3 Administrative and regulatory occupations	\$43,962	\$52,166	\$41,815	\$67,797	F	F	F	F	F	F	F	F	F	x	F
B4 Clerical supervisors	\$45,715	\$48,828	\$43,822	F	F	F	x	x	x	x	x	x	F	F	F
B5 Clerical occupations	\$35,028	\$38,782	\$33,914	\$50,126	F	\$48,973	F	F	F	F	F	F	\$50,161	F	F
C0 Professional occupations in natural and applied sciences	\$65,601	\$68,251	\$57,863	F	F	F	F	F	x	F	F	x	F	F	\$49,946
C1 Technical occupations related to natural and applied sciences	\$50,092	\$52,007	\$43,341	F	F	F	F	F	x	F	F	x	F	F	F
D0 Professional occupations in health	\$77,515	\$101,680	\$64,381	F	x	F	x	x	x	x	x	x	F	F	F
D1 Nurse supervisors and registered nurses	\$60,168	\$61,293	\$60,120	F	x	F	F	x	F	F	x	F	F	x	F
D2 Technical and related occupations in health	\$42,979	\$50,087	\$40,673	F	F	F	x	x	x	x	x	x	F	x	F
D3 Assisting occupations in support of health services	\$30,554	\$32,940	\$30,071	F	x	F	F	x	x	F	x	F	F	F	F
E0 Judges, lawyers, psychologists, social workers, ministers of religion, and policy and program officers	\$56,949	\$63,390	\$52,649	\$75,392	F	F	F	F	F	F	F	F	F	x	F

Selected Occupations	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Median earnings, full-year, full-time earners - 2005 Constant Dollars (\$)</b>															
E1 Teachers and professors	\$58,849	\$62,708	\$55,751	\$76,864	F	\$73,856	F	F	F	F	F	F	\$75,104	F	F
E2 Paralegals, social services workers and occupations in education and religion, n.e.c.	\$30,567	\$38,218	\$29,446	\$36,224	F	F	F	x	F	F	x	F	F	F	F
F0 Professional occupations in art and culture	\$44,010	\$43,534	\$44,321	F	F	F	F	x	F	F	F	F	F	F	F
F1 Technical occupations in art, culture, recreation and sport	\$33,398	\$35,860	\$31,067	F	F	F	F	x	x	F	F	x	F	F	F
G0 Sales and service supervisors	\$29,980	\$36,516	\$25,010	F	F	x	F	x	x	F	x	x	F	F	F
G1 Wholesale, technical, insurance, real estate sales specialists, and retail, wholesale and grain buyers	\$46,349	\$51,093	\$39,833	F	x	F	x	x	x	x	x	x	x	F	x
G2 Retail salespersons and sales clerks	\$27,225	\$34,651	\$21,735	F	F	F	F	x	x	F	x	F	F	x	x
G3 Cashiers	\$17,758	\$18,717	\$17,612	F	F	F	F	x	F	F	x	F	F	F	F
G4 Chefs and cooks	\$21,684	\$23,156	\$20,057	F	F	F	F	x	F	F	x	F	F	F	F
G5 Occupations in food and beverage service	\$16,654	\$20,015	\$15,931	F	F	x	x	x	x	x	x	x	F	F	F
G6 Occupations in protective services	\$56,642	\$58,708	\$48,144	F	F	F	F	F	x	F	F	x	F	F	x
G7 Occupations in travel and accommodation, including attendants in recreation and sport	\$32,763	\$35,951	\$30,885	F	F	F	F	F	x	F	F	F	F	F	F
G8 Child care and home support workers	\$21,980	\$29,542	\$21,161	F	F	F	F	x	F	F	F	F	F	F	F
G9 Sales and service occupations, n.e.c.	\$23,505	\$28,956	\$19,723	\$31,219	\$34,928	F	F	F	F	F	F	F	F	F	F
H0 Contractors and supervisors in trades and transportation	\$55,889	\$57,158	\$39,726	F	F	x	x	x	x	x	x	x	F	\$34,928	F
H1 Construction trades	\$35,639	\$36,077	\$23,759	F	F	x	F	F	x	F	F	x	F	F	x

Selected Occupations	Canada			Nunavut			Kitikmeot			Keewatin			Baffin		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>Median earnings, full-year, full-time earners - 2005 Constant Dollars (\$)</b>															
H2 Stationary engineers, power station operators and electrical trades and telecommunications occupations	\$59,539	\$59,922	\$45,407	F	F	x	F	F	x	F	F	x	F	F	x
H3 Machinists, metal forming, shaping and erecting occupations	\$45,709	\$46,270	\$31,555	x	x	x	x	x	x	x	x	x	x	F	x
H4 Mechanics	\$45,942	\$46,136	\$35,401	F	F	x	F	F	x	F	F	x	F	x	x
H5 Other trades, n.e.c.	\$33,265	\$36,288	\$21,081	x	x	x	x	x	x	x	x	x	x	F	x
H6 Heavy equipment and crane operators, including drillers	\$48,916	\$49,056	\$38,602	F	F	x	F	F	x	F	F	x	F	x	x
H7 Transportation equipment operators and related workers, excluding labourers	\$38,749	\$39,451	\$27,966	\$39,680	\$39,125	x	F	F	x	F	F	x	F	F	x
H8 Trades helpers, construction and transportation labourers and related occupations	\$35,488	\$36,203	\$28,057	F	F	x	F	F	x	F	F	x	F	\$39,125	x
I0 Occupations unique to agriculture, excluding labourers	\$18,039	\$19,644	\$14,824	x	x	x	x	x	x	x	x	x	x	F	x
I1 Occupations unique to forestry operations, mining, oil and gas extraction and fishing, excluding labourers	\$62,524	\$63,157	\$44,445	F	F	x	x	x	x	x	x	x	F	x	x
I2 Primary production labourers	\$29,925	\$31,483	\$21,416	x	x	x	x	x	x	x	x	x	x	F	x
J0 Supervisors in manufacturing	\$55,978	\$59,944	\$37,321	F	F	x	x	x	x	x	x	x	x	x	x
J1 Machine operators in manufacturing	\$37,981	\$43,502	\$25,980	F	F	x	x	x	x	x	x	x	F	F	x
J2 Assemblers in manufacturing	\$37,565	\$40,483	\$31,694	x	x	x	x	x	x	x	x	x	x	F	x
J3 Labourers in processing, manufacturing and utilities	\$31,538	\$36,225	\$25,164	x	x	x	x	x	x	x	x	x	x	x	x

F- Too unreliable to be published

x- Suppressed to meet the confidentiality requirements of the Statistics Act.

Source: Statistics Canada. Income and Earnings Highlight Tables, 2006 Census.

<http://www12.statcan.ca/english/census06/data/highlights/earnings/Table801.cfm?Lang=E&T=801&GH=6&GF=62&G5=1&SC=1&SO=0&O=A>

### 3.3 EXISTING ECONOMIC CONDITIONS

The existing economic conditions in Nunavut are profiled below, first from a general overview perspective, followed by overviews of specific economic sectors. Information in this section draws on the views and experiences of organizations interviewed and information in available documentation.

#### 3.3.1 Overview of Existing Economic Conditions

This section provides an overview of the economic conditions in Nunavut, highlighting the economic structure, key sectoral activity, and the opportunities and challenges in the current economic environment.

##### *Structure of the Nunavut Economy*

Nunavut has a mixed economy that depends on both the wage-based economy and the much smaller land-based activities such as hunting, crafts and fishing.

The government in Nunavut dominates the territorial economy and the service sector. The private sector in Nunavut is comparatively less developed than in the southern parts of Canada. The public sector in Nunavut accounts for a significant portion of Gross Domestic Product (GDP), making up about 26 percent of its value in 2006. By contrast, the public sector accounted for less than 6 percent of the GDP for Canada as a whole in 2006.<sup>9</sup>

The GN projects expenditures of \$1.1 billion for 2008-09. The federal government will contribute about 81% of GN expenditures. Since the creation of Nunavut, the public sector has been the principal engine of the economy. It accounts for approximately 30 percent of territorial wage earners, significantly higher than the Canadian average, which is less than 6 percent.<sup>10</sup>

In the goods-producing sector in 2004, the most important sectors were construction, followed far behind by utilities, manufacturing, mining and commercial fisheries.<sup>11</sup>

The domestic economy is progressing at a healthy pace. Job creation is strong and income levels are rising as a result of government and private industry expansion. In Nunavut, the “GDP grew steadily from 1999 to 2005, averaging 6.3 per cent in real terms”.<sup>12</sup> The territory’s GDP advanced 3.4% in 2006.<sup>13</sup> Nunavut has benefited especially from recent mining industry activity, following several years of declines resulting from the closures of several major mines.

In 2007 the number of people working in the ten largest communities in Nunavut was 9,100 -- up by 900 from the previous year.<sup>14</sup> Government employment, including health and education, accounted for most of the employment. In 2006, based on Statistics Canada data, the unemployment rate for the total population in Nunavut was 15.6%, the highest in the nation (i.e., the national average was 6.6%), while the

<sup>9</sup> Government of Nunavut Department of Finance, *Nunavut Budget 2008-09: Supplementary Documents*. February 20, 2008.

<sup>10</sup> *Ibid.*

<sup>11</sup> Clinton, Graeme and Stephen Vail. “2005 Nunavut Economic Outlook: Update on 5 years of Progress – Final Report”, Prepared for Nunavut Economic Forum by Impact Economics, July 2005

<sup>12</sup> Clinton, G and Vail, S. *op cit.*

<sup>13</sup> Statistics Canada, *The Daily*; November 2007; <http://www.statcan.ca/Daily/English/071108/d071108a.htm>

<sup>14</sup> Nunavut Bureau of Statistics. *StatsUpdate: Labour Force, January 11, 2008* (Source: Statistics Canada, Labour Force Survey, CANSIM table # 282-0055)

unemployment rate for the Aboriginal population was 20.1%. Labour force participation for the total Nunavut population was at 65.3%, while the Aboriginal rate was 59.1%.<sup>15</sup>

### **3.3.1.1 CURRENT ECONOMIC ACTIVITY**

A summary of the existing economic activity in Nunavut follows.

#### ***Transportation***

Transportation infrastructure in Nunavut is in need of updating and expansion. There are no roads or rail connecting communities with each other or the rest of the country and, although all the communities can be accessed by air year-round and all but one by sea during the summer months, the marine and air infrastructure remains inadequate. These transportation issues need to be addressed to facilitate economic development.

#### ***Commercial Fisheries***

Commercial fisheries is an emerging sector in Nunavut's economy. In 2005 it was estimated that the industry adds between \$12 and \$14 million annually to the territory's economy and creates 300 seasonal jobs. Value-added processing in Nunavut plants is responsible for the greatest contribution. Currently, there are three main species being fished for commercial purposes in the territory – turbot, shrimp and Arctic char.

#### ***Government***

Government is the largest employer in Nunavut. The public sector has remained Nunavut's prime economic driver and it is expected to remain so for the foreseeable future. This heavy dependence on the public sector is the result of circumstances such as a harsh climate, geographic remoteness, small population, and underdeveloped infrastructure systems which have led to serious constraints for private sector economic development in the territory.

#### ***Tourism***

The tourism industry is an opportunity for Nunavut to capitalize on its unique natural and cultural features. The Government of Nunavut has identified this sector as one of the three pillars of economic growth in the territory. Currently, the sector employs 500 hospitality workers, contributes \$26 million to the economy and attracts approximately 13,000 people each year, primarily from Canada, America and Europe.

#### ***Communications***

Having adequate communications infrastructure is an essential part of facilitating economic development and improving quality of life in Nunavut. Working towards this goal, in 2005 the federal government provided financial assistance to enable the territory to provide broadband to 25 communities at a cost of \$18 million.

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<sup>15</sup> Statistics Canada. *Community Profiles: Education, 2006 Census*.

<http://www12.statcan.ca/english/census06/data/profiles/community/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Education&Custom=>

Source: Statistics Canada. *Aboriginal Population Profile: Education, 2006 Census*.

<http://www12.statcan.ca/english/census06/data/profiles/aboriginal/Details/Page.cfm?Lang=E&Geo1=PR&Code1=62&Geo2=PR&Code2=01&Data=Count&SearchText=Nunavut&SearchType=Begins&SearchPR=01&B1=Education&Custom=>

### ***Oil and Gas***

Nunavut's oil and gas sector has not seen much activity to this point, yet it holds significant potential for the future of the territory's economy. There are proven oil and gas resources contained within fourteen sedimentary basins. It is estimated that the resources hold 530 million barrels of oil and 12 trillion cubic feet of natural gas.

### ***Energy***

In Nunavut, electricity is provided through diesel generation. Diesel is shipped to each community annually by sea and stored in large fuel tanks. A primary focus for the Quilliq Energy Corporation is conserving and reducing energy use and finding an alternative to diesel, as issues arise surrounding increasing fuel costs, growing demand and environmental concerns.

### ***Arts & Crafts***

Nunavut's arts and crafts sector is emerging as a successful, internationally-recognized part of the territory's economy. It currently provides income to more than 27% of the Inuit population and contributes \$30 million annually to the economy. Inuit art not only makes up more than 10% of Canadian art sold globally, it is a major draw for visitors coming into the territory.

### ***Wildlife***

Wildlife harvesting is an important part of meeting subsistence needs for Inuit, 70% of whom participate in these activities. It provides a fresh alternative to expensive imported food. Wildlife is also harvested for commercial purposes in Nunavut. Species such as polar bears, muskox, caribou and seals can be harvested and sold in a variety of forms locally and to markets throughout Canada and internationally.

### ***Mining***

Mining has great potential as a contributor to Nunavut's GDP. While there are currently no active mines, there are several projects at various stages in the environmental assessment process and many sites undergoing exploration. In 2007, a number of properties in the territory were being explored for uranium (49), diamonds (41), gold and precious metals (26), base metals (9), iron (2), coal (2), and gemstones (sapphires) (1).<sup>16</sup> For the mining sector to fully realize its potential issues such as transportation infrastructure and regulatory process efficiency must be adequately addressed.

The remainder of this section of the report describes current economic activity and related strengths challenges and opportunities in the key economic sectors.

Nunavut shows great economic potential. Confidence remains high for its economy over the 2006 to 2010 timeframe with respect to mining in particular, as well as with tourism, arts, culture and fisheries.<sup>17 18 19</sup> In 2007, *mining* exploration hit a new record in Nunavut, due in part to high commodity prices globally. Well over one hundred exploration projects were active in the territory. Mining companies spent an

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<sup>16</sup> INAC Nunavut Regional Office (Presenter: Karen Costello). (Unknown). 2008 Nunavut Mining Symposium: Nunavut Exploration Activity Update (Presentation). Available [Online]: [http://www.nunavutminingsymposium.ca/presentations/documents/08a1\\_k.costello\\_inac.pdf](http://www.nunavutminingsymposium.ca/presentations/documents/08a1_k.costello_inac.pdf). Viewed: June 2008.

<sup>17</sup> Nunavut Economic Forum, *Qanijjuq II: Preparing for the Journey*, January 2008

<sup>18</sup> Clinton, G. *Nunavut Economic Review*, April 2006

<sup>19</sup> Government of Nunavut, Department of Sustainable Development, *The Fishing Industry of Nunavut date?*

estimated total of \$495 million in exploration and development, including \$230 million in exploration, a record level.<sup>20</sup>

Advances in mining (diamond, gold, metals and uranium) are expected to dominate Nunavut's growth profile in the future. Nunavut is recognized as one of Canada's most attractive jurisdictions for mineral exploration and investment.<sup>21</sup> Proponents of no fewer than seven mineral deposits have begun the formal processes involved in the application for production. Up to eight additional mines may open by 2016, creating many new jobs.<sup>22</sup> For example:

- Mines under construction or development include:
  - Baker Lake Meadowbank Gold Mine;
  - Hope Bay gold mine; and,
  - Miramar mine (has been approved).
  
- Mines under review include:
  - Baffinland Iron Mine at Mary River with is expected to employ 600 people onsite in 2008. If the mine goes into production it could employ up to 3000 people. The corporation is building a railroad to Foxe Basin to connect with tankers.
  - Doris North gold mine;
  - Meladine gold deposit, Rankin Inlet; and,
  - Sabina Corporation (silver, lead, zinc) has begun the permitting process for its Hackett River deposit.

Infrastructure to support mining development with the Bathurst Inlet Port and Road project (BIPAR) would see a port developed in Bathurst Inlet, and a 211 km all-weather road constructed into the mineral-rich interior. If approved, the port is expected to be operational by 2011 and the road by 2012. The project is expected to bring significant Inuit employment, training and business as well as social benefits including new re-supply options for communities in that region.

Stronger mining activity has the potential to contribute to the social and economic health of Inuit, particularly with respect to infrastructure, employment and training. Many employment and business opportunities in construction, transportation, and numerous other service industries will benefit from the spending in the mining sector.<sup>23</sup> A trade school to support mining and other sectoral development is set to open in 2009 in Rankin Inlet.

The lack of a road network, ports and harbours, paved runways, geology maps and skilled workforce make exploration and mineral development in Nunavut much more expensive and when accounting for the regulatory environment and climate change, a higher risk than in other Canadian jurisdictions<sup>24</sup>. There is opposition from some residents to mine development, e.g., the Mary River iron mine is seen by some residents as a threat to the Inuit way of life; others welcome the economic opportunities.<sup>25</sup>

The *fishing* industry is a mix of commercial and subsistence use. It is a young industry and its rich marine resources are now being slowly explored<sup>26</sup>. In 2005, fisheries contributed between \$12 million and \$14 million annually to the territorial economy and created more than 300 seasonal jobs. Nunavut's fishing industry has experienced significant growth in recent years. "Greater allocations of turbot and shrimp, major investments in offshore fishing vessels, and increased participation by Inuit have all contributed to

<sup>20</sup> Government of Nunavut. *Budget Address 2008-2009, February 20, 2008*

<sup>21</sup> Government of Nunavut Department of Economic Development and Transportation *Business Plan, 2006-07*

<sup>22</sup> *Nunavut Economic Forum, Qanijjuq II: Preparing for the Journey, January 2008, p 11 and 16*

<sup>23</sup> Clinton, G. *Nunavut Economic Review, April 2006*

<sup>24</sup> Government of Nunavut. *Budget Address 2008-2009, op cit*

<sup>25</sup> CBC News. (April 7, 2008). *Baffin Island Residents Resist Proposed Iron Mine Plans.*

<sup>26</sup> Government of Nunavut, Department of Sustainable Development, *The Fishing Industry of Nunavut date*

a healthy industry”.<sup>27</sup> Thanks to training, Inuit participation in the industry is expected to increase. The vast majority of Nunavut’s communities currently do not have the necessary infrastructure to support fishing vessels. The future of fisheries depends on good stewardship, conservation and providing maximum benefits to Inuit.<sup>28</sup> Investments required in fisheries include small craft harbour and port facilities, marine service centres, processing plants and cold-storage operations as well as human capital and fisheries science.<sup>29 30</sup> Nunavut is also limited by its minority share in offshore fisheries.<sup>31</sup> There are plans to put a docking facility at a cost of \$8 million in Pangnirtung between 2008 and 2010 and in six other designated areas in Baffin, at a cost of \$50 million for all seven.

The *Arts and Crafts* sector is an important contributor to economic well being. In 2005, the arts sector in Nunavut involved approximately 4,000 individuals. The current value of arts and crafts sales is \$30 million. That value is expected to reach \$50 million and 2,250 full time jobs in 2013.<sup>32 33</sup> Growth in the sector is dependent on improvements in communication and transportation infrastructure and trade. Other challenges include availability of raw materials, provision of safe workplaces, training and access to domestic and international markets.<sup>34</sup>

The *tourism* sector in Nunavut generates about \$26 million in economic activity and attracts approximately 13,000 people each year, primarily from Canada, the United States and Europe.<sup>35 36</sup> Tourism has great but untapped potential. Investments are required, including infrastructure, human resource development, product development and marketing as well as the need to simplify procedures for tourism operators.

*Harvesting activities* in the Nunavut non-wage economy include “hunting for household consumption and community distribution, as well as for the commercial sale of meat and skins. Musk ox, caribou and seals comprise the major species that are harvested in the territory. The annual replacement cost of the harvest of country food has been estimated at \$30 million”.<sup>37</sup> It should be noted that the decisions/actions taken by external governments and/or organizations related to reducing or eliminating markets for animal products (especially seal and polar bear), have had negative impacts on Inuit and the subsistence and tourism sector of the economy (e.g., The European Union Fur Ban related to seals). These decisions/actions have been particularly difficult on the smaller communities which have fewer economic options available. Consequently, there is a need for ongoing monitoring and assessment of any proposed legislative and export proposal that could negatively impact the people and the economy, both wage-based and subsistence, of Nunavut.

### 3.3.1.2 KEY CHALLENGES FOR THE ECONOMY

The overarching key challenge is the capacity of Inuit living in Nunavut, and in particular the labour force, business and public institutions, to take full advantage of economic opportunities in Nunavut. This means more support is required for basic and adult education, skills and business training and for capacity development for communities, non-profit organizations and public sector. Inuit must cope with the

<sup>27</sup> Government of Nunavut and Nunavut Tunngavik Incorporated, “Nunavut Fisheries Strategy”, March 2005

<sup>28</sup> Government of Nunavut Department of Finance, “Nunavut Budget 2008-09: Supplementary Documents

<sup>29</sup> Government of Nunavut and Nunavut Tunngavik Incorporated, *op cit*

<sup>30</sup> Nunavut Economic Forum, *Qanijijuuq: Op cit*

<sup>31</sup> Government of Nunavut Department of Finance, *op. cit*

<sup>32</sup> Government of Nunavut Department of Finance, *ibid*

<sup>33</sup> The Sivummut Economic Development Strategy Group, *Nunavut Economic Development Strategy: Building a Foundation for the Future*, June 2003

<sup>34</sup> Government of Nunavut, *A Strategy for Growth in Nunavut’s Arts and Crafts Sector*, 2005

<sup>35</sup> Nunavut Economic Forum, *Qanijijuuq: Op cit*

<sup>36</sup> Government of Nunavut Department of Finance, *op. cit*

<sup>37</sup> Government of Nunavut Department of Finance, *ibid*

challenge of integrating two apparently opposing worlds: a traditional world that values family, community and sharing and a modern world that values individual performance, commercial ventures and the pursuit of profit.<sup>38</sup>

A second challenge is that economic expansion is expected to easily outpace advances in Nunavut's social performance, which has been slow to improve.<sup>39</sup>

A third challenge is that Nunavummiut still suffer from high unemployment, low levels of basic and higher skills and education, and a fast growing, young population that the territory is not yet equipped to address.<sup>40</sup>

A fourth challenge relates to aging and inadequate infrastructure which is limiting human development and economic success. Gaps exist in housing, municipal works, transportation (roads, marine facilities, air transport) and elsewhere.<sup>41</sup> The limited availability, adequacy and suitability of housing is detrimental to health, education, family and economic development in the territory.

Other specific barriers faced by Nunavut that limit economic development include:

- The limited size of communities and their remoteness from the major metropolitan centres of Canada and other northern communities;
- The harsh climate and the impact it has on facilities' costs (construction and operation) ;
- The high cost of living. A person living in Nunavut would need to spend \$175 to purchase the same goods and services that a person would spend \$100 in the south;
- The high cost of transportation of people and goods to the north and among northern communities, along with the need to import most goods from the south, including higher cost fossil fuel, heavily subsidized by the GN;
- The high burden of taxation faced by residents of the north;
- The almost complete absence of banks and other mainstream financial institutions in many communities;
- The lack of access to investment capital for businesses and infrastructure;
- The lack of mechanisms to support trade of locally produced products -- small local markets limit business growth;
- The difficulties of recruiting specialized skills locally and for the Inuit small businesses to compete with high wages offered by government and major mining companies;
- The international trade laws that act as barriers to marketing Inuit / Nunavut products (e.g. marine mammal products, caribou meat, products from musk oxen, bear hunting, etc.);
- The necessity of providing services to customers and/or deal with government in two or three different languages;
- The need to greatly improve the availability and quality of socio-economic baseline data relevant to economic development and to make it more comprehensive, integrated and publicly available to better inform economic, regional and community planning; and,
- The regulatory system.<sup>42,43,44</sup>

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<sup>38</sup> *Nunavut Economic Forum, Qanijjuq: Ibid*

<sup>39</sup> *Clinton, G. Nunavut Economic Review, op cit*

<sup>40</sup> *Clinton, G. Nunavut Economic Review, op cit*

<sup>41</sup> *Clinton, Graeme and Stephen Vail. Op cit*

<sup>42</sup> *Alison Rogan. Addressing the Cost of Living in Nunavut, Discussion Paper Four, Prepared for the Nunavut Employees Union. April 2003*

<sup>43</sup> *Government of Nunavut Department of Economic Development and Transportation Business Plan, 2006-07*

<sup>44</sup> *Inuit Tapiriit Kanatami. Backgrounder on Economic Opportunities: For Discussion at the Economic Sectoral Meeting, December 13th and 14th, 2004, Ottawa, November 15, 2004*

### **3.3.2 Transportation and Shipping Routes**

#### **3.3.2.1 EXISTING TRANSPORTATION INFRASTRUCTURE**

Transportation infrastructure is a key issue in Nunavut. While all of the 27 communities in the territory (refer to Figure 2) are accessible by air year-round and by sea (except Baker Lake) during the summer months, none are accessible by road. The rest of Nunavut, representing close to 97%, must be accessed by charter flights. Much of the infrastructure that is available is inadequate and outdated. There has been little investment in the transportation sector since the 1970s. The lack of sufficient transportation options is a significant obstacle to economic and community improvement, limiting access and raising costs of development in the territory.<sup>45</sup>

##### ***Roads***

Road infrastructure is very limited in Nunavut. As mentioned above, there are no roads connecting communities to each other. The only surface transportation options outside of these communities are snowmobiles and all-terrain vehicles, which are not always a practical or safe means of traveling the long distances between communities, particularly with the impacts of a warming climate on the winter ice roads. There are also no roads connecting the territory with other parts of Canada. It is the only jurisdiction in North America that is entirely isolated from the National Highway System and the North American Trade Corridor.<sup>46</sup>

A 110 km all-weather road has recently been constructed by Agnico-Eagle Mines Limited from the deep-water port at Baker Lake to its Meadowbank gold mine project, 70 km north of Baker Lake.

Within the communities there is also a need to increase road capacity as the population continues to grow. Community road development depends directly on the size of the community's population. The length of community access and service roads in Nunavut is currently an average of 11.25m per person. With the projected increase in population of 17,188 people between 2000 and 2021, there will need to be 194 km of new service roads constructed.<sup>47</sup>

##### ***Air***

Air transportation is an essential service for residents of Nunavut as it is the only means of year-round transportation into and out of the communities. Every community in Nunavut has an airport, two of which have paved runways while the rest are gravel. Nearly 250,000 passengers pass through these airports every year. Many of these people use one of the six scheduled carrier services and almost half move through the Iqaluit airport.<sup>48</sup>

The infrastructure of these airports is not sufficient to handle the needs of the residents and visitors to the territory and presents accessibility, capacity and safety issues. The majority of the airports are outdated, with the most modern airport having been constructed in 1970s. Changes in aircraft design since that time have resulted in the inability of modern airplanes to deliver cargo or even access several of these communities. There are some communities that are only accessible by Short Take Off and Landing aircraft, making it difficult to integrate these places into an efficient routing system and limiting

<sup>45</sup> Government of Nunavut Department of Finance, "Nunavut Budget 2008-09: Supplementary Documents"

<sup>46</sup> Governments of Northwest Territories, Yukon and Nunavut. "Northern Connections: Multimodal Transportation Blueprint for the North" 2008.

<sup>47</sup> Government of Nunavut "Nunavut Transportation Strategy", 2002.

<sup>48</sup> Governments of Northwest Territories, Yukon and Nunavut. "Northern Connections: Multimodal Transportation Blueprint for the North" 2008.

competitive alternatives for carriers. Also under stress are the three gateway airports at Iqaluit, Rankin Inlet and Cambridge Bay, which have not been designed to handle the current and growing demand. Assuming passenger traffic is proportional to population increase, it is estimated that by 2018, passenger traffic will increase by 194% from 1998's traffic number of 187,521 passengers per year.<sup>49</sup> In addition to access and capacity challenges, updates to many airports are required for safety, security and maintenance purposes.<sup>50</sup>

**Figure 26: Air Routes in Nunavut**



Source: Natural Resources Canada.

<http://atlas.nrcan.gc.ca/site/english/maps/peopleandsociety/nunavut/transport/airroutes>

### **Marine**

Transport by sea is a popular form of inter-community travel, and until recently there were more boats than private vehicles in most communities. All of the communities in Nunavut (with the exception of Baker Lake) have tidewater access; but the only port in the territory is in Nanisivik, the site of an abandoned mining town, and most communities have no breakwaters or marshalling areas. Marine

<sup>49</sup> Government of Nunavut "Nunavut Transportation Strategy", 2002.

<sup>50</sup> Governments of Northwest Territories, Yukon and Nunavut. "Northern Connections: Multimodal Transportation Blueprint for the North" 2008.

transport is also used for re-supply for residents, allowing the delivery of fuel, oil and other goods. However, with a short shipping season of one to five months (depending on the community), these provisions can only be brought in only once a year. The marine system requires a number of changes to facilitate economic growth and community development. With no ports, no updated charts, few navigational aids and crude landing options for ships, boats and their cargo can suffer damage and delays. This lack of infrastructure affects safety, efficiency and hinders development.<sup>51</sup>

**Figure 27: Marine Routes in Nunavut**



Source: Natural Resources Canada.

<http://atlas.nrcan.gc.ca/site/english/maps/peopleandsociety/nunavut/transport/marinetransport>

### ***Rail***

There are currently no rail lines in Nunavut.

<sup>51</sup> *Ibid.*

### 3.3.2.2 CHALLENGES

Transportation is closely tied to the daily lives of residents and the future of economic development in Nunavut: addressing Nunavut's transportation service and infrastructure issues is therefore an immediate concern for the territory. However, there are several factors that present a challenge in updating and improving the transportation system. In addition to the problems inherent in the territory's geography (i.e., small, widely dispersed population, the long distances between communities, the remoteness from the rest of Canada and the often severe weather conditions), one of the primary challenges to improving transportation in Nunavut is finding the resources to support the needed improvements, upgrades and additions to its transportation infrastructure and facilities.

After several decades with minimal investment in transportation infrastructure, there are now many competing needs to address. Proposals to update and construct roads, marine facilities and airports are not only in competition with each other for limited funds but also with the other pressing needs of the growing territory such as waste water and housing infrastructure.

While both the Territorial and Federal government can provide some funding to support the development of transportation infrastructure, such as the recent commitment by the Government of Nunavut to support a road paving project in Iqaluit, and the allocation of Federal funds through the Building Canada Fund for infrastructure projects; the level of funding required to deal with the current and future transportation needs is significant.<sup>52</sup> For example, putting docking facilities in 7 locations around Baffin to support the development of fisheries is projected to cost \$50 million. It is also expected to cost \$40 million to replace the runway at the airport in this region. This is an indication of the challenges that each region confronts in balancing competing transportation needs.

There may also be a role for companies interested in developing resources in Nunavut in improving infrastructure. For example, the company operating the Baffin iron ore mine at May River is planning to build a railroad to the Foxe Basin. However, a report from the Conference Board of Canada indicated that certain infrastructure projects -- such as the construction of a deepwater port and improving harbour facilities -- are projects that are too expensive to be undertaken by the private sector or the Government of Nunavut independently.<sup>53</sup>

### 3.3.2.3 BROADER ISSUES

#### *Economic*

Transportation infrastructure has an impact on the economic development of Nunavut. With air being the only means of travel year round, the costs of doing business are high. The costs of general freight to a community vary depending on the point of departure, but it can be as much as \$18 per kilogram. The current air freight into Nunavut is equivalent to one thousand kilograms per person per year.<sup>54</sup> The only alternative for bringing goods into the territory is by ship, which can create timing challenges for development as shipping only occurs annually.

In addition to these challenges, which can affect most types of development, there are specific transportation issues for some sectors in Nunavut. The fisheries industry in particular is directly affected by inadequate marine infrastructure. The waters surrounding Nunavut contain the only growth fishery in

<sup>52</sup> Government of Nunavut. *Budget Address 2008-2009. February 20, 2008.*

<sup>53</sup> The Conference Board of Canada. "Nunavut Economic Outlook: An Examination of the Nunavut Economy" November, 2002.

<sup>54</sup> Governments of Northwest Territories, Yukon and Nunavut. "Northern Connections: Multimodal Transportation Blueprint for the North" 2008.

Canada. However, the potential of the inshore fishery cannot be achieved without the necessary infrastructure improvements.<sup>55</sup> A deep water port and harbour facilities are essential to expanding the industry. Without a port, trawlers must remain anchored at sea for days while fish are offloaded and transported by sealifts, small boats or other means to the processing plant. This is a costly, inefficient and potentially dangerous practice.<sup>56</sup> The mining industry is also limited by lack of transportation infrastructure. Exploration and extraction activities often take place in areas without pre-existing transportation services. This creates challenges for shipping items into and out of these sites. Greater accessibility also has the potential to increase tourism and connections with broader markets.

### ***Social***

Transportation infrastructure has effects on the quality of life for residents of Nunavut. The expense of transporting goods into and out of communities can increase the cost of living for residents, as these costs are passed on to consumers. It is also expensive for residents to travel to other parts of Canada. A return trip from a remote community to Ottawa is about \$5,000.<sup>57</sup> These costs plus the lack of transportation options outside of communities year round can restrict residents' movement.

### **3.3.3 Commercial Fisheries**

#### **3.3.3.1 CURRENT STATUS**

The fishing industry in Nunavut is an emerging sector. Over the past 5 years, the acquisition of in-shore and off-shore vessels, a greater share of the off-shore quotas and the discovery of larger stocks have contributed to recent growth.<sup>58</sup> In 2005, it was estimated that Nunavut fisheries contributed between \$12 and \$14 million annually to the territory's economy. Of this, \$7.5 to \$9.5 million entered the economy as income. Over 300 seasonal jobs were created as a result of the fishing industry.<sup>59</sup> The two primary species in Nunavut's fisheries sector are turbot and shrimp. Arctic char, found in freshwater lakes and rivers, also accounts for a portion of the territory's total catch. The current status for each of the fisheries these three species is described below.

#### ***Turbot***

Turbot, also known as Greenland halibut, is a flatfish abundant in the deep coastal bays and the coastal shelf of eastern Baffin Island. The average weight of a turbot in the commercial catch is between 3.5 kg and 10.5 kg. It has bright white flesh that retains its appearance during cooking, making it appealing to consumers. The fish are processed in Pangnirtung and shipped daily by air to southern markets.<sup>60</sup>

The turbot fishery consists of an area off the eastern shore of Baffin Island and is divided into two regulatory areas; 0A and 0B (see Figure 28). The fishery first started in Cumberland Sound in the mid-1980s. It is only more recently that it has expanded into the offshore regions of Davis Strait and Baffin Bay. As the largest and most stable ground-fish stock in the northwest Atlantic, commercial quotas for turbot have been increasing.<sup>61</sup> In 2004, the Total Allowable Catch for the 0A division was 4,400 metric tons and it was 5,500 metric tons for the 0B division.<sup>62</sup> In 2007, it had increased to 6,500 metric tons in

<sup>55</sup> Governments of Northwest Territories, Yukon and Nunavut. "Northern Connections: Multimodal Transportation Blueprint for the North" 2008

<sup>56</sup> The Conference Board of Canada. "Nunavut Economic Outlook: An Examination of the Nunavut Economy" November, 2002.

<sup>57</sup> Governments of Northwest Territories, Yukon and Nunavut. "Northern Connections: Multimodal Transportation Blueprint for the North" 2008

<sup>58</sup> Nunavut Economic Forum (2008). *Qanijjuq: Preparing for the Journey*. p.7

<sup>59</sup> Government of Nunavut and Nunavut Tunngavik Incorporated (2005). *Nunavut Fisheries Strategy*.

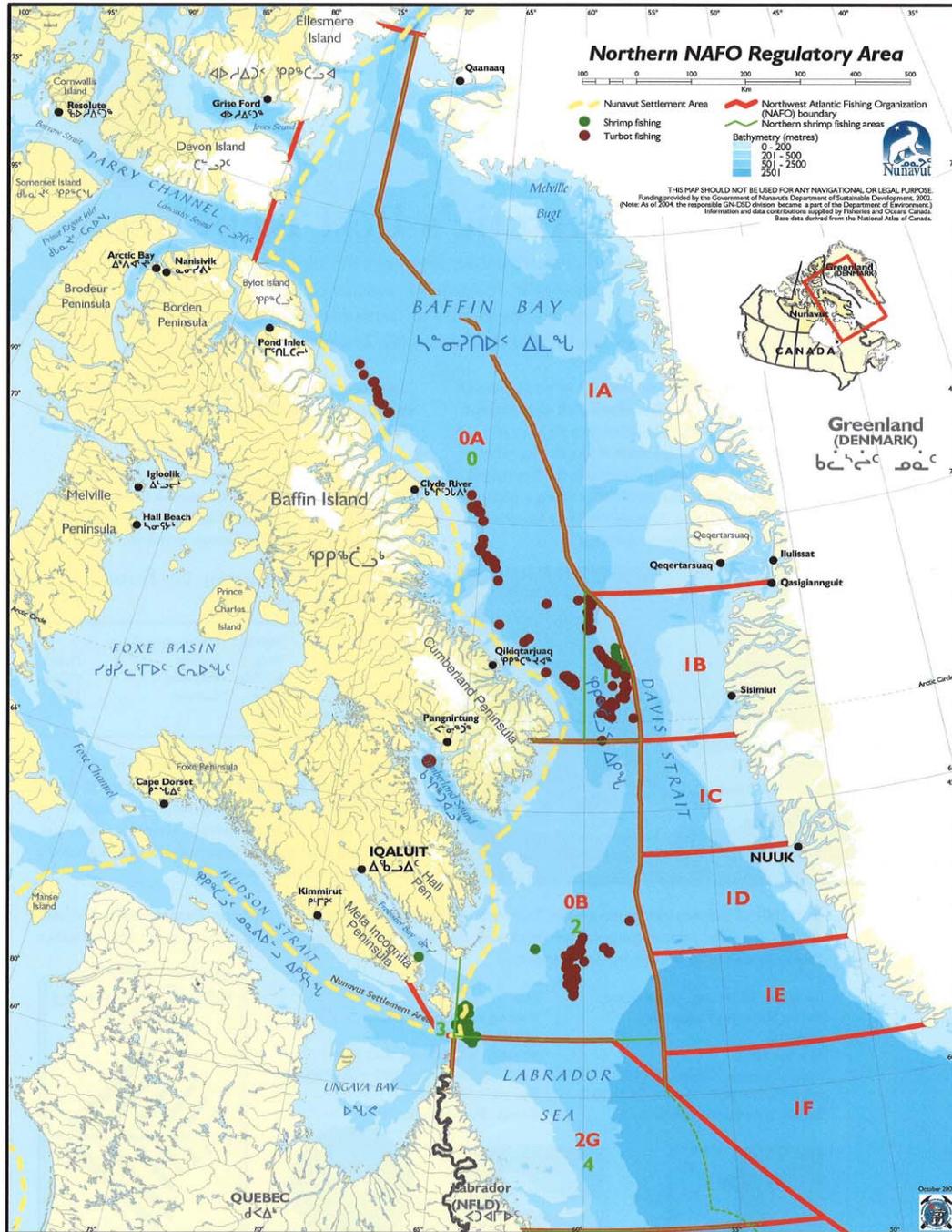
<sup>60</sup> Nunavut Department of Sustainable Development. *The Fishing Industry of Nunavut: Sedna's Bounty, Spirit, Soul and Sustenance*.

<sup>61</sup> *Ibid.*

<sup>62</sup> Government of Nunavut and Nunavut Tunngavik Incorporated (2005). *Nunavut Fisheries Strategy*.

0A and 6,000 metric tons for 0B. However, the entire quota is not allocated to Nunavut.<sup>63</sup> In 2004, Nunavut's share of the total allocation for turbot was 60% (100% of 0A and 27% of 0B).<sup>64</sup> In addition, although Nunavut holds 100% of the fishing rights in division 0A, activity is contracted to non-Nunavut companies for royalty payments and commitments to hire Inuit labour.

Figure 28: North Atlantic Regulatory Areas



Source: Baffin Fisheries Coalition

<sup>63</sup> Fisheries and Oceans Canada. (2007). *Canadian Atlantic Quota Report*.

<sup>64</sup> Government of Nunavut and Nunavut Tunngavik Incorporated (2005). *Nunavut Fisheries Strategy*.

The fishery provides approximately 100 jobs for people living in the Baffin Region. Over half of these people work at the processing plant and the rest are employed as inshore fishers and on company trawlers. These are seasonal jobs, as the fishery is only active between April and December. During this season, it generates over \$4 million each year for the economy of Nunavut.

### *Shrimp*

The pink coldwater shrimp found in the northwest Atlantic is an emerging fishery in Nunavut. In particular, there are two species that are commercially important: the northern pink shrimp and the striped shrimp. Both species are primarily harvested off-shore, though efforts are underway to develop an inshore fishery.

The northern shrimp stocks have grown quickly, with the Total Allowable Catch increasing five-fold between 1990 and 2000, to 140,000 metric tons.<sup>65</sup> In 2007, the Total Allowable Catch of northern shrimp was 164,243 metric tons. Nunavut's share of this was 4,509 metric tons.<sup>66</sup> The shrimp fishery consists of seven Shrimp Fishing Areas. The total quota for these areas is divided equally among 17 license holders. As in the turbot fishery, quotas are contracted out in return for royalty payments and guaranteed employment for Inuit. It is estimated that the shrimp fishery has created more than 50 jobs for residents and brings in over \$4 million per year.<sup>67</sup>

There is currently no processing plant for shrimp in Nunavut. The largest, highest quality shrimp are packed raw and frozen and flown to Japan to be used in sushi and sashimi. The remaining shrimp are cooked or frozen whole and shipped to Europe.<sup>68</sup> Studies investigating the possibility of constructing a plant in Nunavut have suggested that it would be too costly to operate at projected volumes.<sup>69</sup>

### *Arctic Char*

Arctic char, a member of the salmon family, is a freshwater species that lives in northern lakes and rivers. Commercial char weighs between 2.3 and 10 kg. The arctic char fishery is very different from the turbot and shrimp fisheries, as the former is relatively small and employs many people for short periods of time.<sup>70</sup>

Stocks have recently declined due to fishing pressures. Char is a staple food for Inuit; the Nunavut Land Claims Agreement outlines that country food stocks must be protected against commercial operations. Therefore, quotas are only set after subsistence needs are satisfied. With these limitations on volume, there has been some discussion as to how to best exploit the stock. Sport fishing gets a greater value for Arctic char, bringing in \$20 per pound, compared to \$1.50 per pound for commercial operations. There is potential to add value to the fish before exporting by selling exclusively to high-end southern markets.<sup>71</sup> There are three plants in Nunavut that process Arctic char, creating a wide range of products including fresh or frozen, fillets, steaks, smoked and peppered jerky. Together these plants produce just over 100,000 kg of char per year.

<sup>65</sup> Nunavut Department of Sustainable Development. *The Fishing Industry of Nunavut: Sedna's Bounty, Spirit, Soul and Sustenance*.

<sup>66</sup> Fisheries and Oceans Canada. (2007). *Canadian Atlantic Quota Report*.

<sup>67</sup> Nunavut Department of Sustainable Development. *The Fishing Industry of Nunavut: Sedna's Bounty, Spirit, Soul and Sustenance*

<sup>68</sup> *Ibid.*

<sup>69</sup> Conference Board of Canada (2002). *Nunavut Economic Outlook: An Examination of the Nunavut Economy*.

<sup>70</sup> Nunavut Department of Sustainable Development. *The Fishing Industry of Nunavut: Sedna's Bounty, Spirit, Soul and Sustenance*.

<sup>71</sup> Conference Board of Canada (2002). *Nunavut Economic Outlook: An Examination of the Nunavut Economy*.

Figure 29: Arctic Char



Source: Government of Nunavut and Nunavut Tunngavik Incorporated. (2005). *Nunavut Fisheries Strategy*

### ***Processing Plants***

As mentioned above, there are three primary processing plants in Nunavut. Kitikmeot Foods Ltd., in Cambridge Bay, opened in 1990. It processes year-round, with the main product during spring, summer and fall being Arctic char. From October to March, the company focuses on its Muscovy harvest.<sup>72</sup> Kivalliq Arctic Foods Ltd., in operation since 1992, is located in Rankin Inlet. It processes Arctic char and caribou meat.<sup>73</sup> The char used in both of these companies is caught by local fishermen using gill nets and weirs. The use of weirs results in a higher quality product as it leaves no markings from the net on the fish. Pangnirtung Fisheries Ltd on Baffin Island also processes Arctic char; however its main product is turbot. The turbot brought to the plant come from two sources: Inuit fishermen using long-line tackle through the ice in Cumberland Sound and offshore vessels that bring in flash-frozen fish for further processing.<sup>74</sup>

Value-added processing is responsible for the greatest contribution to the territorial economy from the fisheries industry. However, there have been problems maintaining an adequate volume of incoming fish at the Pangnirtung plant, the largest of the processing plants. As a result it continues to experience financial challenges as machinery often sits unused for long periods of time. These financial struggles are common to the Nunavut fish plants (refer to Figure 30). The only company to make a profit in 2004 was Kivalliq Arctic Meats. It made \$165,000, but this was after receiving \$310,000 in direct subsidies and \$105,000 in capital contributions from the government. Kitikmeot foods lost \$28,000 in 2004 on sales worth \$525,000 and subsidies worth \$435,000.<sup>75</sup>

<sup>72</sup> Kitikmeot Foods Limited. <http://www.polar.net.ca/~kitfoods/>

<sup>73</sup> Nunavut Development Corporation. [http://www.ndcorp.nu.ca/ndc/subs\\_meatandfish/kivalliq/](http://www.ndcorp.nu.ca/ndc/subs_meatandfish/kivalliq/)

<sup>74</sup> Nunavut Department of Sustainable Development. *The Fishing Industry of Nunavut: Sedna's Bounty, Spirit, Soul and Sustenance.*

<sup>75</sup> Nunavut Economic Forum. (2005). *Economic Outlook Update of 5 years of Progress.*

**Figure 30: Processing Plant**



Source: Government of Nunavut and Nunavut Tunngavik Incorporated. (2005). *Nunavut Fisheries Strategy*

### **3.3.3.2 CHALLENGES**

#### ***Quotas***

Developing the commercial fisheries is a priority in Nunavut. Increasing the amount of fish brought in to the territory is a key element of any attempt to achieve this goal. For this reason, groups such as the Baffin Fisheries Coalition have been actively pursuing greater access to the fisheries resources.<sup>76</sup> There is concern that quota allocations are not equitable and that the share for non-Inuit companies is too large. Overall, Nunavut only has access to about 38% of the shrimp and turbot in its adjacent waters.

#### ***Infrastructure***

However, even if greater access to quotas could be negotiated, there is a lack of infrastructure to support a larger fishing industry in Nunavut. An increase in fishing activity will require investments to create an adequate fleet of trawlers and sufficient harbour and port facilities. It will also need to have processing plants and cold-storage facilities that can handle larger volumes of fish.<sup>77</sup> Without the necessary infrastructure improvements, Nunavut fisheries will not be able to take advantage of larger quotas.

#### ***Labour***

Another challenge Nunavut faces as it attempts to develop its fisheries sector is finding local employees. With a lack of trained individuals in the area and problems with recruitment and retention of Inuit in the fisheries workforce, there is currently a reliance on the southern labour force. The result of this is a loss to the economy of Nunavut. This is in addition to the fact that fishing enterprises that use Nunavut quotas

<sup>76</sup> Mackenzie, K. (2008). *Baffin Fisheries Coalition Torch Boat in Protest*. Northern News Services.

<sup>77</sup> Government of Nunavut and Nunavut Tunngavik Incorporated. (2005). *Nunavut Fisheries Strategy*.

are owned and operated by companies primarily based in southern Canada. Therefore, Nunavut does not receive all of the benefits of its fishing resources.<sup>78</sup>

### **Costs**

There are significant cost barriers that must be overcome before the Nunavut fishing industry can realize its full potential. In addition to the investments needed to address the challenges of infrastructure and recruiting and training employees, the territory deals with higher costs of doing business than other jurisdictions. For example, the cost of shrimp harvesting in the north is greater than in the south, due to lower catch rates and longer steaming times. It is also more expensive to support fishing crews in the north because of the higher cost of living and transportation to move individuals in or out of the area. There are also growing pressures on the industry with the increasing price of oil. Fuel costs are the second largest cost in the operation of a vessel.<sup>79</sup> These financial demands affect the price of the fish and can make it difficult for Nunavut products to compete in the national and international market place. Exporting out of Nunavut is essential to bringing new money into the economy; therefore efforts are being made to strategically brand projects as high-quality and high-value.<sup>80</sup>

### **3.3.3.3 BROADER ISSUES**

Efforts to develop Nunavut's fisheries take place within natural constraints as well as the above mentioned economic and political limitations. For the sector to be sustainable the industry will need to be aware of and grow within these natural limits. Maintaining healthy fish stocks requires thorough research of current conditions and projections for the future of various species. This has been a challenge for Nunavut, as the federal agencies that used to fund this type of research now expect industry groups to cover part of the costs. This can be a strain on young fisheries. However, Indian and Northern Affairs Canada recently contributed \$159,000 towards char, shrimp and turbot assessment projects to help evaluate the state of each stock.<sup>81</sup> Surveys conducted since 1999 have not revealed over-exploitation of the stocks in Nunavut, but with increasing quotas there is a need to track changes carefully.

Even if the stocks of char, turbot and shrimp are adequate to sustain the commercial fishing industry in the north, there are other priorities to take into consideration. Conservation and subsistence needs must also be met. Char and turbot are an important part of local harvests and efforts will need to be taken to protect community-based fishing needs. There is also a need to consider how other pressures on the stocks can affect ecosystems and particular species -- for example, changes in water temperatures, increasing ship traffic, climate change and pollution. Poor environmental practices by actors outside of the fishing industry can harm the performance of the fisheries sector. This was the case on the Atlantic coast in 1995 when pollution from municipal sewage treatment plants, private residences and agricultural runoff closed shellfish harvests.<sup>82</sup>

### **3.3.4 Government**

The Territory of Nunavut was created in 1999 as a result of the Nunavut Land Claims Agreement (NLCA), the largest Aboriginal land settlement in Canadian history. Since its inception, the public sector has remained Nunavut's prime economic driver and it is expected to remain so for the foreseeable future.

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<sup>78</sup> Ibid.

<sup>79</sup> Baffin Fisheries Coalition. (2008). Presentation to Nunavut Fisheries Symposium.

<sup>80</sup> Government of Nunavut and Nunavut Tunngavik Incorporated. (2005). *Nunavut Fisheries Strategy*.

<sup>81</sup> Indian and Northern Affairs Canada. (2007). *Fisheries: Sustainability and Teamwork*. Tukimut 2007 Edition.

<sup>82</sup> The Conference Board of Canada (2004). *Infrastructure Planning for Nunavut's Communities*.

It is estimated that in 2003 government spending on both wage and non-wage activities accounted for 65% of Nunavut's overall annual expenditures.<sup>83</sup> The public sector accounts for approximately 30% of territorial wage earners.<sup>84</sup> This heavy dependence on the public sector is the result of circumstances such as a harsh climate, geographic remoteness, small population, lack of road and rail access, high cost of labour and materials, and underdeveloped infrastructure systems which have led to serious constraints for economic development in the territory.<sup>85</sup>

### 3.3.4.1 GOVERNMENT OF NUNAVUT

The Government of Nunavut (GN) is a government with no political parties at the territorial level. All Nunavut residents, Inuit and non-Inuit, are entitled to run for office and to elect Members of the Legislative Assembly (MLA) on an individual rather than party basis. However, because Inuit make up the majority of the population, they have the potential to shape the government to reflect their culture, traditions and goals. Since there are no political parties, the Legislative Assembly's decisions are made according to the consensus of the majority of its members rather than political party lines.<sup>86</sup>

The Bathurst Mandate (1999-2020) outlines the values and priorities that are to guide the conduct and the objectives of the GN.<sup>87</sup> The four categories of the mandate are:<sup>88,89</sup>

- Healthy Communities (Inuuqatigiittiarniq) –the need to ensure the overall health of Nunavut, including all aspects of a community and its relationship to the land and its residents;
- Simplicity and Unity (Pijarnirnirqsat Katujjiqatiriittiarnirlu) – commitment to ensuring processes remain accessible to the public, and encouraging public participation in the government process;
- Self-Reliance (Namminiq Makitajunarniq) – responsibility of individuals to themselves, to their family and to their community; and,
- Continuing Learning (Ilippallianguinnarniq) – lifelong commitment to learning and development and government commitment to support this learning at the individual, community and territorial levels.

The GN is based on a decentralized model of government such that it has departmental offices located in 10 communities outside the capital of Iqaluit. Since the wage economy in Nunavut is largely dependent on public sector employment, the intent of decentralization is to help guarantee that job opportunities are spread throughout the territory.<sup>90</sup>

The Government of Nunavut (GN) is comprised of a number of departments as well as agencies, boards and corporations. These include:

- Community and Government Services;
- Culture, Language, Elders and Youth;
- Economic Development and Transportation;
- Education;
- Environment;
- Executive and Intergovernmental Affairs;
- Finance;
- Health and Social Services;

<sup>83</sup> *Sivummut Economic Development Strategy Group (2003). Nunavut Economic Development Strategy: Building a Foundation for the Future, June 2003.*

<sup>84</sup> *Government of Nunavut Department of Finance, Nunavut Budget 2008-09: Supplementary Documents. February 20, 2008.*

<sup>85</sup> *NTI. About NTI. <http://www.tunngavik.com/english/about.php>*

<sup>86</sup> *Government of Nunavut. Consensus Government. <http://www.gov.nu.ca/english/about/cg.pdf>*

<sup>87</sup> *The Mariport Group Ltd. (1999). Nunavut Transportation Strategy. Appendix A: Bathurst Mandate.*

<sup>88</sup> *Government of Nunavut. Consensus Government. <http://www.gov.nu.ca/english/about/cg.pdf>*

<sup>89</sup> *Pinasuaqtavut: 2004-2009.*

<sup>90</sup> *Mayer, P. (2007). Mayer Report on Devolution, June 2007.*

- Human Resources;
- Justice;
- Office of the Legislative Assembly;
- Nunavut Arctic College;
- Nunavut Housing Corporation; and,
- Qulliq Energy Corporation.

### **3.3.4.2 GOVERNMENT OF CANADA**

The Government of Canada is represented by a number of departments and agencies, including:

- Indian and Northern Affairs Canada (INAC);
- Public Service Commission;
- Parks Canada Agency;
- Canada-Nunavut GeoScience Office (NRCan);
- Geomatics Canada (NRCan);
- Fisheries and Oceans Canada (DFO);
- Public Works and Government Services Canada;
- Environment Canada;
- Justice Canada;
- Corrections Services Canada;
- Human Resource and Social Development Canada (HRSDC);
- Industry Canada;
- Heritage Canada;
- RCMP; and,
- Department of National Defence.

These departments all have respective responsibilities and authorities in Nunavut, as they have in the rest of Canada, with the majority of responsibility for Aboriginal and Inuit affairs in Nunavut being carried by INAC.

Since the 1970s, the Canadian government has gradually transferred decision-making powers to territorial governments in order to support the political evolution of the territories and provide greater local decision-making and accountability. With Nunavut becoming Canada's newest territory in 1999, the federal Government has been gradually devolving governance responsibilities to the GN.

### **3.3.4.3 NUNAVUT TUNNGAVIK INCORPORATED**

Nunavut Tunngavik Inc. (NTI) was formed in 1993 to replace the Tunngavik Federation of Nunavut. It is the incorporated organization that represents Inuit under the NLCA. While NTI is not a governmental agency, it is responsible for the management of all Inuit-Owned Lands in Nunavut and acts as the advocate of Inuit interests in Nunavut. NTI is tasked with ensuring that the commitments made in the NLCA are carried out by the designated parties. For NTI, the NLCA is the central structure for identifying policy priorities and directions. This follows 2 main paths:

- Policy and program priorities are determined by what Claim obligations, either Inuit or government, have yet to be implemented; and,
- Priorities can stem from the necessity of meeting ongoing Inuit obligations.

NTI's mission is to foster Inuit economic, social and cultural well-being through the implementation of the NLCA.<sup>91</sup>

NTI is governed by a 10-member Board of Directors elected by Inuit in Nunavut who are 16 years of age and older. NTI has a staff of 90 people in four offices, including an office in Ottawa. NTI is comprised of ten departments, including:<sup>92</sup>

- Lands & Resources;
- Wildlife;
- Claim Implementation;
- Human Resources;
- Business & Economic Development;
- Communications;
- Legal Services;
- Finance;
- Administration;
- Social & Cultural Development; and,
- Resources.

#### **3.3.4.4 EMPLOYMENT IN THE PUBLIC SECTOR**

##### *Article 23*

Current and future public sector employment opportunities in Nunavut are influenced by Article 23 of the NLCA. Its objective is to “increase Inuit participation in government employment in the Nunavut Settlement Area to a representative level”. This objective refers to increases in “all levels and occupational groupings where under-representation has been identified”.

Under Article 23, the GN and the Government of Canada agreed that they would pursue the objective of achieving a representative level of Inuit employment in all three levels of government – federal, territorial and municipal – within Nunavut. Since Inuit comprise approximately 85% of the total territorial population<sup>93</sup>, this means that 85% of public sector positions in Nunavut should be filled by Inuit. Although government is currently the principal employer in Nunavut<sup>94</sup>, the reality of the situation is that the objective of Article 23 is far from being realized.

The Nunavut Implementation Committee recommended that by 1999, 50% of public sector jobs, at all levels, be filled with Inuit and that by 2008, representative levels of Inuit be achieved. While the original aim of 50% was almost met, there has been little improvement in that level since that time. A new date of 2020 has now been submitted as the timeline for representative numbers of Inuit to be employed in public sector jobs.<sup>95</sup> An interim target of 56% by 2010 has been suggested.<sup>96</sup>

In response to Article 23, each department/agency with the GN and the federal government has prepared its own Inuit Employment Plan (IEP). It is expected that all GN departments will have an IEP in their 2007-08 business plans. A comprehensive, GN-wide IEP for the period ending March 2010 will be tabled

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<sup>91</sup> NTI. (2007). 2007 Annual Report.

<sup>92</sup> NTI. About NTI. <http://www.tunnigavik.com/english/about.php>

<sup>93</sup> Statistics Canada's 2006 census reveals a population size of 29, 474 in Nunavut with Inuit representing approximately 85% (24,635) of that total number.

<sup>94</sup> Berger, T.R. (2006). Nunavut Land Claims Agreement Implementation Contract Negotiations for the Second Planning Period 2003-2013. Conciliator's Final Report: "The Nunavut Project." Vancouver, BC March 1, 2006.

<sup>95</sup> Beaubier, H. (2006). New Jurisdictions, New Accountabilities, May 2006.

<sup>96</sup> GN Department of Human Resources. Business Plan, 2006-2007.

in the Legislature 2007-08.<sup>97</sup> The federal government in Nunavut is currently in the midst of renewing the Umbrella IEP, which includes the individual department IEPs.

### *Government of Nunavut*

The Government of Nunavut is not only the largest employer in Nunavut, but it also represents the largest employment sector. This same trend employment occurs throughout the Arctic and sub-Arctic (Nunavut, NWT, Yukon, Alaska and Greenland).<sup>98</sup> Table 17 shows that the Government of Nunavut, as of March 31, 2007, had 2,932 employees working in the above mentioned department, agencies, boards and corporations. There were, however, another 839 positions that were vacant. This means that the staffing capacity was only 78%, leaving a vacancy rate of 22%. Moreover, only 51% of those positions were filled by Inuit (Beneficiaries).

**Table 17: Employment Summary of GN Public Services (as of March 31, 2007)**

	Total Positions				Beneficiaries	
	Total Positions	Vacancies	Filled	% Capacity	Hired	% IEP
Executive	38	6	32	84%	18	56%
Senior Management	142	16	126	89%	31	25%
Middle Management	444	89	355	80%	86	24%
Professional	1239	266	973	79%	264	27%
Paraprofessional	1291	328	963	75%	664	69%
Administrative Support	617	134	483	78%	439	91%
<b>Total All Employment Categories</b>	<b>3771</b>	<b>839</b>	<b>2932</b>	<b>78%</b>	<b>1502</b>	<b>51%</b>
<b>Departments Totals</b>						
Community & Government Services	337	91	246	73%	103	42%
Culture, Language, Elders & Youth	77	20	57	74%	36	63%
Economic Development & Transportation	130	38	92	71%	49	53%
Education	1174	128	1046	89%	557	53%
Environment	107	23	84	79%	37	44%
Executive & Intergovernmental Affairs	50	18	32	64%	21	66%
Finance	206	67	139	67%	60	43%
Health & Social Services	940	319	621	66%	325	52%
Human Resources	79	11	68	86%	43	63%
Justice	255	59	196	77%	97	49%
Office of the Legislative Assembly	31	4	27	87%	13	48%
<b>Total GN Departments</b>	<b>3386</b>	<b>778</b>	<b>2608</b>	<b>77%</b>	<b>1341</b>	<b>51%</b>
<b>Agencies, Boards &amp; Corporations Totals</b>						
Nunavut Arctic College	133	30	103	77%	46	45%
Nunavut Housing Corporation	89	23	66	74%	28	42%
Qulliq Energy Corporation	163	8	155	95%	87	56%
<b>Total Agencies, Boards &amp; Corporations</b>	<b>385</b>	<b>61</b>	<b>324</b>	<b>84%</b>	<b>161</b>	<b>50%</b>
<b>TOTAL</b>	<b>3771</b>	<b>839</b>	<b>2932</b>	<b>78%</b>	<b>1502</b>	<b>51%</b>

Source: GN Department of Human Resources. Towards a Representative Public Service. Department of Human Resources, Inuit Employment and Planning Division. March 31, 2007,p.2.

<sup>97</sup> GN. Human Resources. <http://www.gov.nu.ca/english/about/hr.pdf>

<sup>98</sup> Berger, T.R. (2006). Nunavut Land Claims Agreement Implementation Contract Negotiations for the Second Planning Period 2003-2013. Conciliator's Final Report. "The Nunavut Project." Vancouver, BC March 1, 2006.

In 2006-07, the GN advertised 597 positions (not including casual positions) and hired 367 individuals. Beneficiaries represented 56.7% of those new hires.<sup>99</sup>

Table 18 summarizes the employment situation in the regions and communities in Nunavut. While the staffing capacity is relatively similar across the regions (Baffin – 78%, Kivalliq – 79%, Kitikmeot – 75%), there is a considerable range in the proportion of Beneficiaries employed in the regions (Baffin – 48%, Kivalliq – 61%, Kitikmeot – 52%).

**Table 18: Employment Summary by Community and Region (as of March 31, 2007)**

Community	Total Positions				Beneficiaries	
	Total Positions	Vacancies	Filled	% Capacity	Hired	% IEP
Arctic Bay	46	4	42	91%	25	60%
Qikiqtarjuaq	42	7	35	83%	24	69%
Cape Dorset	119	20	99	83%	51	52%
Clyde River	52	7	45	87%	32	71%
Grise Fiord	18	3	15	83%	11	73%
Hall Beach	48	9	39	81%	28	72%
Igloolik	144	35	109	76%	68	62%
Iqaluit	1436	354	1082	75%	405	37%
Kimmitut	33	4	29	88%	17	59%
Nanisivik	4	1	3	75%	3	100%
Pangnirtung	143	30	113	79%	77	68%
Pond Inlet	137	20	117	85%	71	61%
Resolute Bay	22	3	19	86%	10	53%
Sanikiluaq	47	9	38	81%	27	71%
<b>Total Baffin</b>	<b>2291</b>	<b>506</b>	<b>1785</b>	<b>78%</b>	<b>849</b>	<b>48%</b>
Arviat	203	41	162	80%	103	64%
Baker Lake	146	12	134	92%	73	54%
Chesterfield Inlet	31	7	24	77%	18	75%
Coral Harbour	54	9	45	83%	30	67%
Rankin Inlet	395	102	293	74%	174	59%
Repulse Bay	43	10	33	77%	18	55%
Whale Cove	32	6	26	81%	18	69%
<b>Total Kivalliq</b>	<b>904</b>	<b>187</b>	<b>717</b>	<b>79%</b>	<b>434</b>	<b>61%</b>
Bathurst Inlet	1	0	1	100%	1	100%
Umingmaktok	1	1	0	0%	0	-
Cambridge Bay	255	93	162	64%	65	40%
Gjoa Haven	79	9	70	89%	48	69%
Kugluktuk	133	26	107	80%	56	52%
Kugaaruk	40	6	34	85%	17	50%
Taloyoak	44	6	38	86%	26	68%
<b>Total Kitikmeot</b>	<b>553</b>	<b>141</b>	<b>412</b>	<b>75%</b>	<b>213</b>	<b>52%</b>
Winnipeg	12	1	11	92%	4	36%
Churchill	7	2	5	71%	2	40%
Ottawa	4	2	2	50%	0	0%
<b>Total Other</b>	<b>23</b>	<b>5</b>	<b>18</b>	<b>78%</b>	<b>6</b>	<b>33%</b>
<b>TOTAL</b>	<b>3771</b>	<b>839</b>	<b>2932</b>	<b>78%</b>	<b>1502</b>	<b>51%</b>

Source: GN Department of Human Resources. Towards a Representative Public Service. Department of Human Resources, Inuit Employment and Planning Division. March 31, 2007,p.3.

<sup>99</sup> GN (2007). 2006-2006 Public Service Annual Report, p.11.

### ***Government of Canada***

It is estimated that there are 309 federal government positions available in Nunavut. In a 2007 report produced by the GN, they estimate that Inuit employment in all the Federal departments stood at 39%<sup>100</sup>.

### ***NTI***

NTI's overall Inuit employment rate is 78%. In senior management, 62% of positions are filled by Inuit. This, however, does not include Executive Officers or Executive Assistants, which have 100% Inuit employment.<sup>101</sup>

### **3.3.4.5 CHALLENGES**

Human resource capacity is the greatest challenge facing the public sector in Nunavut. While demand for Inuit workers is high, supply is low. In the government jobs they do occupy, Inuit are over-represented in the lower positions (e.g., administration) and under-represented in the professional and management positions.<sup>102, 103</sup>

The limited number of qualified Inuit available to work in the public sector is the result of challenges such as: competing employment opportunities (e.g. with mining companies), language barriers, geographic distance, high cost of living, low literacy levels and limited educational attainment. Another challenge faced by the public sector is competition with the private sector and a range of Inuit organizations, which provide Inuit with more culturally familiar working environments and in some cases with better employee benefits.

A further challenge facing the government is high staff turnover. Factors affecting retention include: competition from other employers; return to home communities; stress and lifestyle choices; and limited opportunity for advancement.<sup>104</sup>

Although the public sector is currently the most important in the economy, its dominance is expected to decline by the end of the decade (2010) as growth expands into other economic sectors (e.g., mining, construction).<sup>105</sup>

### **3.3.5 Tourism**

According to the Government of Nunavut, "tourism is widely viewed as a sector that will form one of the key 'building blocks' of Nunavut's future economy"<sup>106</sup>. It has been singled out as one of the 'three pillars' of economic growth for the territory. The *Conference Board of Canada* projects that tourism "will become Nunavut's greatest export after raw materials"<sup>107</sup> in the future.<sup>108</sup>

<sup>100</sup> GN (2007). *A Human resources Needs Analysis for Devolution: Preparing the Public Sector for New Jurisdictions and New Accountabilities*, January 30, 2007.

<sup>101</sup> NTI. *Human Resources*. <http://www.tunngavik.com/english/about.php>

<sup>102</sup> Berger, T.R. (2006). *Nunavut Land Claims Agreement Implementation Contract Negotiations for the Second Planning Period 2003-2013. Conciliator's Final Report: "The Nunavut Project."* Vancouver, BC March 1, 2006.

<sup>103</sup> Mayer, P. (2007). *Mayer Report on Devolution*, June 2007.

<sup>104</sup> GN Department of Human Resources. *2006-2007 Business Plan*.

<sup>105</sup> *Sivummut Economic Development Strategy Group (2003). Nunavut Economic Development Strategy: Building a Foundation for the Future*, June 2003.

<sup>106</sup> Government of Nunavut (2002). *The Time is Right: A Vision and Strategy for Tourism Development in Nunavut*.

<sup>107</sup> Conference Board of Canada, "Nunavut Economic Outlook: An Examination of the Nunavut Economy". Ottawa, May 2001.

<sup>108</sup> Government of Nunavut (2002). *The Time is Right: A Vision and Strategy for Tourism Development in Nunavut*.

### 3.3.5.1 CURRENT TOURISM SECTOR

At present, the industry employs approximately 500 hospitality workers, accounts for an estimated CDN\$26 million in economic activity, and attracts approximately 13,000 people each year.<sup>109</sup> Visitors to Nunavut tend to be primarily Canadian, American, and European. Results published in the *Nunavut Exit Study Final Report* showed that the majority of visitors to Nunavut were Canadians, males, likely from Ontario, and approximately 37.5 years of age.<sup>110</sup> In 2006, between the months of June and October, there were approximately 9,300 visitors to Nunavut. Of this group of visitors, approximately one-third were tourists to the territory, approximately 13% were visiting family, and half were in Nunavut for business purposes (see Figure 31). The majority of visitors to Nunavut profiled in the Exit Study report noted the Baffin Region as their primary destination. This was followed by those visitors to Nunavut arriving by cruise ship who, by virtue of being on a cruise, had no specific destination (see Figure 32).

Figure 31: Nunavut Trip Profile<sup>111</sup>

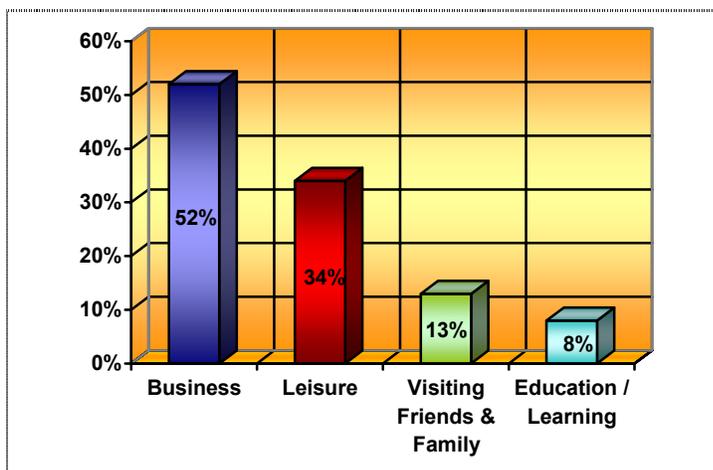
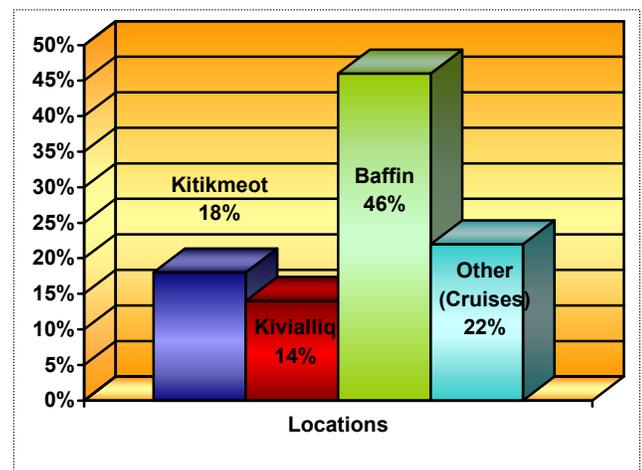


Figure 32: Primary Tourist Destination<sup>112</sup>



The tourism activities that more than 33% of Nunavut visitors participated in were: shopping (local arts and crafts), hiking, museum and cultural site visits / activities, and wildlife / bird viewing (see Figure 33). Tourism-related activities are community / region specific and as such, certain activities may be more predominant in certain communities as than others.

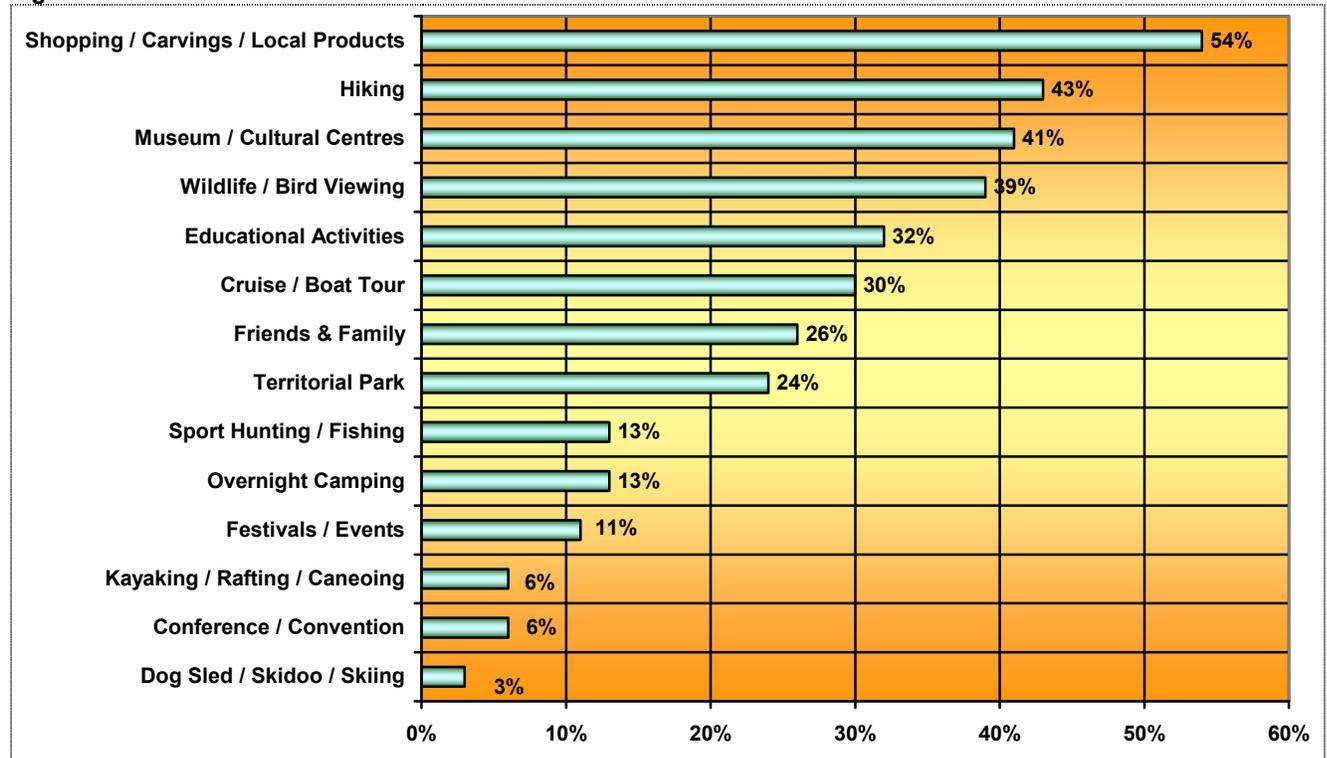
<sup>109</sup> Government of Nunavut Department of Finance. (n.d.). Nunavut Budget 2008-09: Supplementary Documents.

<sup>110</sup> DataPath Systems. (2006). Nunavut Exit Study Final Report: Background and Introduction and Methodologies.

<sup>111</sup> DataPath Systems. (2006). Nunavut Exit Study Final Report: Background and Introduction and Methodologies.

<sup>112</sup> DataPath Systems. (2006). Nunavut Exit Study Final Report: Background and Introduction and Methodologies.

Figure 33: Tourism Activities<sup>113</sup>



According to the Exit Study report, during the period of June through to October, travelers to Nunavut spent approximately CDN\$3.5 million on meals, accommodation, activities and retail purchases, largely in the Qikiqtaaluk and Kitikmeot Regions.<sup>114</sup>

Presently, Nunavut has Visitor Centres in the communities of Iqaluit, Cambridge Bay and Rankin Inlet. Marketing of the territory as an attractive tourism destination is done primarily through website advertising.

In the 2002 *'Update to Nunavut's Economic Outlook'* report, there was an assumption that tourism activity would improve in the later years of the current decade, becoming a more noticeable component of the economy by 2011.<sup>115</sup> In an attempt to facilitate the development of the tourism industry, Nunavut has implemented a range of initiatives to capitalize on the potential in the territory. The *Strategic Investments in Northern Economic Development* (SINED) program has invested 18 per cent of its total allotment in a variety of tourism-related areas. The single largest investment has been in marketing and in particular the sponsorship of an advertising campaign called *"Look Up North"*. Other important investments have included conducting a visitor exit survey, sponsoring research into developing travel and tourism legislation and developing a parks and special places guidebook.<sup>116</sup> Through the Targeted Investment Programs, INAC has agreed, through its Developing the Northern Market project, to contribute a total of \$1.11 million from 2006-2009 to Nunavut Tourism for a New Marketing initiative project.<sup>117</sup>

<sup>113</sup> DataPath Systems. (2006). *Nunavut Exit Study Final Report: Background and Introduction and Methodologies*.

<sup>114</sup> Government of Nunavut Department of Finance. (n.d.). *Nunavut Budget 2008-09: Supplementary Documents*.

<sup>115</sup> Clinton, Graeme & Vail, Stephen. 2005, July. *2005 Nunavut Economic Outlook: Update on 5 years of Progress – Final Report*. Prepared for Nunavut Economic Forum by Impact Economics.

<sup>116</sup> Nunavut Economic Forum. 2008, January. *Qanijjuq: Preparing for the Journey*.

<sup>117</sup> INAC. 2007. *Tukimut 2007 Edition: Marketing Tourism*.

### 3.3.5.2 PROFILING TOURISM ACTIVITIES

#### *Cruises*

Visitors arriving to Nunavut by air account for approximately 78% of visitors or approximately 7,227 visitors, the majority of which are Canadians.<sup>118</sup> Cruise passengers account for approximately 2,096 visitors and are likely to be Americans.<sup>119</sup> Among cruise passengers, slightly over half used the cruise round trip, while slightly under half included air to travel either in or out of Nunavut.<sup>120</sup>

Data related to the tourism industry in general in Nunavut is limited and may be primarily anecdotal. For example, anecdotal evidence shows that “cruise ships bring, to local economies, [...] passengers spending \$5,000 or \$10,000, and sometimes more, during stops”.<sup>121</sup> Nunavut cruises offer passengers excursions that include travel north of the magnetic North Pole and through the Hudson Strait. Cruises afford travelers participation in a range of other tourism-related activities including: sight-seeing (specifically landscape and natural formations such as icebergs), bird and wildlife watching, local Inuit cultural experiences (events, festivals, local arts and crafts), and land and hiking tours.<sup>122</sup>

#### *Animal / Bird-Watching*

Wildlife of interest in Nunavut includes (but is not limited to): walrus, belugas, bowheads, narwhal, musk-ox, caribou, polar bear, and a range of birds.

Guided walrus-watching boat tours are currently available to tourists for the communities of Arviat, Coral Harbour, Grise Fiord, Hall Beach, Kimmirut, Kugaaruk, Pond Inlet, Repulse Bay, Igloolik, and Sanikiluaq which are known for their walrus population. The beluga is common to communities lining Hudson Bay’s west coast, Foxe Basin, and the east coast of Baffin Island all the way to Pond Inlet.<sup>123</sup> Tourist packages are currently available for travelers interested in viewing the beluga from the shore-line and / or from the surface of the water on a guided boat tour.

The largest Arctic whale is the bowhead, reaching up to 18 m. (60 ft.) in length. Approximately 1,000 live full time in Nunavut waters in two distinct populations: one in the Hudson Bay / Foxe Basin region and the other along the east coast of Baffin Island.<sup>124</sup> Tourist have the option of viewing the bowhead at the bowhead sanctuary near Clyde River or from locations in Igloolik, Hall Beach, Cape Dorset, Repulse Bay, Kugaaruk, Pond Inlet, Pangnirtung, and Qikiqtarjuaq (Broughton Island). The narwhal is quite rare but can be seen on the eastern and northern shores of Baffin and Ellesmere Islands.<sup>125</sup>

Approximately 60,000 musk-ox are scattered around Nunavut. Cambridge Bay on Victoria Island, Gjoa Haven and Grise Fiord are a few of the communities known for their thriving and accessible musk-ox

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<sup>118</sup> Clinton, Graeme and Vail, Stephen. (July, 2005). 2005 Nunavut Economic Outlook: Update on 5 years of Progress Final Report. Prepared for Nunavut Economic Forum by Impact Economics.

<sup>119</sup> DataPath Systems. (2006). Nunavut Exit Study Final Report: Background and Introduction and Methodologies.

<sup>120</sup> DataPath Systems. (2006). Nunavut Exit Study Final Report: Background and Introduction and Methodologies.

<sup>121</sup> Clinton, Graeme and Vail, Stephen. (July, 2005). 2005 Nunavut Economic Outlook: Update on 5 years of Progress Final Report. Prepared for Nunavut Economic Forum by Impact Economics.

<sup>122</sup> Nunavut Tourism. (n.d.) Cruises. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=22>. Viewed: June 2008.

<sup>123</sup> Nunavut Tourism. (n.d.) Wildlife Encounters. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=12>. Viewed: June 2008.

<sup>124</sup> Nunavut Tourism. (n.d.) Wildlife Encounters. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=12&IDAnimal=3>. Viewed: June 2008.

<sup>125</sup> Nunavut Tourism. (n.d.) Wildlife Encounters. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=12&IDAnimal=3>. Viewed: June 2008.

populations.<sup>126</sup> Guided tours are available to tourists interested in seeing the musk-ox. Excursions are also available to those tourists interested in seeing herds of Nunavut's 500,000 caribou and groups of polar bears.

Nunavut has 11 bird sanctuaries: Akimiski Island, Harry Gibbons, Boatswain Bay, Nannah Bay, Bylot Island, McConnell River, Dewey Soper, Prince Leopold Island, East Bay, Queen Maud Gulf, and Seymour Island.<sup>127</sup> From these sanctuaries and through guided tours it is feasible to see species such as snowy owls, sandhill cranes, gyrfalcons (including the white phase), jaegers, loons, and plovers.<sup>128</sup>

### ***Wildlife Sport Hunting***

Wildlife sport hunting refers to trophy-based hunting expeditions for species such as polar bears, caribou, barren-ground grizzly bears, walrus, muskox, wolves and wolverines. In Nunavut, hunting season is open all year round with peaks during the months of March through to May in the territory as a whole, and August through to October in Hudson's Bay (see Figure 34). The industry accounts for approximately \$2.5 million in revenue per annum<sup>129</sup> and operates by providing Nunavut outfitters with a certain number of tags which they can sell to interested tourists. The majority of tourists participating in this form of tourism in Nunavut are Americans.

Sport hunting for polar bear and Muskox is a vital source of income for local outfitters.<sup>130</sup> A single polar bear hunting expedition can yield approximately US\$27,000<sup>131</sup> which can be re-invested in the local economy. In 2007, three Nunavut communities held a total of 35 sport hunts, which resulted in an estimated total of \$875,000 in revenue.<sup>132</sup>

<sup>126</sup> Nunavut Tourism. (n.d.) *Wild Encounters*. Available [Online]:

<http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=12&IDAnimal=2>. Viewed: June 2008.

<sup>127</sup> Nunavut Tourism. (n.d.) *Birding*. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=14>. Viewed: June 2008.

<sup>128</sup> Nunavut Tourism. (n.d.) *Birding*. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=14>. Viewed: June 2008.

<sup>129</sup> Canadian Press. (May, 2008). *Polar Bear Hunters Say They'll Seek New Markets After Bears Declared Threatened*. Available [Online]: [http://canadianpress.google.com/article/ALeqM5i9JgWmJNOEI\\_vyrROhIsxCVgQXsQ](http://canadianpress.google.com/article/ALeqM5i9JgWmJNOEI_vyrROhIsxCVgQXsQ). Viewed: June 2008.

<sup>130</sup> The Sivummut Economic Development Strategy Group. (June, 2003). *Nunavut Economic Development Strategy: Building a Foundation for the Future*.

<sup>131</sup> Canadian Press. (May, 2008). *Polar Bear Hunters Say They'll Seek New Markets After Bears Declared Threatened*. Available [Online]: [http://canadianpress.google.com/article/ALeqM5i9JgWmJNOEI\\_vyrROhIsxCVgQXsQ](http://canadianpress.google.com/article/ALeqM5i9JgWmJNOEI_vyrROhIsxCVgQXsQ). Viewed: June 2008.

<sup>132</sup> Canadian Press (written by Bob Weber). (April 26, 2008). *Polar Bears not Endangered, Say Scientists Advising Ottawa*.

Figure 34: Sport Hunting in Nunavut<sup>133</sup>



Map Courtesy of Nunavut Tourism.

### Fishing

In Nunavut, sport fishing for arctic char is a tourism-related activity. Char – both sea-run and freshwater – can be found virtually everywhere in Nunavut.<sup>134</sup> Outfitters in most communities can guide tourists to fishing locations (see Figure 35).<sup>135</sup>

<sup>133</sup>Nunavut Tourism. (2007) Hunting Directory 2007. Available [Online]: <http://www.nunavuttourism.com/new/Downloads/NT-Hunt-Gd-07.pdf>. Viewed: June 2008.

<sup>134</sup> Nunavut Tourism. (n.d.) Sport Fishing. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=24>. Viewed: June 2008.

Figure 35: Sport Fishing in Nunavut<sup>136</sup>



Map Courtesy of Nunavut Tourism

<sup>135</sup> Nunavut Tourism. (n.d.) Sport Fishing. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=24>. Viewed: June 2008.

<sup>136</sup> Nunavut Tourism. (2007). Nunavut Fishing Directory 2007. Available [Online]: <http://www.nunavuttourism.com/new/Downloads/NT-Fish-Gd-07.pdf>. Viewed: June 2008

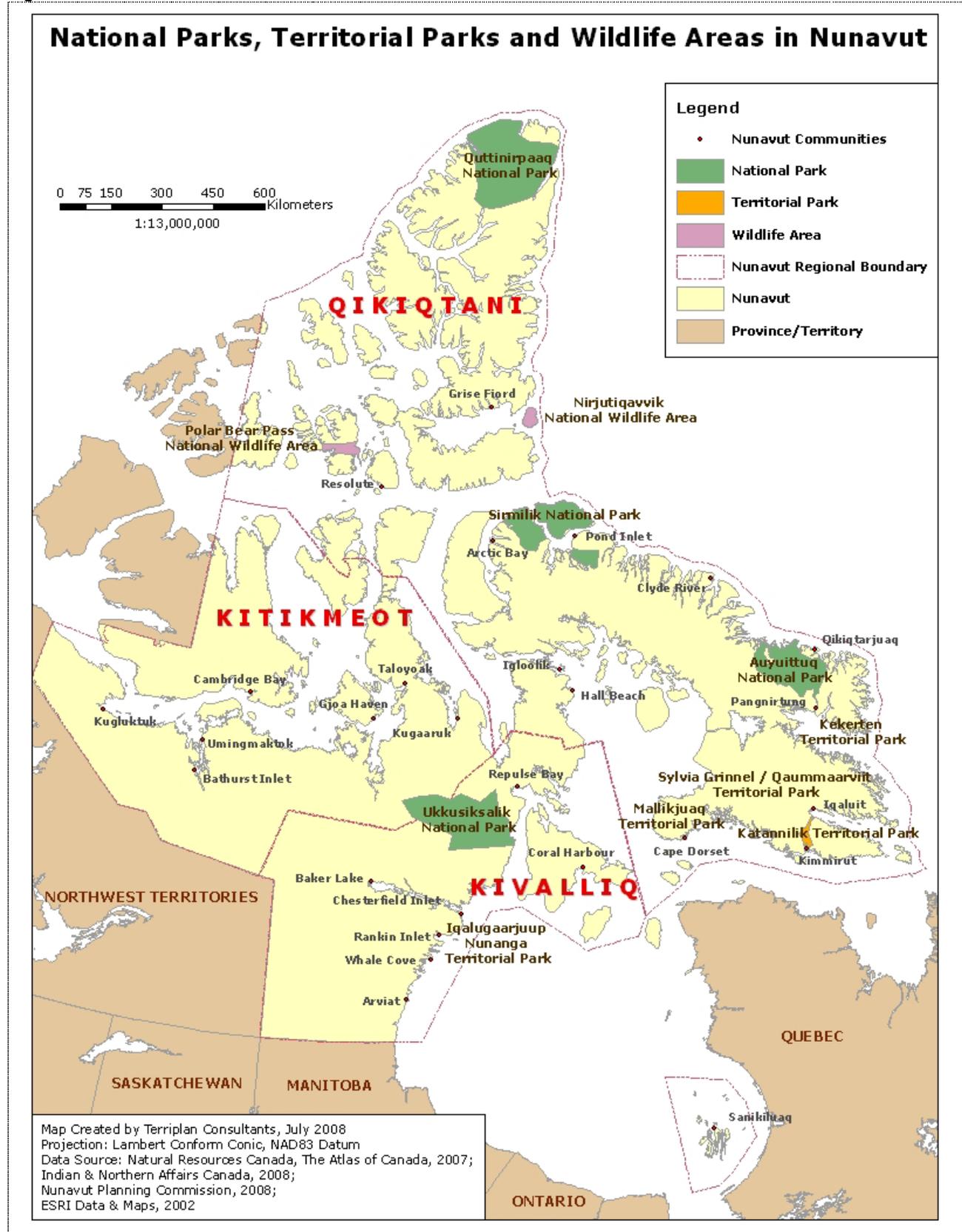
### *Parks*

National and Territorial parks afford Nunavut tourists with the opportunity to participate in a range of activities including (but not limited to): camping, hiking, canoeing, sport hunting and fishing, kayaking, and wildlife observation. At present there are approximately twenty (national and territorial) parks in Nunavut (see Figure36).<sup>137</sup>

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<sup>137</sup> Nunavut Parks. (n.d.) Parks Planning: Park Projects. Available [Online]: <http://www.nunavutparks.com/park-planning/park-project.html>. Viewed: June 2008.

Figure 36: National Parks in Nunavut



### 3.3.5.3 CHALLENGES

The success of the tourism industry is dependent on improvements in several areas of the Nunavut economy including communication and transportation infrastructure and trade.<sup>138</sup> Infrastructure needs include: visitor / heritage / cultural centres and gateway / airport exhibits.<sup>139</sup> As a tourist destination, Nunavut faces a range of challenges including:

- The remoteness of its location and rising transportation costs;
- Infrastructure limitations;
- The cost of food and accommodation;
- Seasonal tourism driven primarily by the severe weather conditions during certain periods of the year and seasonal activities (i.e., hunting);
- International politics (i.e., polar bear hunting, seal hunting);
- Limited broadband internet capability;
- A qualified workforce to support the industry; and,
- A lack of up-to-date tourism statistics and tourist profiles to inform industry operators.<sup>140</sup>

#### *Remoteness & Infrastructure*

The remoteness of Nunavut's location is both an opportunity and a challenge for tourism. In terms of a challenge, remoteness impacts the cost of air, land, and sea travel both to Nunavut and within the territory. The results from the Nunavut Exit Study showed that "25% [of participants] strongly agreed that there were many improvements needed for tourism" in Nunavut to meet their expectations. Disappointments noted by tourists to the territory regarding high costs included (but were not limited to): "the frightful airfares [and] the image of my bank account when I returned home".<sup>141</sup>

Limited infrastructure (see Transportation, Section 3.3.2) impacts the ease and cost of traveling within Nunavut. According to the feedback provided by tourists completing the Nunavut Exit Survey: "bring loads of money to enjoy"<sup>142</sup> Nunavut, be prepared "to spend [money] to be able to see and do what you really want to do"<sup>143</sup>, and "go to Nunavut with an open mind and a fair deal of money".<sup>144</sup> The tourism industry needs infrastructure if it is to reach its potential.<sup>145</sup>

Tourists noted that, beyond transportation infrastructure, tourism-related infrastructure such as accommodation and the cost of food were significant limitations encountered during their travel in Nunavut. Tourists noted that accommodation and food were generally overpriced and of low quality, tourists will likely be "unable to rent ATVs [in order to] see more of the tundra"<sup>146</sup>, and "the cost of food in the local grocery store"<sup>147</sup> were unattractive.

<sup>138</sup> Nunavut Economic Forum. (January, 2008). *Qanijjuq: Preparing for the Journey*.

<sup>139</sup> Government of Nunavut (2002). *The Time is Right: A Vision and Strategy for Tourism Development in Nunavut*.

<sup>140</sup> Government of Nunavut (2002). *The Time is Right: A Vision and Strategy for Tourism Development in Nunavut*.

<sup>141</sup> DataPath Systems. (2006). *Nunavut Exit Study Final Report: Background and Introduction and Methodologies*.

<sup>142</sup> DataPath Systems. (2006). *Nunavut Exit Study Final Report: Background and Introduction and Methodologies*.

<sup>143</sup> DataPath Systems. (2006). *Nunavut Exit Study Final Report: Background and Introduction and Methodologies*.

<sup>144</sup> DataPath Systems. (2006). *Nunavut Exit Study Final Report: Background and Introduction and Methodologies*.

<sup>145</sup> Conference Board of Canada (prepared for Nunavut Association of Municipalities). (January 2004). *Infrastructure Planning for Nunavut Communities; Interim Report*.

<sup>146</sup> DataPath Systems. (2006). *Nunavut Exit Study Final Report: Background and Introduction and Methodologies*.

<sup>147</sup> DataPath Systems. (2006). *Nunavut Exit Study Final Report: Background and Introduction and Methodologies*.

### ***Seasonal Tourism***

Tourism related activities such as bird watching, certain types of fishing, and sport hunting are seasonally driven which means that there are certain periods of the year when portions of Nunavut's tourism industry will be non-operational.

Severe weather is likely to also impact access to specific locations in Nunavut at certain times of the year. Limitations in terms of transportation (see Transportation, Section 3.3.2) and amenable tourism-related infrastructure such as appropriate accommodation can also impact certain types of tourism activities.

### ***External Factors and Pressures***

Polar bear sport hunting / harvesting is highly subject to both national and international political sensitivities. The recent United States of America decision to list polar bears as a threatened species could seriously impact the sport hunting market in Nunavut.

### ***Climate Change***

An additional challenge faced by Nunavut's tourism industry is climate change. Changing climate can impact the types and abundance of wildlife food supply which in turn can impact the health and quantity of wildlife in Nunavut. Climate change can also impact species migration patterns. In terms of tourism, as the quantity of wildlife dwindles, so too might the permits issued for sport hunting. This could potentially drive the cost of wildlife harvesting up and reduce the quantity of tourists able to participate in this activity. Changing migration patterns may mean increased costs associated with travel and infrastructure development to support tourism related facilities closer to the location of wildlife herds and nesting grounds.

### ***Trained Workforce***

The need to build human resources capital for tourism is the number one need expressed by the stakeholders, along with the lack of awareness<sup>148</sup> and the lack of training. An appropriately trained workforce is necessary to support tourism in Nunavut along with up-to-date data related to tourist needs / wants and the state of tourism in Nunavut.

## **3.3.6 Communication**

### **3.3.6.1 EXISTING ACTIVITY IN NUNAVUT'S COMMUNICATIONS SECTOR**

In the year 2000, the federal government established the National Broadband Task Force with a goal of lowering the cost of broadband for northern communities by investing \$155 million over period of 10-15 years.<sup>149</sup>

Broadband was provided to 25 Nunavut communities in September 2005, at a cost of \$18 million.<sup>150</sup> This investment is considered as one of the best possible in the territory's future.<sup>151</sup>

<sup>148</sup> Government of Nunavut (2002). *The Time is Right: A Vision and Strategy for Tourism Development in Nunavut*.

<sup>149</sup> Conference Board of Canada. *Infrastructure Planning for Nunavut Communities*. January 2004

<sup>150</sup> INAC. *Tukimut 2006 Edition. Embracing Broadband: Educating the Public Now is Key*. 2006

<sup>151</sup> *Impact Economics, 2005 Nunavut Economic Outlook*. August 2005

Currently, about 4,000 people throughout the territory use broadband, which is stretched to its capacity. Other services offered free, or at a minimal cost include printing, scanning, photocopying, and faxing.

**Figure 37: Satellite Station in Arctic Bay<sup>152</sup>**



The Strategic Investments in Northern Economic Development (SINED) program introduced by the federal government in 2004 has been an important contributor to bringing broadband to Nunavut. With an aim of helping Northerners to generate opportunities, the SINED program supported establishment of communications infrastructure and creation of capacity within Community Service Providers to deliver broadband services. The following are examples of broadband projects sponsored by SINED.<sup>153</sup>

- Voice Over Internet Protocol;
- Low-cost Work Station Protocol;
- Multi-point Video Conferencing;
- Visitor Access;
- Security Monitoring; and,
- Broadband Training Network.

### 3.3.6.2 CHALLENGES

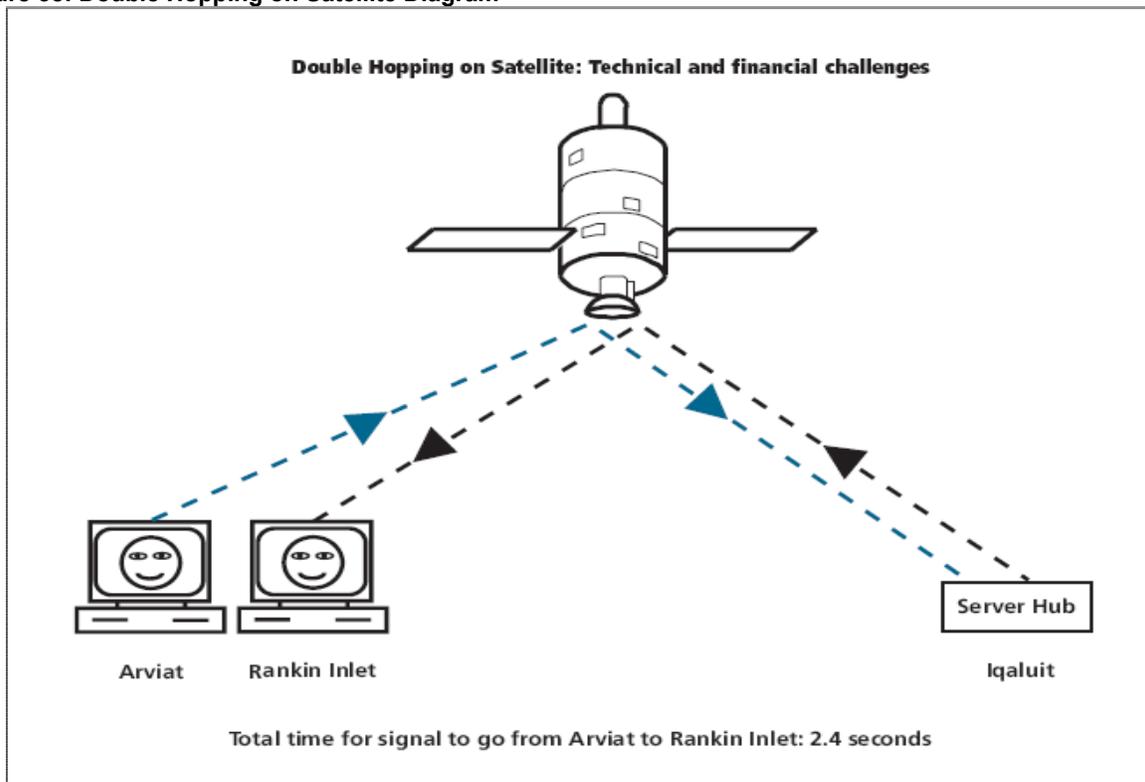
Nunavut does not have a land based infrastructure; therefore, instead of fibre optic and microwave options used in road-linked communities in southern Canada for provision of broadband services, the territory needs to rely on very expensive satellite connections. In the road-linked areas of Canada, installation and upgrade of required infrastructure is costly (about 90% of total cost of the service), but once it is in place, the ongoing operational costs are low (remaining 10%). In Nunavut, the situation is reversed. The front-end capital cost for installing broadband point of presence in every community is insignificant (about

<sup>152</sup> Government of Nunavut, Department of Sustainable Development, Community Economic Development and Trade Division, Nunavut Broadband Task Force, "Sivumuuqallianiq, Moving Forward: Strengthening our Self Reliance in an Information Age", 2002

<sup>153</sup> Nunavut Economic Forum. Qanijjuq II. The Journey Continues. A Discussion of the Renewal of the Strategic Investments in Northern Economic Development Program in Nunavut. January 2008

10% of the total cost of service) in comparison to the cost of purchasing satellite bandwidth, which is many times higher than the operational costs for fibre optic or microwave broadband in the south.<sup>154</sup>

**Figure 38: Double Hopping on Satellite Diagram<sup>155</sup>**



In 2002, the Nunavut Broadband Task Force estimated that “when Nunavut will start using broadband, our costs will not be \$3 million in satellite costs per year, it will be tens of millions of dollars per year”.<sup>156</sup>

### 3.3.6.3 BROADER ISSUES

The broadband network with its high-speed capabilities has the capacity to transform not only Nunavut’s economy, but also its whole society. With high-speed Internet, Nunavummiut will have:

- More equitable access to health and education services;
- Access to global markets for goods and services produced in Nunavut;
- Remote access to professional services (i.e., accounting, legal, marketing and business administration advice and assistance);
- Telework, especially in the areas of translation services and cultural product development; and,
- Access to information about federal and territorial programs.

Currently, the QINIQ network<sup>157</sup> delivers broadband connectivity to the 25 communities in Nunavut. In 2005, through funding provided under the SINED program and support from INAC and the Department

<sup>154</sup> Government of Nunavut. *Inter-departmental Committee on Capital Planning. Sustainable Infrastructure for Nunavut: Making the Socio-Economic and Environmental Case for Infrastructure Development. November 2003*

<sup>155</sup> Government of Nunavut, Department of Sustainable Development, Community Economic Development and Trade Division, Nunavut Broadband Task Force. *Sivumuuqallianiq, Moving Forward: Strengthening our Self-Reliance in an Information Age. 2002*

<sup>156</sup> Government of Nunavut, Department of Sustainable Development, Community Economic Development and Trade Division, Nunavut Broadband Task Force. *Sivumuuqallianiq, Moving Forward: Strengthening our Self-Reliance in an Information Age. 2002. p.18.*

of Economic Development and Transportation, QINIQ launched the Financial Services project to examine the opportunities for delivering basic banking services to all Nunavummiut, and to assess the obstacles for extending these services to remote communities through the use of broadband network. The following are the set of recommendations that were developed by Financial Services project team:

1. “That the Government of Canada augments the *Bank Act* and related regulations to enable the delivery of bank teller services via desktop videoconferencing as an equivalent to face-to-face in-branch interaction with customers;
2. That Canadian financial institutions with organizations in Nunavut support desktop videoconferencing as an alternative to face-to-face in-branch interaction with customers;
3. That Canadian financial institutions provide desktop videoconferencing services in the Inuit language, and provide Inuit language translations of basic banking documentation for client reference;
4. That the Government of Nunavut develop and launch a communications plan and training that encourages access to and use of basic banking services while highlighting the benefits to Nunavummiut and economic development in the territory;
5. That the Government of Nunavut and governmental organizations broaden the use of direct deposit for its payments to suppliers, employees and other recipients of government payments; and,
6. That the regulations governing the Interac system be augmented to encourage its use to facilitate bank transactions in remote locations, especially deposits of cash where no community in-branch services are available”.<sup>158</sup>

In December 2007, The Nunavut Broadband Development Corporation’s Board of Directors could not ratify the new QEC-NBDC Settlement. The NBDC directors determined that a significant increase to regular QINIQ subscribers was the only way to meet the additional Qulliq Energy Corporation (QEC) costs not covered in the original 2004 QEC-NBDC Agreement. This was not an option the directors would approve.

### **3.3.7 Oil and Gas**

Nunavut has proven oil and gas potential. According to the Geological Survey of Canada’s most recent estimates of discovered petroleum resources in Nunavut, there are 530 million barrels of oil and 12 trillion cubic feet of natural gas in the territory.<sup>159</sup> This accounts for 5% of oil and 15% of gas reserves in Canada.<sup>160</sup>

The oil and gas potential of Nunavut is contained in fourteen sedimentary basins. The most explored is the northwestern basin, including Sverdrup - the largest and most significant petroleum basin to date with 18 discoveries of oil and gas. This basin represents 11- 22% of the remaining discovered and undiscovered potential in Canada.<sup>161</sup> It is estimated that Sverdrup Basin alone has reserves worth more than one trillion dollars.<sup>162</sup>

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<sup>157</sup> *QINIQ is the Inuktitut root word for “to search”. QINIQ is a Canadian company which utilizes satellite and wireless communications technology to provide broadband Internet service to remote communities in the Canadian territory of Nunavut.*

<sup>158</sup> *Nunavut Broadband Development Corporation. Financial Services. Banking With Broadband. March 2006. p.16.*

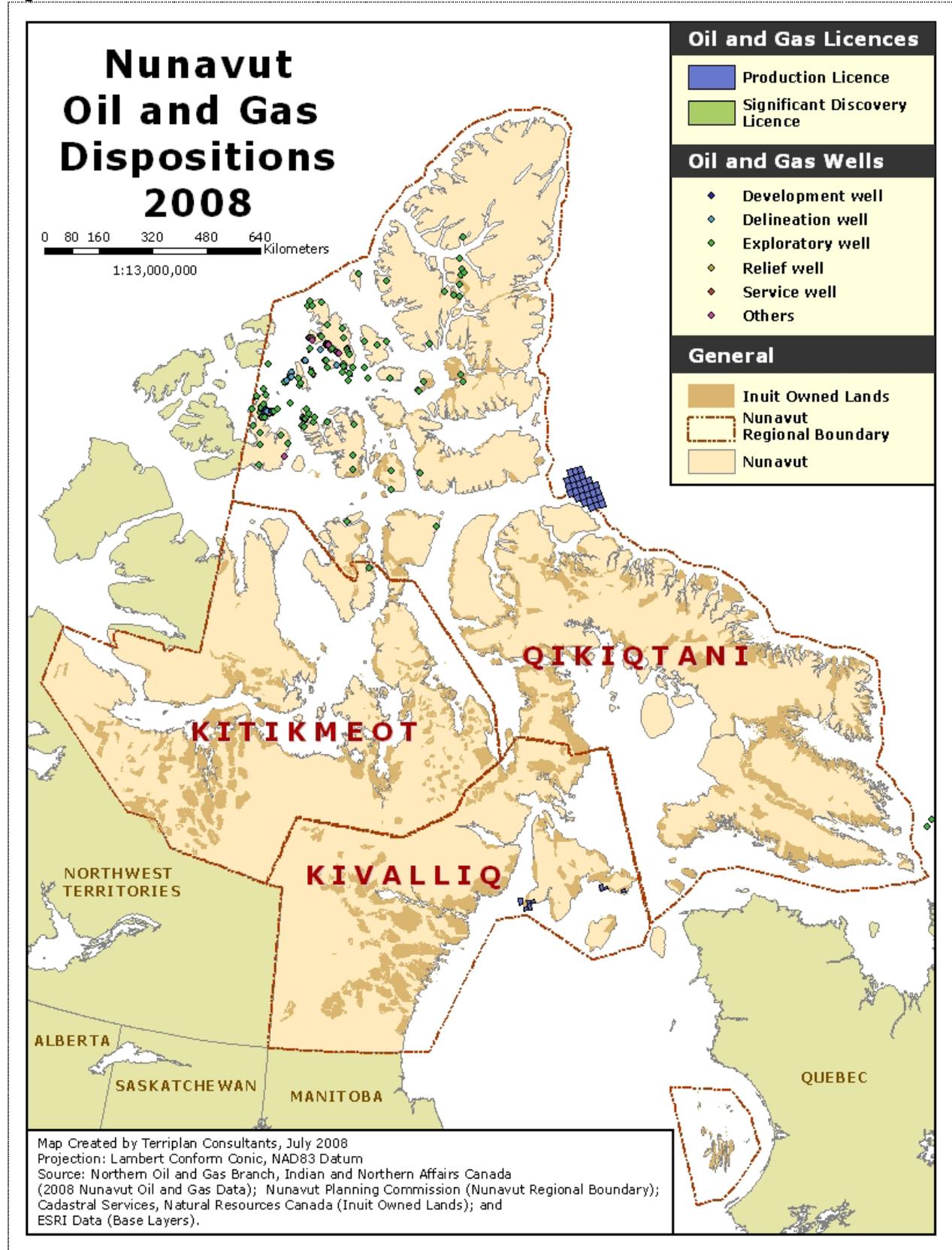
<sup>159</sup> *Government of Nunavut. Department of Finance. Nunavut Budget 2008-09: Supplementary Documents*

<sup>160</sup> *Government of Nunavut Department of Economic Development and Transportation. Business Plan 2006-07*

<sup>161</sup> *Ikuma II Report. Meeting Nunavut’s Energy Needs. Structures and Strategies for Energy Self-Reliance. March 2002*

<sup>162</sup> *Honourable Paul Okalik, Premier of Nunavut. Arctic Gas Symposium. Calgary, Alberta. March 2, 2007.*

Figure 39: Oil & Gas - Nunavut



Regarding the conventional undiscovered oil and gas resources, the Geological Survey of Canada estimates that there are approximately 10 billion barrels of crude oil and 100 trillion cubic feet of natural gas in Nunavut. Unconventional petroleum resources have not been officially estimated; however, up to one billion barrels of oil sands and 600 trillion cubic feet of gas hydrates may exist in the territory.<sup>163</sup>

Recently, foreign and Canadian investors have demonstrated interest in Nunavut's oil and gas potential. A Greenlandic company began an offshore survey on the Canadian side of the Davis Strait near southern Baffin Island. Another prospecting company begins surveying in the Davis Strait in summer 2008. If prices of natural gas remain high, Petro Canada is planning to develop its Drake Point and Hecla license areas on Melville Island.<sup>164</sup>

In accordance with its plan to facilitate oil and gas exploration and development activity in Nunavut, the GN's Department of Economic Development and Transportation is currently in the process of conducting a Strategic Environmental Assessment Study for petroleum resource development in Nunavut to identify issues that could cause delays. In addition, the department administers Community Minerals Awareness program that helps communities to respond to proposed development of local and territorial mineral and petroleum resources with knowledge and understanding of potential impacts and opportunities.

### **3.3.8 Energy Structure**

#### **3.3.8.1 EXISTING ENERGY INFRASTRUCTURE**

Electricity is provided to Nunavummiut through the operation of diesel generation plants in individual communities. Due to the geographic isolation of the 26 communities from one another and the vast distances between them (Nunavut spans 3 time zones and covers approximately 770,000 square miles, or 1/5 of Canada), diesel fuel is shipped to each community annually by sea and stored in large diesel fuel tanks.

**Figure 40: Diesel Fuel Storage Tanks (Rankin Inlet)**



Photo by Terriplan Consultants

<sup>163</sup> Government of Nunavut. Department of Finance. Nunavut Budget 2008-09: Supplementary Documents

<sup>164</sup> *Ibid.*

### ***Qulliq Energy Corporation***

Qulliq Energy Corporation (QEC) is responsible for generating, distributing, delivering and selling energy to the communities, operating the diesel generation plants in each of the communities, and providing mechanical, electrical and line maintenance from three regional centers. QEC is a Crown Corporation owned 100% by the Government of Nunavut (GN). The corporation was originally established in 2001 as Nunavut Power Corporation (NPC) under the Nunavut Power Utilities Act. It was renamed Qulliq Energy Corporation and the Nunavut Power Utilities Act was renamed the Qulliq Energy Corporation Act as the result of legislation passed in March 2003 which also broadened the corporation's mandate to respond to a range of energy use and conservation issues in Nunavut.<sup>165</sup>

In the Government of Nunavut mandate statement for the second term in the document "Pinasuaqtavut 2004-09", the QEC has been assigned the lead role in responding to the goal enunciated for this five year period to "conserve and reduce the use of energy and find alternatives to diesel fuel for electricity generation."<sup>166</sup>

### ***Energy Conservation Activities***

QEC and GN are active in pursuing opportunities related to energy conservation, as described below:

- Residual Heat Projects - Use of heat capture devices in existing diesel plants to transfer what was formerly seen as "waste" heat, into district heating systems. In 2006-07 the QEC built heat recovery projects in Iqaluit and Rankin Inlet. To raise capital for additional heat recovery projects in Nunavut, funding is being sought through partnerships.
- Nunavut Energy Centre – The Nunavut Energy Centre, located in Iqaluit, has an energy conservation focus, and provides a resource for individuals, community governments, businesses and non-governmental organizations to identify, evaluate and support the implementation of energy efficiency projects.
- New opportunities for existing resources – One example is QEC looking at contracts to string and carry high speed fibre optic cable using existing power poles.
- Fuel Efficiency – QEC is engaging in efforts to improve fuel efficiencies in both capital and operations phases.
- Energy Strategy - Development of a comprehensive energy strategy by the GN Energy Secretariat to lay out a long term vision of energy use in 5-year and 25-year timeframes.

### ***Energy Costs***

The GN protects Nunavummiut by directly and indirectly subsidizing the cost of energy. In order to better track and manage these subsidies, as well as promote energy efficiency and conservation, the GN proclaimed legislation in 2007 to establish a single Affordable Energy Fund. Current subsidies will continue under this Fund.<sup>167</sup>

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<sup>165</sup> Qulliq Energy Corporation, "Corporate Plan 2007-2008"

<sup>166</sup> Government of Nunavut. "PINASUAQTAVUT 2004-2009: Our Commitment to Building Nunavut's Future - Working to improve the health, prosperity, and self-reliance of Nunavummiut"

<sup>167</sup> Government of Nunavut Department of Finance, "Nunavut Budget 2008-09: Supplementary Documents"

### 3.3.8.2 CHALLENGES FOR NUNAVUT’S ENERGY SECTOR

#### *Increasing Cost of Fuel*

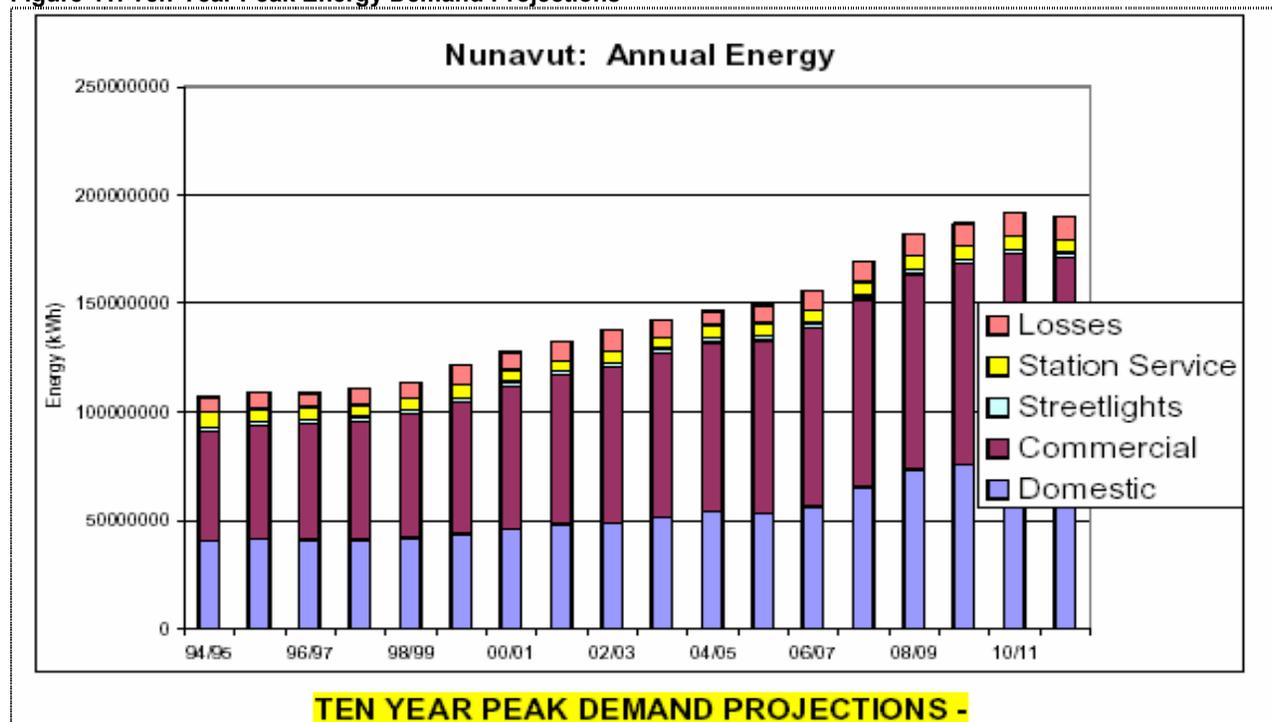
More so than the rest of the country, Nunavut does not have access to a cheap and clean energy supply. Imported fossil fuels are required to satisfy over 99 per cent of all electricity, heating and transportation demand in Nunavut. Consequently, it is heavily exposed to foreign supply interruption and pricing risks. In 2003, the Government of Nunavut estimated its annual energy cost to be \$120 million, a substantial portion of the Government’s operating budget (18 per cent).<sup>168</sup> With world oil prices having increased considerably since 2003, especially over the last six months, this percentage is likely much higher at present. Continually rising oil costs will make it increasingly more difficult to do business in Nunavut.

#### *Growth Demands*

The corporation continues to operate in a time of significant load growth. Across Nunavut, departments and municipalities are mobilizing to provide improved infrastructure to Nunavummiut, e.g., a trade college in Rankin Inlet, housing and classroom facilities, new or improved medical facilities, improved airport facilities, community centers sewage treatment facilities. These infrastructure projects are predicted to require additional energy loads.<sup>169</sup>

The following graphs depict the predicted load growths for the QEC:

**Figure 41: Ten-Year Peak Energy Demand Projections**

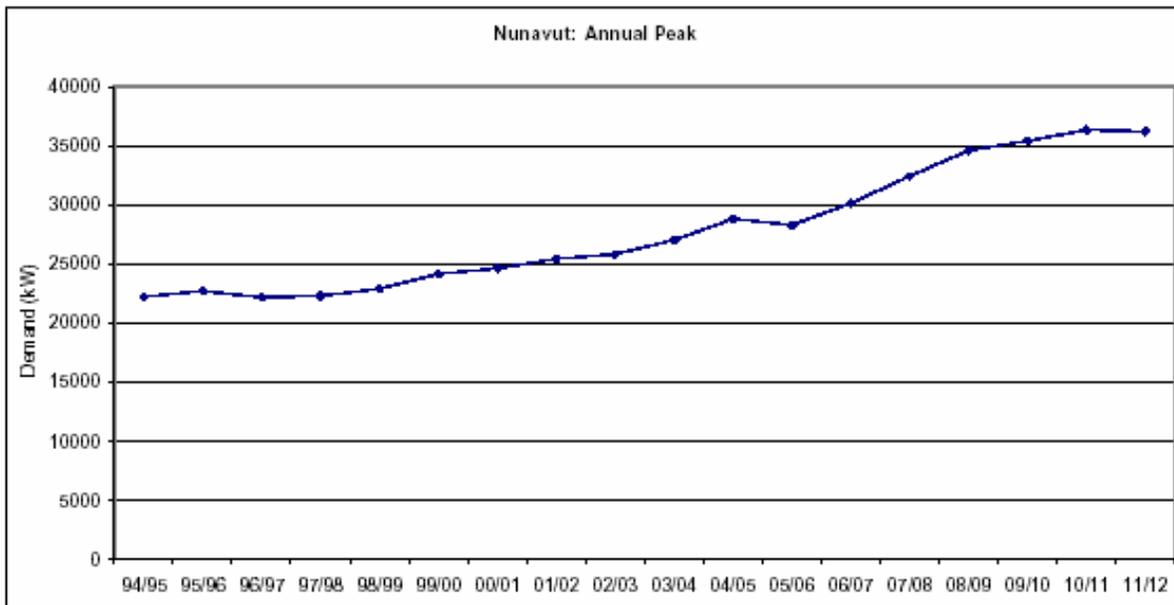


<sup>168</sup> Government of Nunavut’s Inter-departmental Committee on Capital Planning

“Sustainable Infrastructure for Nunavut: Making the Socio-Economic and Environmental Case for Infrastructure Investment”, November 2003

<sup>169</sup> Qulliq Energy Corporation, op cit

**Figure 42: Nunavut Annual Peak Energy Demand**



Source: Qulliq Energy Corporation, “Corporate Plan 2007-2008”

### ***Mining and Energy***

The significant start-up activity in the mining sector will challenge the QEC’s ability to respond to other resource development activities in Nunavut. The QEC is investigating opportunities to participate as operator in generation activities in the mining sector. At the same time, the Government of Nunavut encourages companies that are advancing mining developments in Nunavut to review and address energy risks and options with both Qulliq Energy Corporation (electrical generation) and the Petroleum Products Division (fossil fuel use and storage at an early stage in order to develop good projections of need and to anticipate potential areas of common investment and infrastructure advantage.<sup>170,171</sup>

### ***Environment***

Relying on diesel for its energy needs is hurting Nunavut’s environmental performance. Nunavut produces one of the highest per capita rates of greenhouse gas emissions in Canada. It also leads the nation in per capita energy consumption.<sup>172</sup> Diesel fuel costs are not expected to decrease and new federal environmental guidelines will result in a need to upgrade fuel storage facilities in the future at a cost of \$22 million over the next five years. At the same time, there will be pressure in Canada, particularly through its commitments to the Kyoto Accord, to move toward cleaner energy alternatives. Unlike Greenland which is working towards supplying half of its energy needs by hydroelectricity, renewable energy supply remains undeveloped in Nunavut. Alternatives to cleaner forms of energy, such as hydro and wind, are very capital intensive.<sup>173</sup>

<sup>170</sup> Qulliq Energy Corporation, “Corporate Plan 2007-2008”

<sup>171</sup> Government of Nunavut Department of Economic Development and Transportation, “Parnautit: A Foundation for the Future – Mineral Exploration and Mining Strategy 2007

<sup>172</sup> Government of Nunavut’s Inter-departmental Committee on Capital Planning op cit

<sup>173</sup> Government of Nunavut’s Inter-departmental Committee on Capital Planning op cit

### 3.3.8.3 BROADER ISSUES

High and rising fuel costs affect a number of other economic opportunities in Nunavut, such as:

- Transportation to communities will become more expensive - this will increase the cost of delivering programs and reduce training opportunities;
- The cost of delivering electrical power is expected to increase with the need to build new facilities and undertake major upgrades to plant and delivery systems;
- The cost of heating and other fuels supplied can also be expected to increase, partly because of increases in the cost of purchase and delivery of products, but also as a result of a change in pricing policy to eliminate “hidden subsidies” and recover actual costs;
- A growing population is expected to exert increased demand for heating fuel and electricity;
- As the total cost of delivering fuel and electricity increases, there will be increased demands on the GN for fuel and power subsidies to make these essential commodities affordable;<sup>174</sup> and,
- High energy costs can also impact economic opportunities in Nunavut. For example, they can prevent the creation of new business opportunities or reduce people’s ability to participate in industrial opportunities outside of their home community.<sup>175</sup>

### 3.3.9 Arts and Crafts

#### 3.3.9.1 CURRENT ARTS & CRAFTS SECTOR

Though sometimes overlooked, the arts and crafts industry in the North is flourishing. In spite of the high cost of living, the territories are home to a large number of artists and culture workers. Northern artists are the best funded artists in the country. This is being done by governments as a mean of developing an economy that outlasts the waves and troughs of resource development industry.<sup>176</sup> In terms of funding, the Federal Government contributes \$537 per capita in the Yukon, \$722 in NWT and \$382 in Nunavut, all well above the national average of \$243 per capita.<sup>177</sup>

Internationally recognized for their soapstone sculptures, prints, and fabric arts, over 27% of the Inuit population in Nunavut are involved in the production of Inuit art which includes stone, bone, prints, paints, and skin pieces.<sup>178</sup> Traditional Inuit carvings, prints and jewellery make up 10 per cent of Canadian art export.<sup>179</sup>

As reported in the 2006 Nunavut Exit Study Final Report, when asked what activities they engaged in, the majority of tourists completing the Exit Survey indicated that they participated in activities which supported Nunavut arts and crafts and culture (see Figure 43).

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<sup>174</sup> Ikuma II Report: meeting Nunavut’s Energy Needs: Structures’ and Strategies, March 21, 2002

<sup>175</sup> Government of Nunavut’s Inter-departmental Committee on Capital Planning

“Sustainable Infrastructure for Nunavut: Making the Socio-Economic and Environmental Case for Infrastructure Investment”, November 2003

<sup>176</sup> UPHERE Business (author: Katherine Sandiford). (March 2008). *Picture Imperfect – All is not well with the Arts. – Opportunity Wasted?*

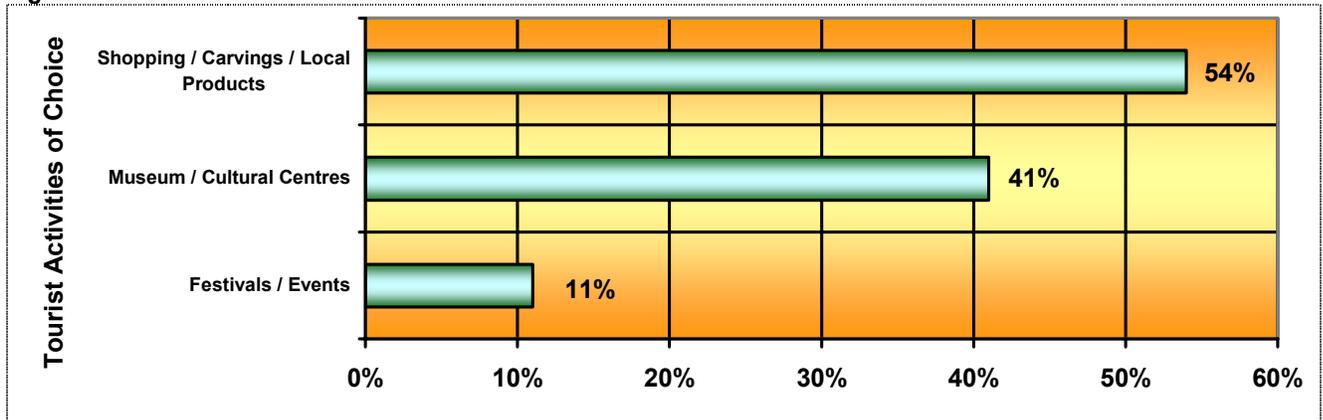
<sup>177</sup> UPHERE Business (author: Katherine Sandiford). (March 2008). *Picture Imperfect – All is not well with the Arts. – Opportunity Wasted?*

<sup>178</sup> Nunavut Tourism. (n.d.) *Arts and Culture: Inuit Arts & Crafts*. Available [Online]:

<http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=20&IDAnimal=25>. Viewed: June 2008.

<sup>179</sup> UPHERE Business (author: Katherine Sandiford). (March 2008). *Picture Imperfect – All is not well with the Arts. – Opportunity Wasted?*

**Figure 43: Tourist Activities of Choice<sup>180</sup>**



As of 2005, the arts sector engaged 20% of the territorial work force over the age 14, approximately 4,000 individuals who rely upon the arts either for their primary form of livelihood, or to provide an important source of supplemental income. The economic impact of arts sector activities is measured by an estimated \$30 million contribution to Nunavut's economy annually.<sup>181</sup> The industry -- specifically Inuit art -- accounts for more than 10% of Canadian art sold internationally.<sup>182</sup>

The current multi-million dollar culture and art industry is supported by production studios in Taloyoak, Baker Lake, Arviat, Iqaluit, Cape Dorset, and Pangnirtung.<sup>183</sup>

### Carving

In terms of materials for carving, soapstone has been the preferential choice in the past due primarily to its softness; however, over the course of time and with better tools and technology, harder, longer-lasting serpentine has become the preferred choice of material.<sup>184</sup> Current material choices vary in shades, textures, and can include marble, argillite and quartzite, ivory, antler, and bone.

Carving, to varying degrees, takes place in each of Nunavut's communities. Local artists use the stones from their community when carving such that the type, texture, and colour of the stones used in each carving can indicate the origin of the artistic piece. The theme and subject matter of the carving can also indicate its origin. Each community has its own distinct artistic specialty. Cape Dorset and Kimmirut carvers are recognized for the details and realism of their sculptures<sup>185</sup> while the stone used in Arviat and Baker Lake yields more abstract art.<sup>186</sup>

<sup>180</sup> DataPath Systems. (2006). *Nunavut Exit Study Final Report: Background and Introduction and Methodologies*.

<sup>181</sup> Government of Nunavut (2005). *A Strategy for Growth in Nunavut's Arts and Crafts Sector*.

<sup>182</sup> Government of Nunavut (2005). *A Strategy for Growth in Nunavut's Arts and Crafts Sector*.

<sup>183</sup> Department of Economic Development and Transportation. (n.d.) *Economic Development: Arts and Crafts*. Available [Online]: <http://www.edt.gov.nu.ca/lookupnunavut/artsandcrafts.htm>. Viewed: June 2008.

<sup>184</sup> Nunavut Arts and Crafts Association. (n.d.) *Development of Art in Nunavut*. Available [Online]: <http://www.nacaarts.org/devArtNunavut.html#carvings>. Viewed: June 2008.

<sup>185</sup> Nunavut Tourism. (n.d.) *Arts and Culture: Inuit Arts & Crafts*. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=20&IDAnimal=25>. Viewed: June 2008.

<sup>186</sup> Nunavut Tourism. (n.d.) *Arts and Culture: Inuit Arts & Crafts*. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=20&IDAnimal=25>. Viewed: June 2008.

Figure 44: Jimmy Peetooloosie's "Bear." Soapstone.<sup>187</sup>



Figure 45: Snow Goggles Made of Ivory<sup>188</sup>



### Prints and Fibre Arts

Since its introduction in Cape Dorset in 1962 by James Houston, Inuit print art has grown in popularity and has evolved to include stonecuts, stenciling, silkscreen, engraving, lithography, etching, and woodcut. As with carving, each community has a unique style and theme preference for its artistic pieces. Generally speaking, Inuit printmakers in Nunavut have focused on the natural Arctic world, Inuit mythology and scenes of everyday traditional life.<sup>189</sup>

### Fashion

Seal hunting and harvesting is an alternative income generation activity to wage employment where wage employment opportunities are limited. Sealing helps to foster financial independence by allowing the hunter to participate in arts and crafts and the fashion sector.

Figure 46: Fur Coat<sup>190</sup>



The current Fur Production and Design course offered at Arctic College attempts to position Nunavut to fulfill the projections made in 2003. The course affords students the opportunity to participate in a class focused on sewing sealskins. This course is a ten-month initiative sponsored by the Nunavut Economic Development Strategy as a way of both supporting the traditional seal harvesting economy and developing a successful fur fashion industry in the North. The course teaches students the traditional way of carrying out the sewing of sealskins but also blends elements of the modern in with tradition (i.e., the use of Kerri lotion to help keep the skins supple).<sup>191</sup>

<sup>187</sup> Soapstone Carving. (n.d.) Soapstone Carving. Available [Online]: [http://www.trussel.com/f\\_art.htm](http://www.trussel.com/f_art.htm). Viewed: June 2008.

<sup>188</sup> Royal Ontario Museum. (2004). The Role of Ivory. Available [Online]: [http://www.rom.on.ca/exhibits/ivory/role\\_ivory\\_english\\_1.php](http://www.rom.on.ca/exhibits/ivory/role_ivory_english_1.php). Viewed: June 2008.

<sup>189</sup> Nunavut Tourism. (n.d.) Arts and Culture: Inuit Arts & Crafts. Available [Online]: <http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=20&IDAnimal=25>. Viewed: June 2008.

<sup>190</sup> Our Times (author unknown). (March 2006). Our Featured Celebration. (Issue 48). Available [Online]: [http://images.google.ca/imgres?imgurl=http://www.consilium.ca/images/FUR20COAT.jpg&imgrefurl=http://www.consilium.ca/newsletters/March\\_2006.html&h=340&w=260&sz=23&hl=en&start=17&um=1&tbnid=9uV0-dOpKUo4M:&tbnh=119&tbnw=91&prev=/images%3Fq%3DNunavut,%2Bfur%26um%3DI%26hl%3Den%26sa%3DN](http://images.google.ca/imgres?imgurl=http://www.consilium.ca/images/FUR20COAT.jpg&imgrefurl=http://www.consilium.ca/newsletters/March_2006.html&h=340&w=260&sz=23&hl=en&start=17&um=1&tbnid=9uV0-dOpKUo4M:&tbnh=119&tbnw=91&prev=/images%3Fq%3DNunavut,%2Bfur%26um%3DI%26hl%3Den%26sa%3DN). Viewed: June 2008.

<sup>191</sup> Canada's Arctic Journal (author unknown). (January / February 2008). Above & Beyond – The Bearded Ones. Specific Article – Economic Development Strategy Supports Tradition: Developing a Sealskin Fashion Industry in Nunavut.

Clothes-making is taught through the teaching of basic drawing skills followed by elements of design. Students are also provided with the opportunity to use up-to-date industry technology (such as industrial sewing machines). Throughout the course, students research national dress in other polar regions including the many variations of amauti designs<sup>192</sup> and discuss how contact with Europeans affected traditional clothing.<sup>193</sup> By the completion date of the course, each individual student is expected to have made a pair of mitts and kamiik (sealskin boots). As a group, students are expected to sew a traditional style sealskin outfit including parka and pants.

In Nunavut, Repulse Bay is recognized as specializing in the craft of clothing / garment making.<sup>194</sup>

### ***Jewellery & Ceramics***

Following INAC's competition in 1976 encouraging Inuit artists to fashion attractive jewellery pieces, jewellery making has emerged as a relatively thriving industry in Nunavut. Nunavut's Arctic College currently runs a jewellery making program and community based courses and programs have also been developed and implemented. Generally speaking, Inuit jewellers produce bracelets, earrings, broaches, and sculptures.

**Figure 47: Polar Bear Cameo Ring<sup>195</sup>**



**Figure 48: Large Pot by Yvo Samgushak<sup>196</sup>**



In response to the nickel mine closure in Rankin Inlet in the 1960s, ceramics developed as an industry. Following difficulty associated with establishing a defined market and high product cost (due to high costs in Nunavut), the ceramics sector faded away in the late 1970s. However, since the 1990s, there has been a recent resurgence in the industry through the establishment of the Matchbox Gallery, which encourages local artists to pursue ceramics in Rankin Inlet.

### ***Film & Television***

Nunavut's Isuma Productions, based in Igloolik, has established a free Internet video site which provides website visitors with access to films as well as indigenous filmmaking from around the world. The site currently supports 100 films in 7 indigenous languages and there are plans to expand the repertoire to include 10,000 films in 100 languages along with live TV programming. During its first three weeks of its

<sup>192</sup> Canada's Arctic Journal (author unknown). (January / February 2008). Above & Beyond – The Bearded Ones. Specific Article – Economic Development Strategy Supports Tradition: Developing a Sealskin Fashion Industry in Nunavut.

<sup>193</sup> Canada's Arctic Journal (author unknown). (January / February 2008). Above & Beyond – The Bearded Ones. Specific Article – Economic Development Strategy Supports Tradition: Developing a Sealskin Fashion Industry in Nunavut.

<sup>194</sup> Nunavut Tourism. (n.d.) Arts and Culture: Inuit Arts & Crafts. Available [Online]:

<http://www.nunavuttourism.com/new/site/experiences.asp?IDActivity=20&IDAnimal=25>. Viewed: June 2008.

<sup>195</sup> Gallery Canada. (n.d.) Central Arctic Inuit Art. Available [Online]:

<http://www.gallerycanada.com/proddetail.asp?prod=DAY%2DR1805&cat=46>. Viewed: June 2008.

<sup>196</sup> Matchbox Gallery. (n.d.) Welcome to Matchbox Inuit Ceramics. Available [Online]: [http://matchboxgallery.com/inuit\\_ceramics.htm](http://matchboxgallery.com/inuit_ceramics.htm). Viewed: June 2008.

operation, the site saw 4,500 unique visitors and 600,000 hits from 50 different countries.<sup>197</sup> Isuma Productions is currently developing its third feature film, following the critically acclaimed *'The Journals of Knud Rasmussen'* and *'Atanarjuat The Fast Runner'*.

### 3.3.9.2 CHALLENGES

Like tourism, the success of the arts and crafts industry is dependent on improvements in several areas of Nunavut's economy and infrastructure including resource needs, marketing / communication, and transportation / trade infrastructure requirements.

A thriving arts and crafts industry requires improvements in:

- Access to raw materials;
- Access to national and international markets;
- Access to appropriate information (such as funding types and sources);
- Standardization of the quality of work;
- Pricing consistency;
- A qualified workforce to support the industry; and,
- An up-to-date artist and art statistics accounting key industry drivers.<sup>198</sup>

#### *Remoteness & Infrastructure and Access to Raw Materials*

Access to raw materials and the economic viability of the arts and crafts industry is tied to transportation. A thriving arts and crafts industry hinges on supplying artists with raw materials in a consistent and cost effective manner and allowing artists access to a distribution mechanism not likely to further drive product costs higher. In Nunavut, due to challenges associated with the transportation infrastructure (see Transportation, Section 3.3.2) artists are not likely to receive a constant and consistent supply of raw materials located outside of their community (i.e., soap stone, quarrying stone, etc.), nor is it necessarily cost-effective for them to ship completed pieces to their customers. Costs incurred during the manufacturing and production phases of artistic pieces are likely to be reflected in the final price shown to customers which in turn can limit product affordability and decrease the product market.

#### *Accounting for Art*

Information related to the arts and crafts industry is limited in Nunavut. As of 2005 there was no consistent system in place to collect data related to the quantity of artists and crafts persons within the territory, nor was there a system in place to track quality and value of the products produced by local artisans or the territory.

A data tracking system facilitates better management of the arts and crafts industry through provision of product quality and pricing data which in turn can lead to standardization and benchmarking. It also allows for a better understanding of the current level of training required by artisans in order to improve the quality of products being produced. Further to this, access to industry information and statistics can assist artists by providing them with information on available tools and support mechanisms (such as funding) and can in fact drive competition by allowing artisans to see what is taking place in the industry and in the territory.

<sup>197</sup> *UPhere Business* (author unknown). (March 2008). *Picture Imperfect – All is not well with the Arts. – Look out YouTube.*

<sup>198</sup> *Government of Nunavut (2005). A Strategy for Growth in Nunavut's Arts and Crafts Sector.*

## ***Marketing & Branding***

Nunavut lacks mechanisms to support trade of locally produced products. On the supply side, Nunavut businesses and development corporations need to become export ready and build the capacity to enter extra-territorial markets. On the demand side, viable niche markets for Nunavut products need to be developed or expanded through branding, marketing and establishment of distribution channels.<sup>199</sup>

### ***3.3.10 Wildlife***

#### ***3.3.10.1 WILDLIFE HARVESTING***<sup>200</sup>

##### ***Subsistence Activities***

Wildlife harvesting has been an important part of life for Inuit people for thousands of years. This remains true today. Statistics collected in 2001 showed that 70% of Inuit adults in Nunavut participate in harvesting activities.<sup>201</sup> One of the primary functions of this activity is the provision of food. Country food consists of a wide range of items including caribou, whales, ducks and seals, and is a staple of the Inuit diet. In 73% of Nunavut households half or more of the meat or fish eaten is harvested country food.<sup>202</sup> This food provides an alternative to products shipped in to communities by sea or air. As a result of the long distances required to travel to Nunavut, imported food is costly and not as fresh as locally harvested food. It has been estimated that annual replacement cost of the harvest of country food is \$30 million.<sup>203</sup> In addition to cost savings and access to fresh food, harvesting activities provide the people of Nunavut with the opportunity to participate in a traditional way of life that fits with Inuit cultural values.

##### ***Commercial Harvests***

Wildlife harvesting contributes to the economy of Nunavut through commercial activities. In addition to Nunavut's commercial fisheries, there are some wildlife species that are being harvested for commercial purposes. To this point, the focus of such activity has primarily been on polar bears, caribou, muskox and seals.

##### ***Polar Bears***

Polar bear hunting generates substantial income for Nunavut residents. Hunters coming to the territory to participate in a polar bear hunt pay as much as \$35,000 for airfare, accommodation and hunt-related fees.<sup>204</sup> The jobs and income produced by this industry may be negatively affected by a decision in May of 2008 by the U.S. government to list polar bears as a threatened species under its Endangered Species Act. The consequence of this move is that American hunters may not bring polar bear trophies back into the United States.<sup>205</sup> This decision arises out of concern that, although polar bear numbers have more than doubled in the last 40 years, melting ice in the north endangers the long term survival of the species.<sup>206</sup>

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<sup>199</sup> Government of Nunavut Department of Economic Development and Transportation. (unknown). *Business Plan: 2006-07*.

<sup>200</sup> Once the wildlife study being completed concurrently with this project is completed, any data from it relevant to this discussion could be incorporated.

<sup>201</sup> Tait, H., Nepton-Riverin, M., and Clark, C. (2007). *Inuit Statistical Profile. Inuit Tapiriit Kanatami*.

<sup>202</sup> Tait, H. (2001). *Harvesting and Country Food: Fact Sheet*. Statistics Canada.

<sup>203</sup> The Sivummut Economic Development Strategy Group. (2003). *Nunavut Economic Development Strategy: Building a Foundation for the Future*.

<sup>204</sup> CBC News. (April, 2008). *Inuit Outfitters, U.S. Hunters in Limbo Over Delayed Polar Bear Decision*.

<sup>205</sup> CBC News (May, 2008). *U.S. Bans Import of Polar Bear Trophies: Official*.

<sup>206</sup> Fekete, J. (May, 2008). *Nunavut Opposes Anti-polar Bear Hunt Movement in U.S.* Calgary Herald.

Scientists and hunters have recently observed thinner polar bears in the Baffin Bay region; the Nunavut government is consequently considering a reduction in the Baffin Bay hunting quotas. However, hunters disagree that that thinning ice is the cause of poorer health in the bears – rather, they argue that the bears are losing weight because there are too many of them and competition for food is high.<sup>207</sup> The Nunavut Wildlife Management Board sets the hunting quotas for the territory.

### *Caribou*

Caribou is harvested commercially on Southampton Island. When the harvest began in 1995, the quota was set at 3,000. After 2 years it employed close to 60 people seasonally. By 2001, 3,500 caribou were brought in from the hunt. Caribou meat is nutritionally dense and low in fat. Kivalliq Arctic Foods Ltd. processes and sells a range of caribou products, receiving a price of \$19.55 per pound for tenderloins, strip loins and French rack. The plant is certified for sale in the European Union and has made an effort to create a strong brand using words such as “wild”, “organic” and “quality”.<sup>208</sup>

**Figure 49: Kivalliq Arctic Foods Ltd.**



Source: Terriplan Consultants

### *Muskox*

Muskox populations have fluctuated greatly over the last few hundred years, but their numbers are currently thriving. Harvests are conducted in Cambridge Bay on Victoria Island in the spring and fall and last about two weeks. A quota system ensures that the level of harvest is sustainable.<sup>209</sup> An average of 400 muskox are harvested each year. Kitikmeot Foods Ltd. (in Cambridge Bay) processes and sells a variety of muskox items. One of their main products is strip loin and tenderloin cuts, which sell for close to \$40 per kg wholesale. Ground meat costs about \$10 per kg. Approximately 29 people are employed in the process of harvesting muskox, from hunting to packaging.<sup>210</sup> In addition to meat, muskox also provide versatile hide and soft hair for wool. A small number of muskox are reserved each year for sport hunting. Visitors may pay up to \$5,000 for a guided hunt.<sup>211</sup>

<sup>207</sup> CBC News. (April, 2008). *Biologists, Hunters differ on Cause of Thin Polar Bears.*

<sup>208</sup> Mason, A.M., Dana, L. and Anderson, R. (2007). *The Inuit Commercial Caribou Harvest and Related Agri-Industries in Nunavut.* Int. J. Entrepreneurship and Small Business, Vol. 4, No. 6/

<sup>209</sup> *Nunavut Muskox.* <http://www.nunavutmuskox.ca/>

<sup>210</sup> Lawrence, R. *Kitikmeot Foods Ltd. and Kitikmeot Hunters and Trappers Association - Muskox Makes for Culinary Treat, and More.*

<sup>211</sup> *Nunavut Muskox.* <http://www.nunavutmuskox.ca/>

**Figure 50: Muskox**



Source: Nunavut Planning Commission <http://npc.nunavut.ca/eng/regions/akunnig/wildlife.html>

### *Seals*

Seal hunts have provided food and clothing for Inuit for many years. It has also been an important economic activity, providing income from commercial meat sales, clothing production, arts and crafts production and the sale of raw sealskins. The sealing industry has suffered major setbacks due to trade barriers imposed by foreign markets. Both the United States and the European Parliament have placed restrictions on the import of seal products in the 1970s and 1980s. Although the European barriers targeted the Newfoundland hunt, the distinction between Newfoundland and Nunavut sealskins was not made in the marketplace. Sales of sealskins dropped from 50,000 pelts in 1977 to 1,000 in 1988. There has been some resurgence since that time.

While European markets still lag and access continues to be denied in the U.S., there is demand for Nunavut sealskins in Russia and China. There is also a growing domestic market in Nunavut. Recently, the World Conservation Union urged governments not to create bans on seal products. This signals a potential change in the future of the seal hunt.<sup>212</sup>

**Figure 51: Seal Skin Kamiks**



Source: Arctic Nunavut Online Shop  
<http://www.arcticnunavut.ca/index.php>

<sup>212</sup> Government of Nunavut. *Waiting at the Edge: Sustainable Sealing in Nunavut*.  
[http://www.edt.gov.nu.ca/sealing.economy\\_trade.htm](http://www.edt.gov.nu.ca/sealing.economy_trade.htm).

### 3.3.10.2 CHALLENGES

There are several challenges faced by both commercial and subsistence hunters in the wildlife harvesting sector. For those seeking to benefit from the commercialization of harvests, one of the greatest challenges is finding a market to support development. Barriers to exploiting a market may be direct, such as the trade limitations on sealskins discussed above, or they may be more indirect, such as the higher costs of importing wild meat from Nunavut compared to meat from southern farms.

For subsistence hunters, there is a threat posed by commercial wildlife harvesting. There is potential for these two groups of hunters to be in competition with each other. If commercial hunters over-harvest a population, all hunters in that area will suffer. The NWMB we co-ordinates activities with Nunavut's 27 community-based Hunter and Trapper Organizations (HTOs) and three Regional Wildlife Organizations (RWOs) – the Qikiqtaaluk Wildlife Board, the Keewatin Wildlife Federation, and the Kitikmeot Hunters and Trappers Association. These organizations oversee harvesting at the local and regional levels, while the NWMB oversees wildlife management throughout the Nunavut Settlement Area.

The determination of quota levels is another challenge that hunters face. There have been cases where biologists and hunters disagree on population levels. One such instance happened with the bowhead whale population. Government officials believed that the bowhead whale was endangered, while hunters suggested populations were thriving. The result was an eventual agreement by regulators with the hunters.<sup>213</sup> Finding ways to reconcile differences between the accounts of scientists and those of hunters will be essential to proper management of wildlife populations. If set incorrectly, quotas may unnecessarily restrict hunting or, alternatively, they may allow over-harvesting.

Finally, there are challenges associated with working with wild species. Migration patterns can change or population levels may decrease due to climate change, over-hunting or natural cycles. These changes may be unpredictable and require significant shifts in hunting practices.

### 3.3.10.3 BROADER ISSUES

The growth and development of Nunavut is a priority. Efforts are being taken in a wide range of sectors, including transportation, mining and tourism, to bring in investment, attract new residents and visitors, create jobs and improve overall quality of life. Yet there is potential for activities meant to increase development in one sector to threaten the sustainability of another. Wildlife harvesting in particular is sensitive to changes in the natural environment. Increased economic growth can bring with it increases in human population, energy use, water use, production of waste and infrastructure. These changes can have negative impacts on wildlife in Nunavut, and in turn on hunting, if they disrupt natural systems and degrade environmental quality. A detrimental effect on harvesting not only has consequences for Inuit hunters, it can also affect activities in tourism, which relies on hunting as an attraction for many visitors. Awareness of these connections and attempts to balance the needs of different sectors will be necessary for successful development of the territory as a whole.

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<sup>213</sup> Nunatsiaq News. (April, 2008). *DFO's Whale Research Debacle*.

### 3.3.11 Mining

#### 3.3.11.1 CURRENT MINING SECTOR

According to the GN Department of Economic Development and Transportation, “Nunavut is recognized as one of Canada’s most attractive jurisdictions for mineral exploration and investment”.<sup>214</sup> As of 2008, mining related exploration is taking place across the territory for diamonds, gold, silver, copper, nickel, platinum, uranium, iron, coal, gemstones, lead, coal, zinc, cobalt, and palladium. Based on statistics from 2007, there are over 130 individual mining properties across Nunavut’s three regions (see Figure 52) including:

- 9 Base Metals properties;
- 26 Gold and Precious Metals properties;
- 41 Diamond properties;
- 49 Uranium properties;
- 2 Iron properties;
- 2 Coal properties; and,
- 1 Gemstone (Sapphire) property.<sup>215</sup>

Mining explorations currently sit on both Inuit Owned Lands and Crown land. Crown owns or retains the rights to approximately 98% of Nunavut. However, the Nunavut Land Claims Agreement (NLCA) provides the Inuit of Nunavut with fee simple title to approximately 356,000 square kilometres of land within the 2,000,000 square kilometre territory. There are 944 parcels (16% of Nunavut) of Inuit Owned Lands (IOL) where Inuit hold surface title only (surface IOL) and 150 parcels of land for which the Inuit have a subsurface IOL and hold fee simples which include mineral rights.<sup>216</sup>

Mining exploration activity is currently underway on several IOL in the three regions of the territory (see Table 19).

**Table 19: Explorations on IOL in Nunavut<sup>217</sup>**

Kitikmeot	Kivalliq	Qikiqtani / Baffin
<ul style="list-style-type: none"> <li>• High Lake -Ulu</li> <li>• Hackett River</li> <li>• Hope Bay                             <ul style="list-style-type: none"> <li>○ Doris, Madrid, Boston</li> </ul> </li> <li>• North Arrow</li> <li>• Silvertip</li> <li>• George Lake</li> <li>• Goose Lake</li> </ul>	<ul style="list-style-type: none"> <li>• Meadowbank</li> <li>• Meliadine</li> <li>• Kiggavik-Sissons</li> <li>• Maze Lake</li> <li>• Angilak</li> </ul>	<ul style="list-style-type: none"> <li>• Baffin Island Gold</li> <li>• Mary River</li> </ul>

Projects on IOL which have been identified as ‘potential’ mining projects include: High Lake-Ulu (Izok), Meliadine, and Hope Bay (Madrid).<sup>218</sup>

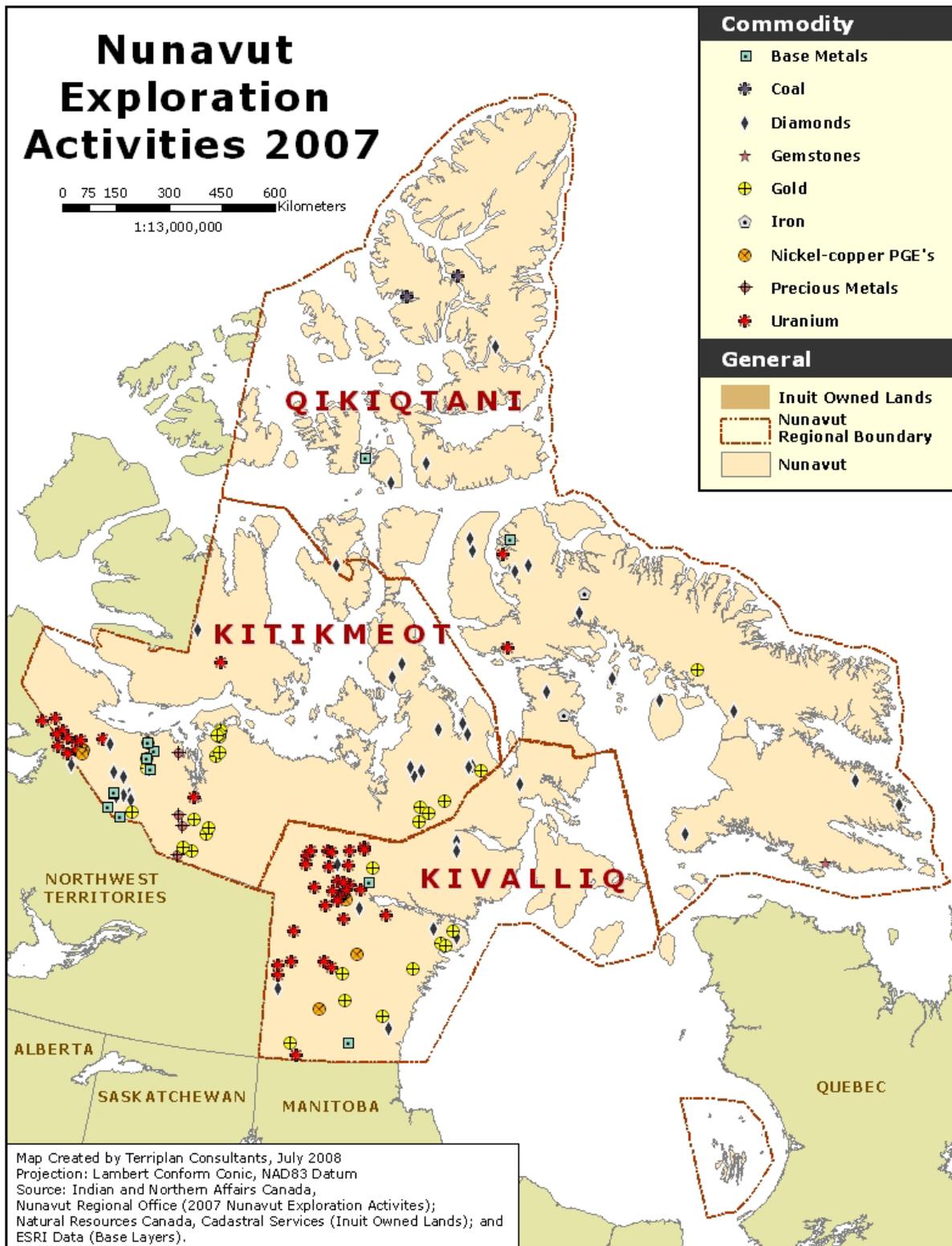
<sup>214</sup> Government of Nunavut Department of Economic Development and Transportation. (n.d.) Government of Nunavut Department of Economic Development and Transportation Business Plan: 2006-07.

<sup>215</sup> INAC Nunavut Regional Office (Presenter: Karen Costello). (Unknown). 2008 Nunavut Mining Symposium: Nunavut Exploration Activity Update (Presentation). Available [Online]: [http://www.nunavutminingsymposium.ca/presentations/documents/08a1\\_k.costello\\_inac.pdf](http://www.nunavutminingsymposium.ca/presentations/documents/08a1_k.costello_inac.pdf). Viewed: June 2008.

<sup>216</sup> Natural Resources Canada (Canadian Intergovernmental Working Group on the Mineral Industry). (2007). Overview of Trends in Canadian Mineral Industry. Available [Online]: <http://www.nrcan.gc.ca/mms/pdf/explor/2007/exploration07-e.pdf>. Viewed: June 2008.

<sup>217</sup> Department of Lands & Resources (presentation). (April 2008). Nunavut Tunngavik Incorporated. Available [Online]: [http://www.nunavutminingsymposium.ca/presentations/documents/08a2\\_k.morrison\\_nti.pdf](http://www.nunavutminingsymposium.ca/presentations/documents/08a2_k.morrison_nti.pdf). Viewed: June 2008.

Figure 52: 2007 Exploration Sites - Nunavut

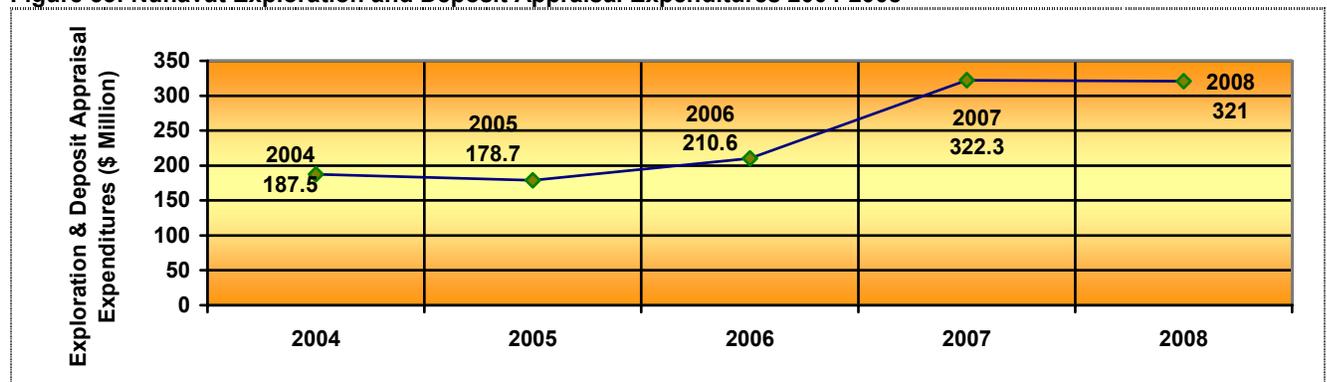


<sup>218</sup> Department of Lands & Resources (presentation). (April 2008). Nunavut Tunngavik Incorporated. Available [Online]: [http://www.nunavutminingsymposium.ca/presentations/documents/08a2\\_k.morrison\\_nti.pdf](http://www.nunavutminingsymposium.ca/presentations/documents/08a2_k.morrison_nti.pdf). Viewed: June 2008.

Mining and mining related activities are significant contributors to Nunavut’s GDP. In 2002, with the closure of both the Nanisivik and Polaris mines, the mining sector contribution to Nunavut’s GDP dropped from 21% to 3%.<sup>219</sup> However, Statistics Canada noted that Nunavut's economy expanded by a record 13.0% in 2007, up from 3.4% in 2006.<sup>220</sup> Nunavut’s economy continues to thrive, in spite of mine closures, driven primarily by mining related exploration expenditures and world demand for commodities and natural resources.

Mining related exploration expenditures have been on the rise since 2004 in the territory. In 2008 it is estimated that exploration and deposit expenditures will account for approximately \$321 million – an increase of \$133.5 million from 2004 (see Figure 53). Nunavut’s 2008 exploration and deposit expenditures are expected to account for approximately 11.6% of all mining related exploration and deposit expenditures made in Canada.<sup>221</sup>

**Figure 53: Nunavut Exploration and Deposit Appraisal Expenditures 2004-2008<sup>222</sup>**



Precious metals were the commodity for which the majority of mining exploration dollars (\$117.05 million) in Nunavut were spent in 2007. This was followed by iron, for which \$86.72 million was spent on exploration (see Figure 54). In total, approximately \$322.3 million was spent on mining deposits and exploration in Nunavut in 2007. This figure was approximately 53% greater than exploration expenditures in 2006 (\$210.6 million) and accounted for 12.6% of all mining expenditures in Canada.

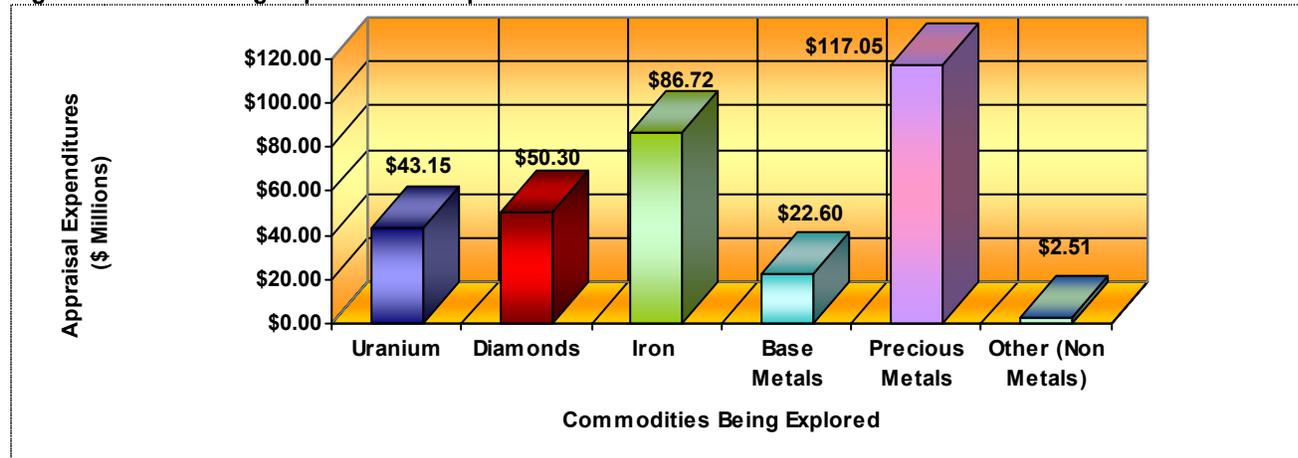
<sup>219</sup> Canadian Mining Industry. (May 2003). *Mining in the North: Investing in Canada’s Future* (presentation). Available [Online]: [http://www.mining.ca/www/media\\_lib/MAC\\_Documents/Presentations/English/northernmines.pdf](http://www.mining.ca/www/media_lib/MAC_Documents/Presentations/English/northernmines.pdf). Viewed: June 2008.

<sup>220</sup> Mine Web (Author: Dorothy Kosich). (April 29, 2008). *Junior Mining: Domestic Mining Spurred Record GDP Growth in Canadian Territories in '07*. Available [Online]: <http://www.mineweb.com/mineweb/view/mineweb/en/page66?oid=51896&sn=Detail>. Viewed: June 2008.

<sup>221</sup> Natural Resources Canada. (November 2007). *Minerals and Mining Statistics On-Line: Mineral Resources Development Statistics*. Available [Online]: [http://mmsd1.mms.nrcan.gc.ca/mmsd/exploration/byprov\\_e.asp](http://mmsd1.mms.nrcan.gc.ca/mmsd/exploration/byprov_e.asp). Viewed: June 2008.

<sup>222</sup> Natural Resources Canada. (November 2007). *Minerals and Mining Statistics On-Line: Mineral Resources Development Statistics*. Available [Online]: [http://mmsd1.mms.nrcan.gc.ca/mmsd/exploration/byprov\\_e.asp](http://mmsd1.mms.nrcan.gc.ca/mmsd/exploration/byprov_e.asp). Viewed: June 2008.

**Figure 54: 2007 Mining Exploration & Deposit Activities in Nunavut<sup>223</sup>**



Though no mines are currently operational in Nunavut, according to recent reports, the Nunavut Impact Review Board (NIRB) has approximately half a dozen mining projects which are in the environmental assessment phase. In 2007, NIRB dealt with 152 project applications, launched two project reviews and monitored two other reviews.<sup>224</sup> The Nunavut Water Board (NWB) approved 230 technical reports in 2007 and is, in 2008, addressing approximately 193 outstanding reports for projects across the territory.<sup>225</sup>

***Kitikmeot Region Exploration Activity***

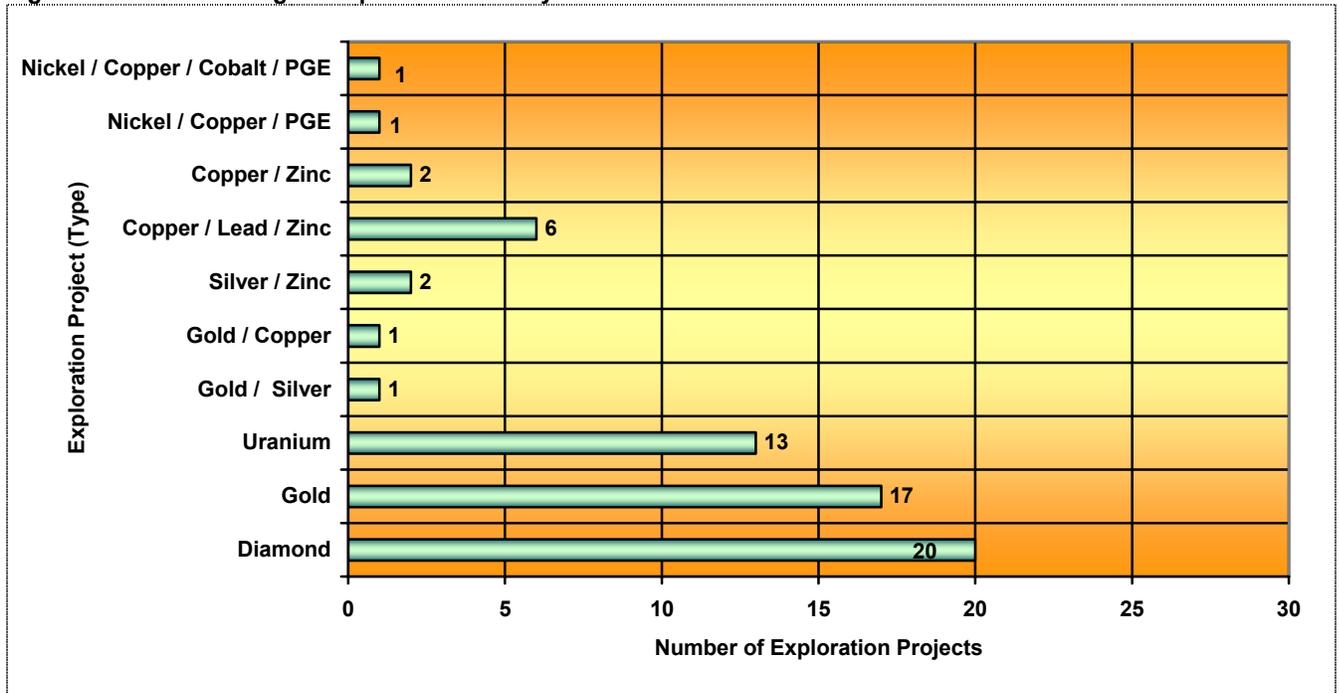
In 2007, there were approximately 64 active gold, diamond, base and precious metals, and uranium exploration projects in Nunavut’s Kitikmeot Region. The majority of these exploration activities (approximately 78%) were in the diamond (31%), gold (27%), and uranium (20%) commodity areas (see Figure 56).

<sup>223</sup> INAC Nunavut Regional Office (Presenter: Karen Costello). (Unknown). 2008 Nunavut Mining Symposium: Nunavut Exploration Activity Update (Presentation). Available [Online]: [http://www.nunavutminingsymposium.ca/presentations/documents/08a1\\_k.costello\\_inac.pdf](http://www.nunavutminingsymposium.ca/presentations/documents/08a1_k.costello_inac.pdf). Viewed: June 2008.

<sup>224</sup> Resource Development News (CBC News). (April 10, 2008). Heightened Mining Interest Swamps Nunavut Regulatory Boards.

<sup>225</sup> Resource Development News (CBC News). (April 10, 2008). Heightened Mining Interest Swamps Nunavut Regulatory Boards.

**Figure 55: Kitikmeot Region Exploration Activity<sup>226</sup>**

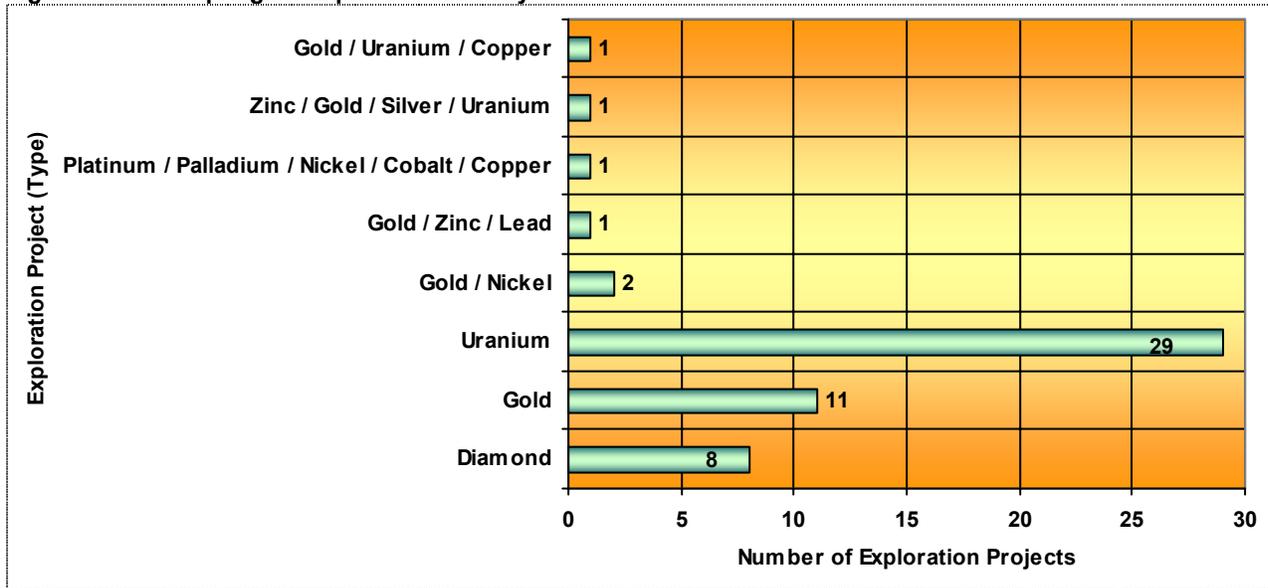


***Kivalliq Region Exploration Activity***

In 2007, there were approximately 54 active gold, diamond, base and precious metals, and uranium exploration projects in the Kivalliq Region. The majority of these exploration activities (approximately 74%) were in the uranium (54%) and gold (20%) commodity areas (see Figure 57).

<sup>226</sup> Natural Resources Canada (Canadian Intergovernmental Working Group on the Mineral Industry). (2007). Overview of Trends in Canadian Mineral Industry. Available [Online]: <http://www.nrcan.gc.ca/mms/pdf/explor/2007/exploration07-e.pdf>. Viewed: June 2008.

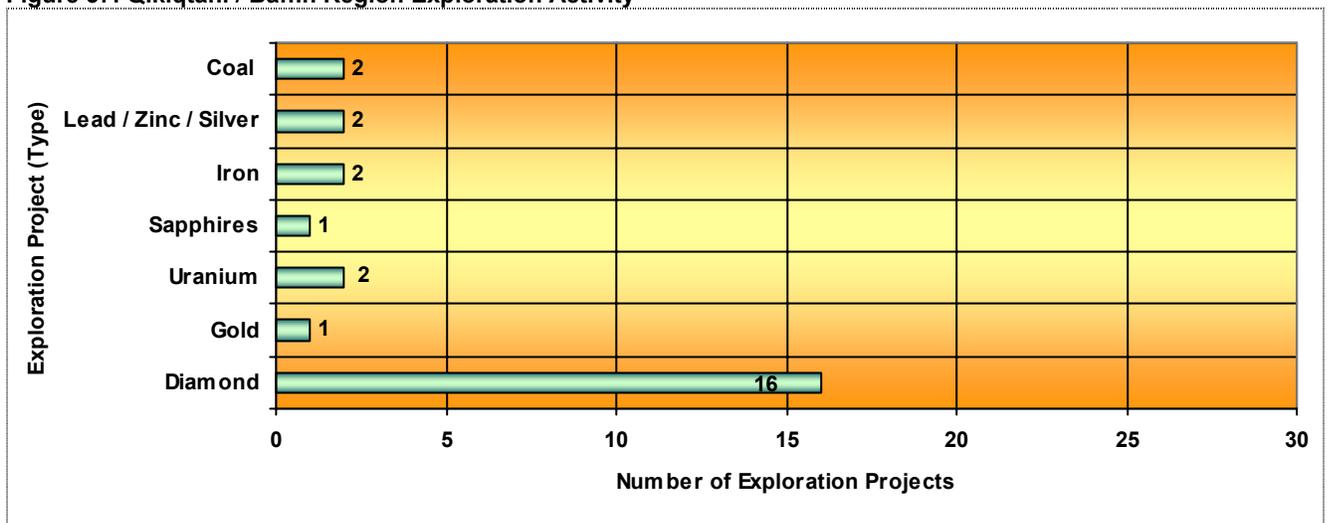
Figure 56: Kivalliq Region Exploration Activity<sup>227</sup>



*Qikiqtani / Baffin Region Exploration Activity*

In 2007, there were approximately 26 active gold, diamond, base and precious metals, and uranium exploration projects in the Kivalliq Region. The majority of these exploration activities (approximately 62%) could be found in the diamond (62%) commodity area (see Figure 58).

Figure 57: Qikiqtani / Baffin Region Exploration Activity<sup>228</sup>



<sup>227</sup> Natural Resources Canada (Canadian Intergovernmental Working Group on the Mineral Industry). (2007). Overview of Trends in Canadian Mineral Industry. Available [Online]: <http://www.nrcan.gc.ca/mms/pdf/explor/2007/exploration07-e.pdf>. Viewed: June 2008.

<sup>228</sup> Natural Resources Canada (Canadian Intergovernmental Working Group on the Mineral Industry). (2007). Overview of Trends in Canadian Mineral Industry. Available [Online]: <http://www.nrcan.gc.ca/mms/pdf/explor/2007/exploration07-e.pdf>. Viewed: June 2008.

### 3.3.11.2 PROFILING MINING ACTIVITIES

#### *Base Metals*

Base metals include copper, zinc, lead and iron. Most of the base metal exploration in Nunavut occurs in the Kitikmeot region (see Figure 59). There is significant potential in base metals as there are currently several large, undeveloped sites with massive sulphide deposits. Some particular locations of interest include Gonder, High Lake, Hood and Izok Lake.

In the Kitikmeot region there are a total of 13 exploration projects investigating base metals. Of these projects, 10 are focused exclusively on base metals exploration, while 3 are a combination of base and precious metals exploration (see Figure 55 above).

In the Kivalliq region there are a total of 6 exploration projects investigating base metals. Of these projects, none are focused exclusively on base metals exploration; all 6 are a combination of base and precious metals exploration (see Figure 56 above).

In the Qikiqtani / Baffin region there are a total of 2 exploration projects investigating base metals. Of these projects, neither are focused exclusively on base metals exploration; both are a combination of base and precious metals exploration (see Figure 57 above).

The greatest level of base metal exploration in Nunavut is taking place in the Kitikmeot region, with a total of 13 exploration projects. Kitikmeot is followed by Kivalliq in terms of number of base metal explorations taking place. Kivalliq has 6 exploration projects underway (see Figure 58). Throughout Nunavut, the majority of base metal exploration projects are focused on copper, zinc, and nickel.

**Figure 58: Regional Dispersion of Base Metals Projects in Nunavut**

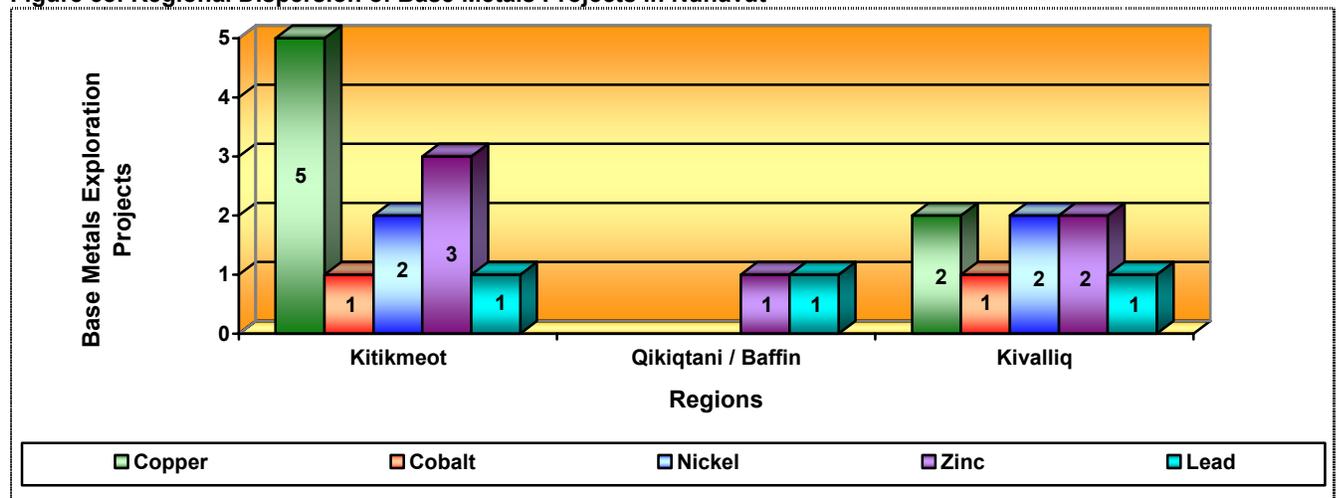
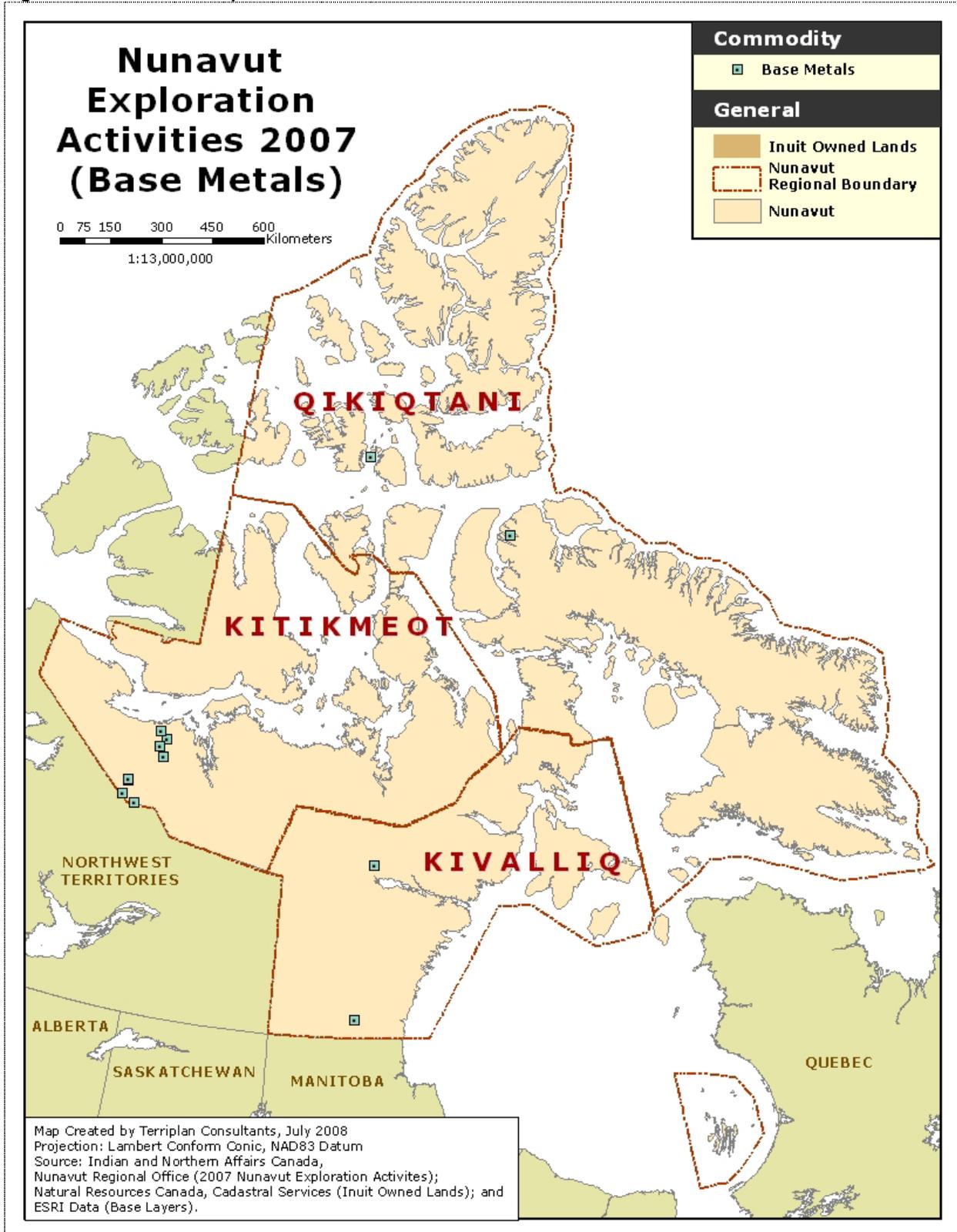


Figure 59: Base Metals Exploration in Nunavut



### ***Gold and Precious Metals***

There are three promising gold mineral deposits currently being explored in Nunavut. The first is located near Rankin Inlet. It is estimated that this site contains 4.9 million ounces of gold. The project is projected to cost \$250 to \$300 million to construct and will employ an estimated 300 people, of which up to 100 could be local residents.<sup>229</sup> A second site of mineral deposits has been identified within the over 1,000 square kilometers of the Hope Bay greenstone belt. This area is estimated to contain over 10 million ounces of gold. Finally, the Meadowbank area within the Kivalliq region contains gold deposits.<sup>230</sup> It is predicted that open pit mining in this area will produce 330,000 ounces of gold per year over a lifespan of 8.1 years.<sup>231</sup>

Exploration for other precious metals -- in particular silver and platinum -- is also occurring throughout the territory. There are several active silver exploration projects and at least two projects that include platinum exploration. The silver operations include exploration of the greenstone belt extending 140 kilometres south from the Coronation Gulf as well as the activities at Hackett River which have revealed a potential deposit of 205 million ounces of silver.<sup>232</sup>

In the Kitikmeot region there are a total of 21 exploration projects investigating gold and precious metals (see Figure 61). Of these projects, 17 are focused exclusively on gold exploration, while 4 are a combination of base and precious metals exploration (see Figure 55 above).

In the Kivalliq region there are a total of 17 exploration projects investigating gold and precious metals. Of these projects, 11 are focused exclusively on gold exploration, while 6 are a combination of base and precious metals exploration (see Figure 56 above).

In the Qikiqtani / Baffin region there are a total of 2 exploration projects investigating gold and precious metals. Of these projects, one is focused exclusively on gold exploration, while the other is a combination of base and precious metals exploration (see Figure 57 above).

The greatest level of base metal exploration in Nunavut is taking place in the Kitikmeot region, with a total of 13 exploration projects. Kitikmeot is followed by Kivalliq in terms of number of base metal explorations taking place. Kivalliq has 6 exploration projects underway (see Figure 60). Throughout Nunavut, the majority of base metal exploration projects are focused on copper, zinc, and nickel.

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<sup>229</sup> The Conference Board of Canada. "Nunavut Economic Outlook: An Examination of the Nunavut Economy" November, 2002.

<sup>230</sup> Indian and Northern Affairs Canada (2007). Nunavut Overview 2007, Mineral Exploration, Mining and Geoscience.

<sup>231</sup> Cumberland Resources Ltd. <http://www.cumberlandresources.com/mdb/mdbbank.html>

<sup>232</sup> Canadian Intergovernmental Working Group on the Mineral Industry (2007). Overview of Trends in Canadian Mineral Exploration.

Figure 60: Regional Dispersion of Gold & Precious Metals Projects in Nunavut

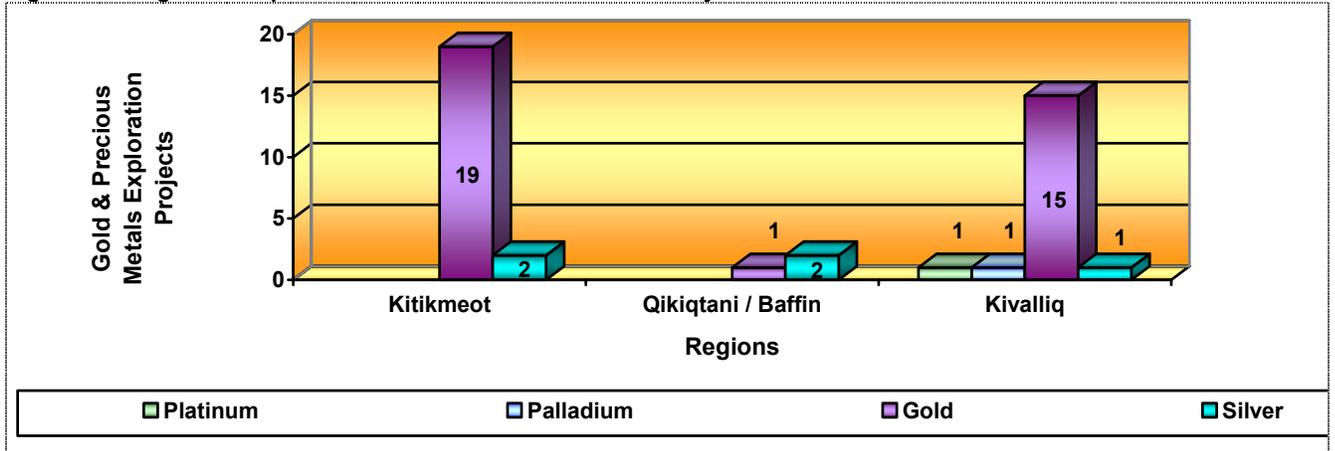


Figure 61 Gold & Precious Metals Exploration in Nunavut

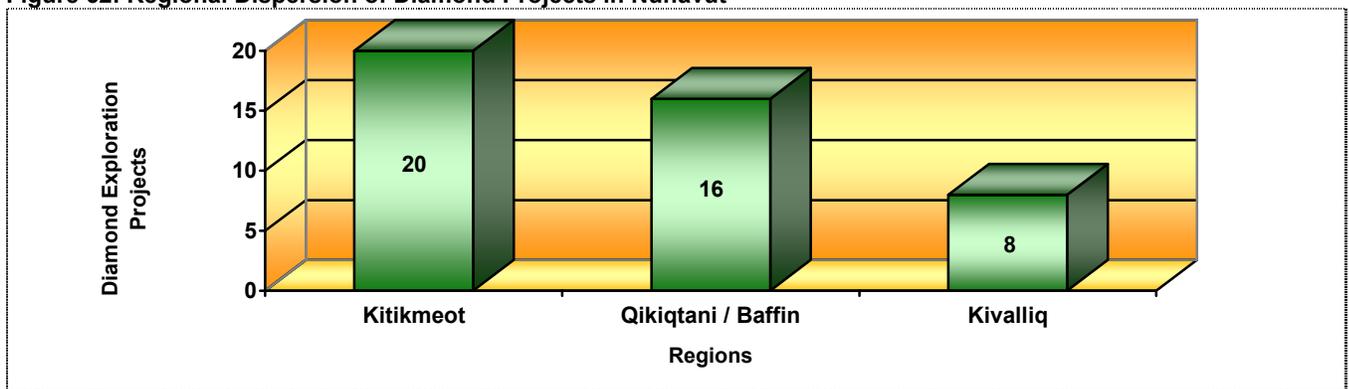


**Diamonds**

Diamonds are one of the primary commodities sought after in Nunavut. There are more than 40 active diamond projects and the total expenditures in this sector in 2007 totals \$50.3 million.<sup>233</sup> The primary geographic areas of interest include the Coronation Gulf district, the Kugaarik district, north-central Baffin Island, Melville Peninsula and parts of the Hearne domain near Rankin Inlet.<sup>234</sup> In 2006, Jericho Diamond Mine (which was closed in early 2008) -- the first diamond mine in Nunavut -- officially opened. It was originally projected to have a 9 year lifespan and produce an average of 2,000 tones per day.<sup>235</sup> In its first year, the operations unearthed a 59 carat gemstone with good shape, colour and clarity. It was sold for US\$450,000.<sup>236</sup>

Of the over 130 mining properties currently undergoing exploration, diamond and uranium activities represent the greatest proportion with 44 properties each (see Figure 63). Of the three regions, diamond exploration activity is most predominant in Kitikmeot, where 20 of the 44 current exploration projects are located (see Figure 62).

**Figure 62: Regional Dispersion of Diamond Projects in Nunavut**



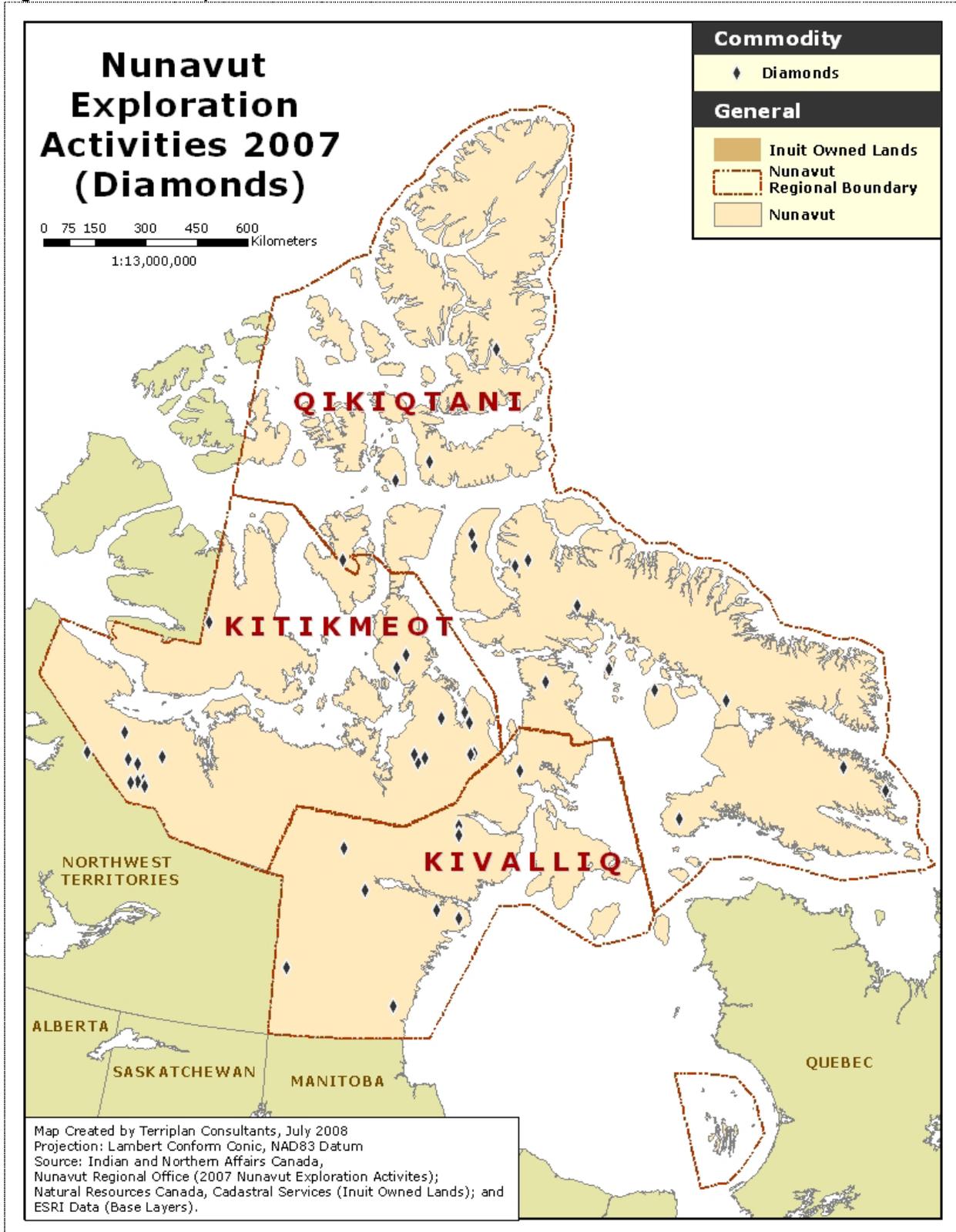
<sup>233</sup> Costello, K. (2007). *Nunavut Exploration Activity Update*.

<sup>234</sup> Indian and Northern Affairs Canada (2007). *Nunavut Overview 2007, Mineral Exploration, Mining and Geoscience*.

<sup>235</sup> Indian and Northern Affairs Canada (2007). *Nunavut Overview 2006, Mineral Exploration, Mining and Geoscience*

<sup>236</sup> Tahera Diamond Corporation. <http://www.tahera.com/Operations/Mining/default.aspx>

Figure 63: Diamond Exploration in Nunavut

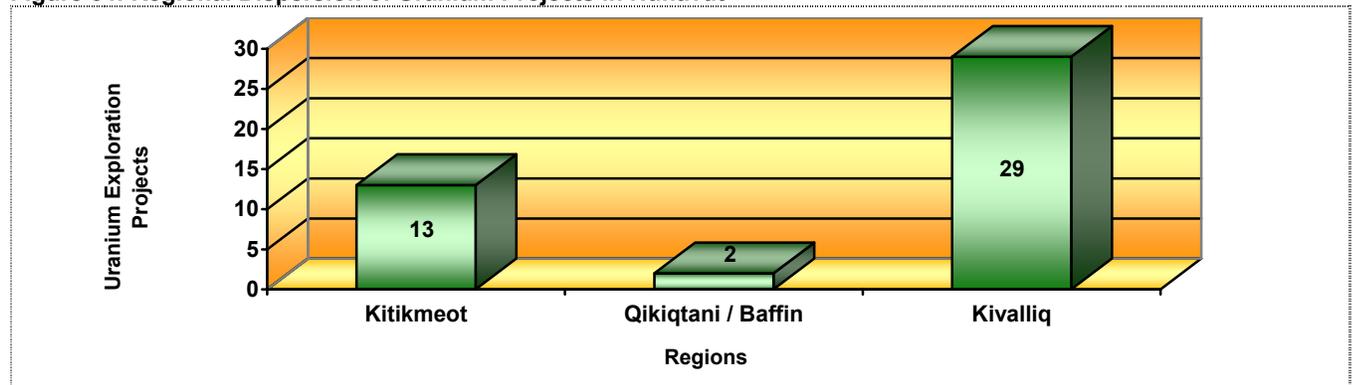


**Uranium**

Of the over 130 mining properties currently undergoing exploration, uranium and diamond activities represent the greatest proportion with 44 properties each. Of the three regions, uranium exploration activity is most predominant in Kivalliq where 29 of the 44 current exploration projects are located (see Figure 64 & Figure 65). These activities are being conducted by a range of companies, from small grassroots exploration to well-developed drill programs. The largest increase in exploration activity in 2007 was due to grassroots uranium projects.<sup>237</sup> In total, \$43.15 million was spent on exploration and deposit appraisals of uranium in 2007.<sup>238</sup>

While this work is underway across the territory, there are several areas of particular interest, including Hornby Bay, Thelon Basin, Baker Basin and the smaller Elu, Borden and Fury-Hecla basins. Current exploration activity involves both the reassessment of potential sites found in the past and the exploration of new sites.<sup>239</sup> Uranium activity is now emerging since the ban on exploration on Inuit-Owned Lands (IOL) has been lifted by Inuit leaders. Companies may now revisit historic discoveries, such as the one at Lac Cinquante, estimated to contain 11.6 million pounds of uranium oxide. At the current price of US\$75 per pound of uranium, companies as well as the Inuit who own the land may see significant profits.<sup>240</sup>

**Figure 64: Regional Dispersion of Uranium Projects in Nunavut**



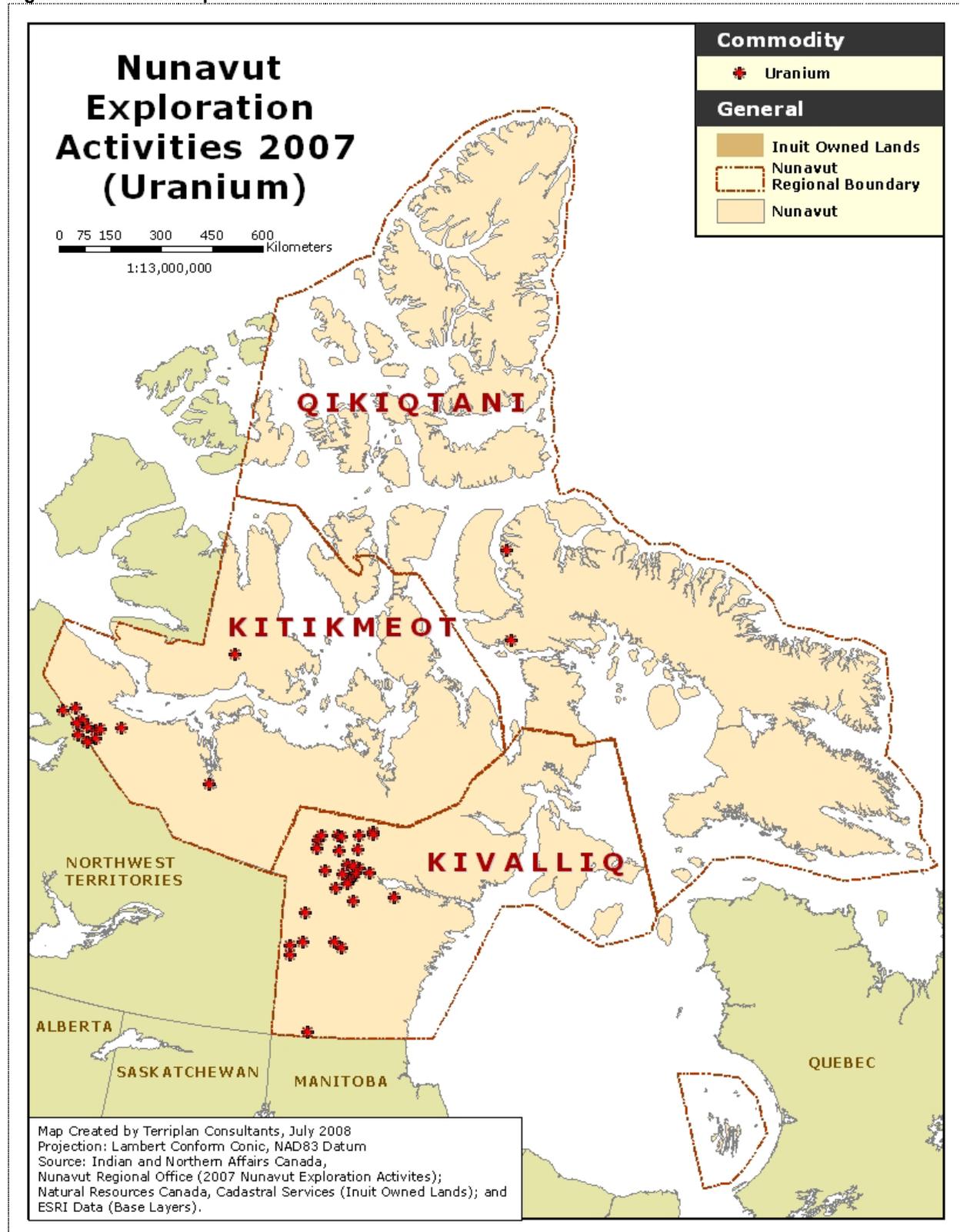
<sup>237</sup> Indian and Northern Affairs Canada (2007). *Nunavut Overview 2007, Mineral Exploration, Mining and Geoscience*.

<sup>238</sup> INAC Nunavut Regional Office (Presenter: Karen Costello). (Unknown). 2008 Nunavut Mining Symposium: Nunavut Exploration Activity Update (Presentation). Available [Online]: [http://www.nunavutminingsymposium.ca/presentations/documents/08a1\\_k.costello\\_inac.pdf](http://www.nunavutminingsymposium.ca/presentations/documents/08a1_k.costello_inac.pdf). Viewed: June 2008.

<sup>239</sup> *Ibid.*

<sup>240</sup> Dias, D. (April, 2008). *No More Taboos*. *Financial Post*.

Figure 65: Uranium Exploration in Nunavut



### ***Iron***

Iron is an important base metal for the Nunavut mining sector.<sup>241</sup> In 2007, \$86.72 million was spent on exploration activities for iron, while \$22.6 million was spent on all other base metals.<sup>242</sup> A large iron ore operation is being established south of Pond Inlet at the Mary River deposits. With construction beginning in 2010, the mine is expected to last 25 years and employ between 400 and 500 people once in operation.<sup>243</sup>

Both of Nunavut's iron exploration projects are located in the Qikiqtani / Baffin region (see Figure 66).

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<sup>241</sup> *Indian and Northern Affairs Canada (2007). Nunavut Overview 2006, Mineral Exploration, Mining and Geoscience*

<sup>242</sup> *Costello, K. (2007). Nunavut Exploration Activity Update.*

<sup>243</sup> *Quenneville, G. (Aoril, 2008). Mining Symposium Returns to Iqaluit. Nunavut News.*

Figure 66: Iron Exploration in Nunavut



### *Coal*

Two companies currently have coal licenses in Nunavut. The first -- West Hawk Coal -- has seven licenses on Ellesmere Island, 8 kilometres south of Eureka. There are two separate areas within the licenses: the North Fosheim Peninsula Property and the May Point Property. No work has been conducted on these properties since 1981 and more exploration would be needed to create an estimate of the coal resources in these locations. The second company with coal licenses is James Bay Energy Ltd. Its licenses cover the Kangut Peninsula on Axel Heiberg Island, just west of Ellesmere Island. There has been no activity reported on these licenses.<sup>244</sup>

Both of Nunavut's coal exploration projects are located in the Qikiqtani / Baffin region (see Figure 67).

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<sup>244</sup> *Indian and Northern Affairs Canada (2007). Nunavut Overview 2006, Mineral Exploration, Mining and Geoscience*

Figure 67: Coal Exploration in Nunavut



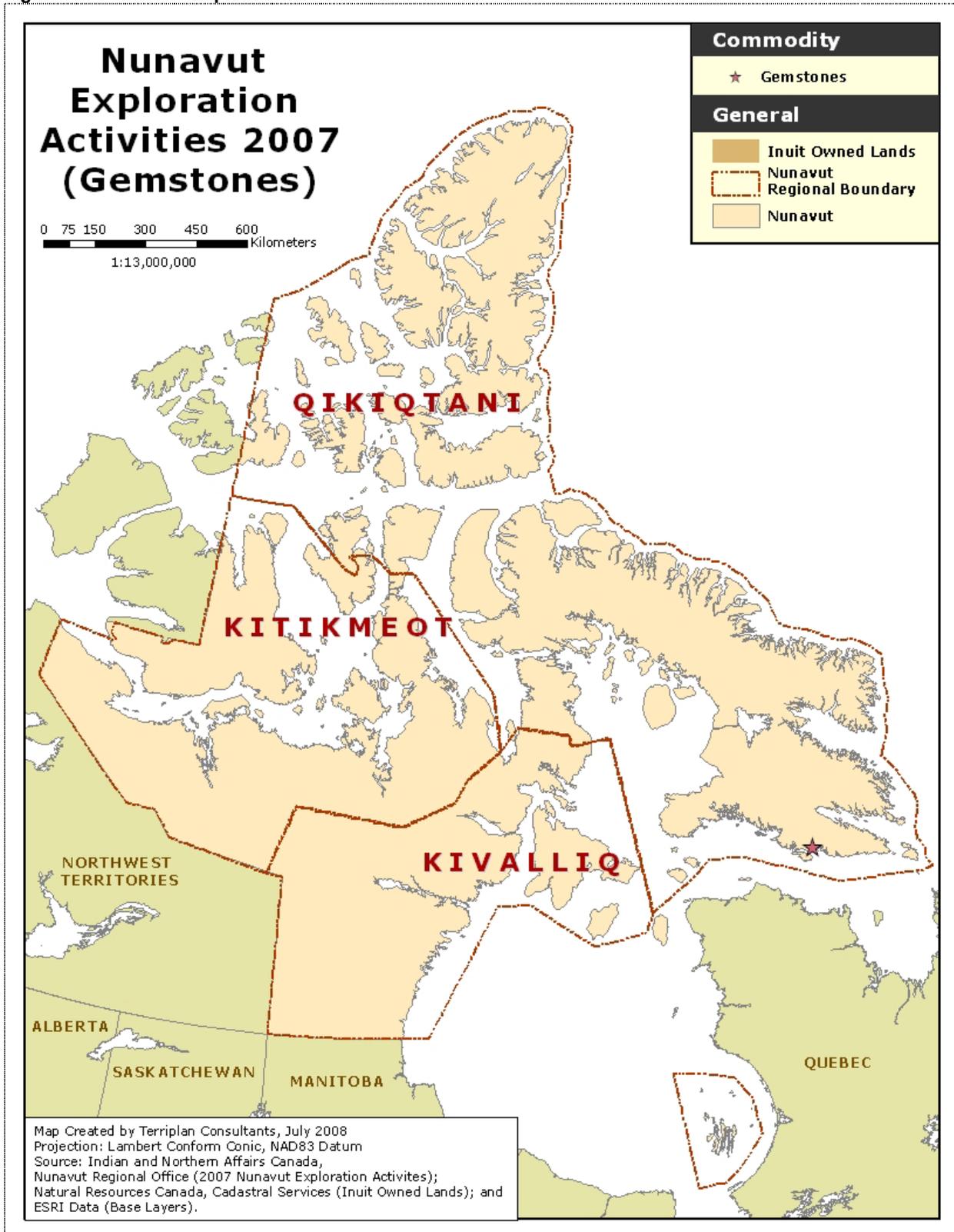
### ***Gemstones***

The only gemstone currently under exploration in Nunavut is sapphire. Nunavut's gemstone (sapphires) exploration project is located in the Qikiqtani / Baffin region (see Figure 68). Two occurrences were discovered on Southern Baffin Island in 2001. In 2004, four more occurrences in that area were found. A 2006 drilling program targeted areas hosting colourless to deep blue, yellow and pink sapphires. A prospect was found in 2007, with surface samples containing several sapphires, the largest of which was a complete crystal weighing 27.85 grams.<sup>245</sup>

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<sup>245</sup> *Indian and Northern Affairs Canada (2007). Nunavut Overview 2006, Mineral Exploration, Mining and Geoscience*

Figure 68: Gemstone Exploration in Nunavut



### **3.3.11.3 CHALLENGES**

#### ***Remoteness & Infrastructure***

The GN Department of Economic Development and Transportation states that, “Nunavut’s infrastructure in every area is far behind any other part of Canada. The lack of a road network, ports and harbours, paved runways, geology maps, and topographic maps make exploration and mineral development in Nunavut much more expensive and at a higher risk than in other Canadian jurisdictions”.<sup>246</sup> In 2007, the Jericho mine had to close operations and seek court protection for the sum of \$143 million. Jericho’s closure is blamed on inefficient calculations for Nunavut’s high cost operational environment and the fluctuating global economy.

In addition to the cost to the proponent, the lack of appropriate infrastructure has meant the dependence on ice / winter roads which, with the impact of climate change, has not necessarily been a dependable transport mechanism. These transportation challenges have resulted in creative strategies to reduce transportation costs. Such strategies have included the clustering of exploration activities close to one another as a means of leveraging existing transport arterials and situating activities in and around the coastal regions of Nunavut. Clustering and gathering in and around the coastal regions due to transportation limitations has meant that a significant portion of Nunavut has not yet been explored.

#### ***Impact of Mining (Socio-Economic & Environmental)***

Mining results in both socio-economic and environmental impact. Mining activities have the potential to impact the quality of life by contaminating local land and water resources and by impacting wildlife habitat and migration routes, which can impact the quantity of wildlife in a certain area. As such, local residents are not always supportive of having mines in their communities. A primary example of this comes from the residents of Igloolik, Nunavut and some of the Baffin Island communities who opposed plans for a mine because they felt the proposed mine was likely to impact the Inuit walrus hunts.<sup>247</sup>

#### ***Regulatory Processes***

A key challenge faced by the mining industry in locations such as Nunavut, is regulatory process inefficiencies. Driven by the fact that Nunavut is a newly established territory (with Aboriginal, Federal, and Territorial interests) functioning with a human resource deficit can result in process duplications and inefficiencies which can slow the proponent’s mining timeline down and result in increased proponent costs. Both of these scenarios (i.e., schedule delays and increasing financial costs) could make mining in Nunavut a less attractive pursuit for mining companies.

#### ***Trained Workforce***

In addition to infrastructure and access limitations, Nunavut, has a small labour force with limited education and work skills. This poses a challenge to the territory in terms of providing prospective mining companies with a local, centralized, workforce capable of being mobilized to support mining initiatives.

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<sup>246</sup> Government of Nunavut Department of Economic Development and Transportation. (Unknown). “Parnautit: A Foundation for the Future – Mineral Exploration and Mining Strategy 2007

<sup>247</sup> CBC News. (April 7, 2008). Baffin Island Residents Resist Proposed Iron Mine Plans.

## 3.4 FUTURE ECONOMIC DEVELOPMENT OPPORTUNITIES

The outlook and economic opportunities for the future for Nunavut, are discussed below first in general terms, followed by specific economic sectors. Information in this section draws on the views and experiences of organizations interviewed and information in available documentation.

### 3.4.1 Overview of Future Economic Development Opportunities

Described below is an overview of the future economic development opportunities: the economic outlook, opportunities for future economic development and economic development priorities.

#### 3.4.1.1 ECONOMIC OUTLOOK AND FORECASTS FOR NUNAVUT

The 2005 Nunavut Economic Outlook for 2005-2020 forecasts the following economic activity and GDP growth:<sup>248</sup>

- Although the public sector remains the major player in Nunavut's domestic economy and will remain so over the forecast period, recent advances in the private sector will diminish this dominance. Led by the mining and construction industries, growth in business investments will result in more private-sector jobs.
- Real GDP is expected to grow 4.7% over the period 2006-2010. Then growth is expected to decline markedly to 2.4% over 2011 to 2015 and to 1.6% over 2016-2020;
- In the early years of the forecast period, the public sector will provide new opportunities for employment and stimulate much of the territory's growth. In the later years, growth will shift towards three sectors in the private sector: mining, fishing and construction;
- Additional job creation will occur in the public, mining, and retail trade sectors. The public sector will continue to be a significant contributor to the Nunavut economy well into the future,<sup>249</sup> and,
- With growth in the Nunavut economy coming from sectors other than government, the economy will be more diversified and will lessen the territory's dependence on federal transfers.

#### 3.4.1.2 OPPORTUNITIES FOR FUTURE ECONOMIC DEVELOPMENT

There is very strong potential in mining development including gold, metals and uranium. Mining provides the greatest long-term opportunities in monetary terms. According to a 2007 GN report, "optimistically, 1500 new mine-related jobs could be created in Nunavut over the next 10 years".<sup>250</sup> Mines with known deposits possibly going forward for approval include:

- Agnico-Eagle Mines Ltd. – Meadowbank Project (gold), Kivalliq
- Areva Resources Inc. – Kiggavik Project (uranium), Kivalliq
- Newmont Ming Corp. – Hope Bay Project (gold), Kitikmeot
- Zinifex Canada - Izok Lake Project (lead, zinc), Kitikmeot;
- Zinifex Canada - High Lake Project (gold/copper), Kitikmeot; and,
- Baffinland Iron Mines Corporation – Mary River Project (iron ore), Qikiqtani.

<sup>248</sup> Clinton, G and Vail, S. 2005 *Op cit*

<sup>249</sup> Government of Nunavut Department of Finance, *Op cit*

<sup>250</sup> Government of Nunavut Department of Economic Development and Transportation, "Parnautit: A Foundation for the Future – Mineral Exploration and Mining Strategy 2007"

Nunavut has proven oil and gas potential, accounting for 5% of known oil reserves and 15% of known gas reserves in Canada.<sup>251</sup> Gas production is expected to reach 345 billion cubic feet or 6% of total projected Canadian production.<sup>252</sup>

In the longer term, higher fuel prices will make diverse alternatives to diesel generation such as hydro electricity, residual heat and energy conservation, more viable across Nunavut.<sup>253</sup>

Nunavut's fishing industry, after mining, has the potential to become a major driver of Nunavut's future economy. Fisheries is expected to expand new species including flounder, clams, crab and scallops.<sup>254</sup> Those opportunities can be augmented if Nunavut can access new fishing quotas and develop its offshore and in shore fisheries as well as fish science.<sup>255 256</sup>

Potential public infrastructure projects include:

- Construction of a deep sea port in Iqaluit, currently under study. It is expected to bring benefits to the fishing, tourism and transportation industries as well as reducing shipping cost;
- Manitoba – Kivalliq Road;
- Northwest Passage as a potential gateway;
- Bathurst Inlet Port and Road Project; and,
- Hydroelectric development in the vicinity of Iqaluit

### 3.4.1.3 ECONOMIC PRIORITIES

In 2008, the Nunavut Economic Forum (NEF) identified three top priorities for the medium term: "Education, Community and Organizational Capacity and Local Business Development".<sup>257</sup> For the NEF, it is crucial that Nunavut makes a concerted effort to ensure that its economy diversifies and attracts private investments, which are expected to expand as the land claims settlement creates a positive investment climate more conducive to predictability. Nunavut's key challenge will be to ensure that more of the wealth produced in Nunavut stays in Nunavut -- not an easy task.<sup>258</sup> According to the NEF, as of 2008, sector strategies have been completed in the following areas: Mining, Fishing, Sealing, Arts and Crafts, Housing, Adult Learning and Climate Change.<sup>259</sup> In early 2009, the NEF is expected to convene the Sivummut III Economic Development Conference which will provide the opportunity to assess progress in implementing the 2003 NEF Economic Strategy and identify new priorities for the coming years. This will help all levels of government establish their direction for investing in economic development in Nunavut.

The GN Targeted Investment Program (TIP) has identified four thematic areas for investment:<sup>260</sup>

- Building the knowledge base in key economic sectors;
- Enhancing the economic infrastructure base;
- Promoting capacity development of organizations, associations, small and medium sized enterprises (including social enterprises), and individuals; and,

<sup>251</sup> Government of Nunavut Department of Economic Development and Transportation Business Plan, 2006-07

<sup>252</sup> Government of Nunavut Department of Finance, "Nunavut Budget 2008-09, Op cit

<sup>253</sup> Qulliq Energy Corporation, "Corporate Plan 2007-2008"

<sup>254</sup> Government of Nunavut and Nunavut Tunngavik Incorporated, "Nunavut Fisheries Strategy", March 2005

<sup>255</sup> Nunavut Economic Forum, Qanijjuq: Preparing for the Journey, January 2008

<sup>256</sup> Government of Nunavut, Department of Sustainable Development, The Fishing Industry of Nunavut, Op. cit

<sup>257</sup> Nunavut Economic Forum, Qanijjuq II: Ibid

<sup>258</sup> Public Policy Forum, "Economic Transformation North of 600" - Outcomes Report", February 2007

<sup>259</sup> Nunavut Economic Forum, Qanijjuq II: Op cit

<sup>260</sup> Nunavut Economic Forum, Qanijjuq II: Op cit

- Enhancing economic diversification within regions and sectors with a focus on the development of new sectors, products and markets.

The GN will receive \$182.7 million from the federal government over the next seven years for capital infrastructure. This funding will be allocated to the following sectors: transportation infrastructure; wastewater treatment and solid waste management; clean drinking water; disaster mitigation; cultural relevance; and sport and tourism.<sup>261</sup>

The federal government's Strategic Investments in Northern Economic Development (SINED) program earmarked investments in seven areas of the TIP program between 2005 and 2009, including four sectors with the greatest potential for growth: mining and exploration (32%), fishing (8%), tourism/parks (18%), and arts and cultural industries (5%); and three areas where progress will greatly enhance Nunavummiut participation in the economy: community organizational capacity (22%), trade (10%), and broadband/connectivity (5%).<sup>262</sup>

#### **3.4.1.4 FUTURE OPPORTUNITIES IN ECONOMIC SECTORS**

A summary of future economic activity in Nunavut follows.

##### ***Transportation***

There are currently several projects in the planning and review stages aimed at addressing the challenges with Nunavut's transportation infrastructure. This includes the construction of ports, roads, harbour facilities and a railway line. These investments, made by both government and private companies not only facilitate economic development, but will also improve access and opportunities for the residents of Nunavut.

##### ***Commercial Fisheries***

Activity in Nunavut's commercial fishing industry is predicted to grow. By the year 2013 it is expected to be bringing in \$85 million to the economy. Efforts to achieve this growth include investments in marine infrastructure, such as ports, docks and harbour facilities, as well as training programs that address the need for a skilled fishing workforce. In addition to expanding the current fisheries, exploration into new fish species will occur.

##### ***Government***

In order for the government to move closer to the NLCA targets for Inuit employment, they must continue their efforts to increase training and education opportunities in order to improve Inuit capacity and thereby increase Inuit employment numbers. In addition, with the proposed transfer of administration and control of public lands and resources and rights with respect to waters, from INAC to the GN there may be an increased need for a trained, representative workforce.

##### ***Tourism***

Tourism is a sector that is highly desirable in Nunavut as it offers the opportunity for job creation at the community level, promotion of Inuit culture and protection of natural resources. Its successful

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<sup>261</sup> Government of Nunavut. *Budget Address 2008-2009, February 20, 2008, op cit*

<sup>262</sup> *Ibid*

development requires appropriate marketing, infrastructure development and standards and regulations. Opportunities for expansion include capitalizing on the European market, taking advantage of the infrastructure created by mining activities, and promoting the unique remoteness of the area.

### ***Communications***

The current goal in the communications sector is to increase broadband capacity. Doing so would create multiple benefits including promotion of arts and crafts and tourism, generation of jobs in the IT sector, and improved access to public services.

### ***Oil and Gas***

The oil and gas sector in Nunavut could grow significantly if there are sustained high oil and gas prices or supply shortages. These factors could lead to further exploration of the territory's resources. It is predicted that the rate of gas production will reach 345 cubic feet per year by 2020. To realize these predictions the territory must first overcome the obstacles presented by its extreme climate and inadequate transportation infrastructure.

### ***Energy***

As in the oil and gas sector, the increasing price of fuel and increasing demands will trigger examination of opportunities for alternative methods of generating energy and conservation. Current efforts are focused on exploring residual heat programs, conservation initiatives, nuclear power, hydro-electric generation and other alternatives (ex. solar and wind).

### ***Arts and Crafts***

The development of a successful arts and crafts sector is being pursued through a variety of strategic investments such as initiatives that help create international recognition, expand the international market share and increase the quality of Nunavut art.

### ***Wildlife***

There is potential in this sector for growth and development. This is dependent however, on a number of variables including the international policy on seal and polar bear hunting, changing climate conditions and the effects of development in other sectors on the environment. Careful monitoring and research of wildlife is needed as the economy and population of Nunavut expands.

### ***Mining***

Mining could potentially be one of the most lucrative industries for Nunavut. There are three significant projects anticipated to begin operations in the near future and it is projected that there will be 8 open mines by 2016. Each mine brings both revenue and employment to the territory. Two trends of particular interest in this sector are the research into environmentally friendly operations and the push to invest in commodities given current global political uncertainty.

### **3.4.2 Transportation and Shipping Routes**

#### ***Proposed Projects***

There are several projects in the planning and review stages that propose to address some of the current challenges with Nunavut's transportation infrastructure. These projects have been proposed by both the public and private sectors and deal with a range of issues varying in scale and cost, from port construction to road paving. While some of the projects are intended to improve access or capacity for specific sites or resource development companies, the potential economic growth facilitated by any improvement to the existing infrastructure can have benefits for the broader public, such as employment and increased accessibility.

#### ***Bathurst Inlet Port and Road Project***

The Bathurst Inlet Port and Road Project (BIPAR) is a \$270 million joint venture between Nuna Logistics (a mining-services firm) and Kitikmeot Corporation (an Inuit development company)<sup>263</sup>. The project includes the development of a marine port at Bathurst Inlet and a 211 km all-weather road from the port south to Contwoyto Lake. This will provide access into the mineral-rich interior of the Slave Geological Province. Thus, this project will facilitate the development of many large, land-locked mineral deposits, generating economic benefits for the Region and the territory. It is expected that residents of the region will benefit from greater opportunities for employment, training and small business development. Surrounding communities may benefit from a reduction in the costs of certain goods, such as fuel<sup>264</sup>. The road will also improve surface access outside of Nunavut, as it will connect to an existing winter road from Contwoyto Lake to Yellowknife. Initiated in 1998, the project is currently in the technical review process.

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<sup>263</sup> CBC News. (March 26, 2008). *Bathurst Road and Port Review Rolls on Despite Funding Uncertainties*.

<sup>264</sup> Kitikmeot Corporation. (July, 2007). *Presentation for Community Meetings*. <http://www.nunalogistics.com/projects/clients/bathurst/index.html>

Figure 69: Proposed Bathurst Inlet Port & Road



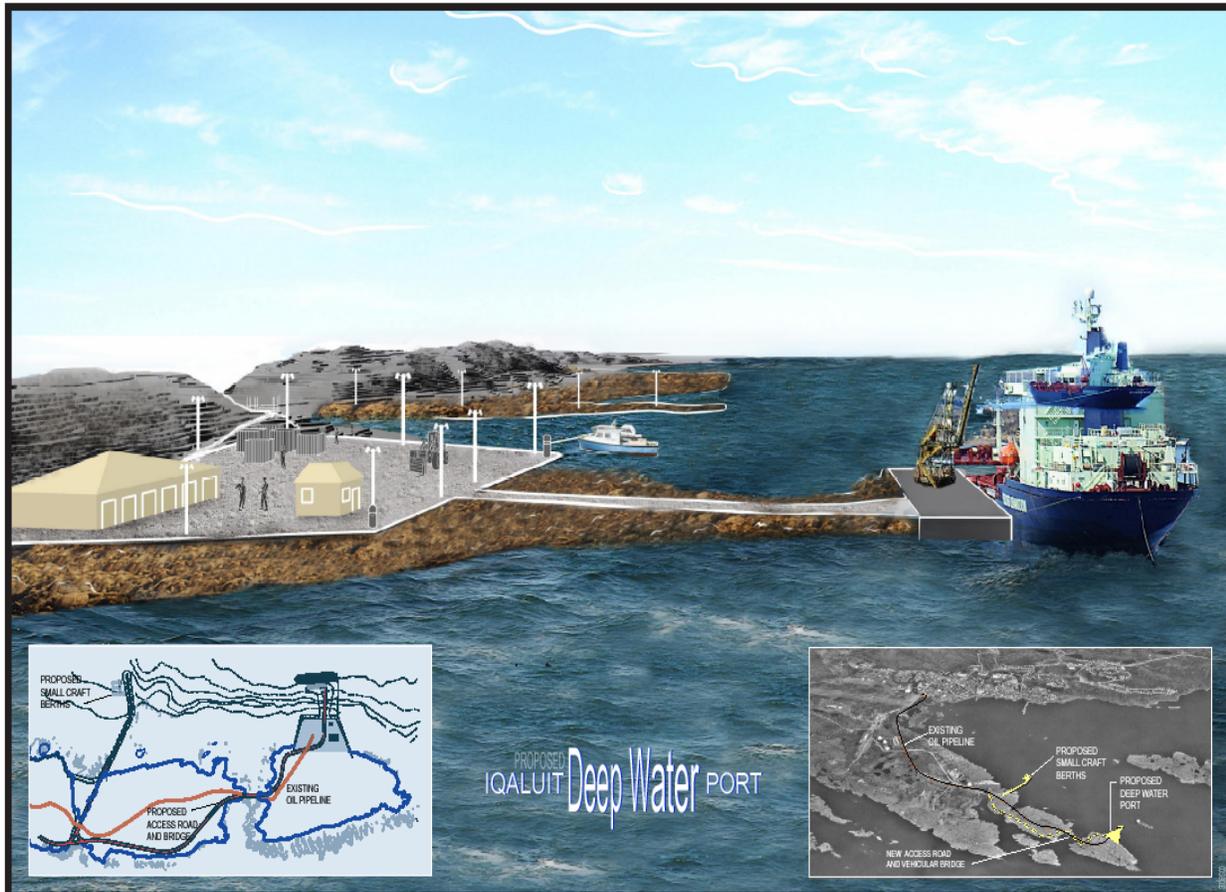
Source: Nuna Logistics

### Iqaluit Deep Water Port

The City of Iqaluit has initiated a planning process for the construction of integrated deepwater facilities. These facilities will include a deepwater port and a small craft harbour. Proponents anticipate several benefits of the construction of these facilities. For example, it is expected that the port will increase safety and reduce unloading time of cargo products by close to 80% and by almost 60% for petroleum products. It is also expected that fisheries vessels will experience a reduction in lost time through trips to port for re-supply, refuelling and unloading by an average of 6 days. This will create an incentive for fisheries vessels to visit Iqaluit. Currently ships with catches from Nunavut's off-shore fisheries are unloading in Greenland and Newfoundland. The presence of a port would allow the processing and selling of fish as exports from Nunavut. Direct employment opportunities will arise from the increase in users of the area.

Services will be required for unloading, re-supply, repair and maintenance of vessels, as well as accommodation and transportation. The ability to access boats during all tides will give local outfitters more opportunities to run boat tours for visitors. This, in addition to easier access for cruise ships, may increase revenue from tourists.<sup>265</sup>

**Figure 70: Proposed Iqaluit Deepwater Port Facilities**



Source: City of Iqaluit. (2005). Strategic Plan for the Iqaluit Deepwater Port Project

## Roads

Roads are a key element in accessing the natural resources of the territory. There are several new roads currently being considered. In the Kitikmeot Region, one mining company has proposed a road from Izok Lake to Gray's Bay on the Coronation Gulf. The company also plans to build port facilities on the Bay. Another major project that is being proposed is the construction of a road from the Kivalliq Region to Manitoba<sup>266</sup>. In 2001, the governments of Nunavut and Manitoba signed a Memorandum of Understanding to facilitate the joint planning of a road to between the two jurisdictions.<sup>267</sup> Establishing such a connection would link Nunavut to the National Highway System, promote resource development and tourism, and lower the costs of transporting goods between the Kivalliq Region and Manitoba.<sup>268</sup>

<sup>265</sup> City of Iqaluit. (2005). Strategic Plan for the Iqaluit Deepwater Port Project.

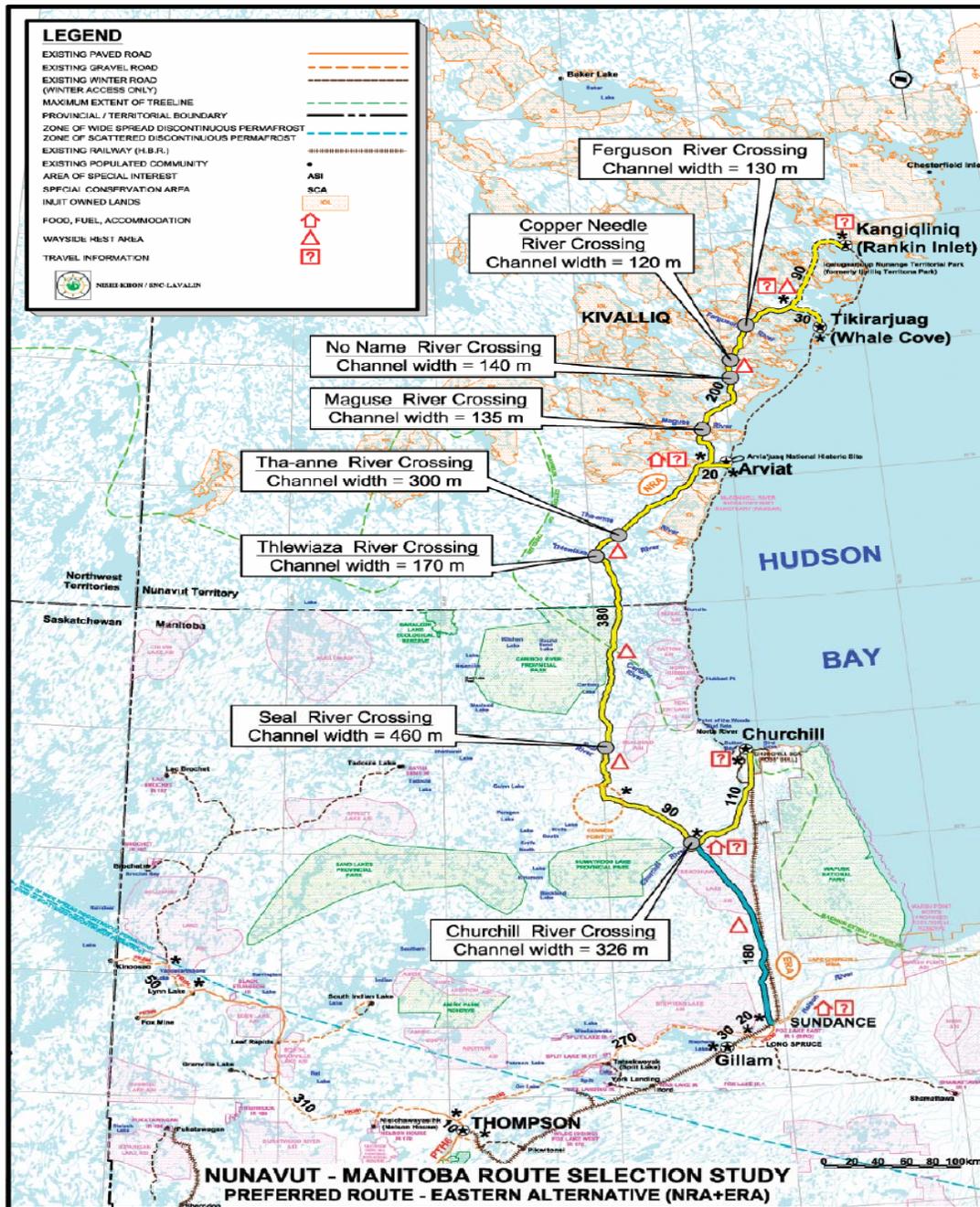
<sup>266</sup> Ryan, D. (2006). Paths to prosperity. Three Projects Vying to be Nunavut's First Major Road.

<sup>267</sup> The Conference Board of Canada. (2002). Nunavut Economic Outlook: An Examination of the Nunavut Economy.

<sup>268</sup> Nunavut –Manitoba Selection Study. <http://www.nu-mbrss.snclavalin.com/index.htm>

These proposed roads, in addition to the previously described road from Bathurst Inlet, have the potential open up parts of the territory for development.

Figure 71: Proposed Road from Kivalliq Region in Nunavut to Churchill, Manitoba



Source: Nunavut–Manitoba Selection Study (2007) Newsletter

Currently, Nunavut has no railway lines. This may soon change with the proposal to build a railway system on Baffin Island. A mining company seeking to develop iron ore in Mary River plans to construct

a rail line from Mary River 145 km to port facilities at Steensby Inlet. Trains would be used to move ore to the port and bring in supplies and equipment<sup>269</sup>.

### ***Docking Facilities and Small Craft Harbour***

There are also projects currently planned for Baffin Island to address the lack of marine infrastructure. Docking facilities are planned for Pangnirtung and 6 other areas around Baffin. A new small craft harbour is being developed in Pangnirtung and should be complete by 2010. These projects are intended to help develop the fisheries sector by increasing access and capacity.

### ***Other Opportunities***

In addition to these projects, for which planning is already underway, the Government of Nunavut has identified several priority areas for future initiatives. These include developing an Intercommunity Access Road and Resource Road Program, a Harbour, Breakwater and Marshalling Area Program, relocating airports and paving existing roads.<sup>270</sup> There is also potential for the territory to take advantage of its unique geographical features. For example, the area offers an ideal location for cold-weather testing of military and civilian aircraft. The European Aeronautic Defence and Space Company has selected the Iqaluit International Airport as the testing ground for projects such as the Euro-Copter and the Airbus A380 jumbo jet.<sup>271</sup> Also, climate change may reduce sea ice, opening up the Northwest Passage for shipping and allowing for more extensive exploration for minerals and fossil fuel.<sup>272</sup>

### **3.4.3 Commercial Fisheries**

There are optimistic forecasts for the future of Nunavut's commercial fisheries sector. The Sivummut Economic Development Strategy Group projected that Nunavut would achieve 85% ownership of its adjacent resources by 2013. Along with this, it expects that by that same year at least 200 new jobs will be created in offshore fisheries and that two new fish processing facilities will be in operation.<sup>273</sup> The Baffin Fisheries Coalition estimates that within 10 years, the fishery will contribute at least \$85 million to the territorial economy.<sup>274</sup> In addition to ongoing efforts to improve quotas, groups within the Nunavut fisheries sector have focused on several key areas to realize these projections.

One of these areas is the exploration of new species of fish. This work has shown economic potential for a number of species including scallops, toad crab, flounder, sea urchins and various species of cod. A particular interest is the Greenland cockle and soft-shelled clam found off the east coast of Baffin Island. Changes in world markets, harvests of traditional species and technology could increase the potential of these species and help diversify the Nunavut fisheries sector.<sup>275</sup>

Training is another area that is receiving significant focus. In 2005, a partnership was formed between the government of Nunavut, the federal government, Inuit organizations, Baffin Fisheries Coalition and private industry. Through this partnership a \$5.1 million initiative was developed to provide training for Inuit on fishing vessels. This program provides a variety of educational opportunities, from training for entry-level positions and technical positions such as mates and engineers to diploma programs for

<sup>269</sup> *Railway Gazette*. (2008). *Baffin Island Arctic Ore Line Advances*.

<sup>270</sup> *Governments of Nunavut, NWT and Yukon*. (2008). *Northern Connections: Multimodal Transportation Blueprint for the North*.

<sup>271</sup> *Government of Nunavut Department of Finance*. (2008). *Nunavut Budget 2008-09: Supplementary Documents*.

<sup>272</sup> Clinton, G. and Vail, S. (2005). *Nunavut Economic Outlook: An Update on 5 Years of Progress*, *Nunavut Economic Forum*.

<sup>273</sup> *The Sivummut Economic Development Strategy Group* (2003). *Nunavut Economic Development Strategy: Building a Foundation for the Future*.

<sup>274</sup> *Baffin Fisheries Coalition*. <http://www.edt.gov.nu.ca/lookupnunavut/comfishing.htm>

<sup>275</sup> *Nunavut Department of Sustainable Development*. *The Fishing Industry of Nunavut: Sedna's Bounty, Spirit, Soul and Sustenance*.

fisheries observers and administrators. It also provides career counselling and mentorship programs to increase job retention. The overall goal is to train up to 180 individuals and support the growth of the industry with local employees.<sup>276</sup>

Another activity that has been prioritized is the development and improvement of infrastructure. There are proposals currently underway to construct ports, docks and harbours in Iqaluit, Bathurst Inlet and at various locations around Baffin Island. These efforts will help improve access and safety for Nunavut fishing vessels. The Baffin Fisheries Coalition has contributed to the development of fishery infrastructure by acquiring two fishing vessels, both with freezing capacity.

Nunavut's fisheries are currently lacking base-line data on its fish species and interspecies interactions. This is in part to the fact that Nunavut's fishery is still emerging and science is a mandate of the federal Department of Fisheries and Oceans (DFO). While other jurisdictions have had the benefit of years of science and exploration, DFO has recently reduced its science sectors and capacity and have moved towards a user pays model, which does not work in Nunavut where the fishing industry is still trying to develop. Increased investment in fish science is needed in the North.

Partnerships (federal, territorial, Inuit orgs, research institutes, college, etc.) are also key to fisheries and sealing development. Improvements in public relations, training and technology, marketing and business development and Science and Resource Management would all contribute to a vital fishery in Nunavut. A current challenge in the fishery sector is the need for more federal funding programs to support these initiatives.

### **3.4.4 Government**

#### ***Employment Targets***

In order for the government to move closer to the NLCA targets for Inuit employment, they must continue their efforts to increase training and education opportunities in order to improve Inuit capacity and thereby increase Inuit employment numbers.

#### ***Devolution of Lands and Resources***

The proposed transfer of administration and control of public lands and resources and rights with respect to waters, from INAC to the GN is presently on the negotiating table. Should this transfer of responsibility occur, it will signify an important opportunity for the political progress of Nunavut. It will also mean that a number of new positions related to lands and resources will be devolved from INAC to the GN (number to be determined). This will in turn create considerable challenges in ensuring a trained, representative workforce is in place to assume these new positions.

#### ***Private Sector***

Although the public sector remains the major player in Nunavut's domestic economy and is expected to remain so over the period from 2005 to 2020, recent advances in the private sector will diminish this dominance. The 2005 Nunavut Economic Outlook forecasts that growth in business investment, led by the mining and construction industries, will result in more private sector jobs and greater diversification of the economy.<sup>277</sup> However, increased mining and exploration activities bring with them increased

<sup>276</sup> Nunavut Economic Forum. (2005). *Economic Outlook Update of 5 Years of Progress*.

<sup>277</sup> Clinton, G. and Vail, S. (2005). *Nunavut Economic Outlook: Update on Five Years of Progress*. Nunavut Economic Forum, July 2005.

government responsibilities for regulating and managing the many projects that will require their efforts in future years, ensuring that the government will remain a vital and strong force in Nunavut's economy in the future.

### **3.4.5 Tourism**

Three sectors offer excellent prospects for large scale economic growth: minerals, fishing, and tourism. All three offer possibilities to build community assets in the form of training, jobs, and business opportunities.<sup>278</sup> According to the GN, "tourism may well be one of the only industries available in Nunavut that can offer opportunities for employment creation at the community level".<sup>279</sup> Nunavut's distinctive attractions have tremendous potential to support the development of tourism products and services. The tourism sector generates external capital, promotes Inuit culture and the protection of the territory's natural resources.<sup>280</sup> However, tourism hinges on appropriate marketing and promotion, along with the development of appropriate standards and regulations, and infrastructure development.<sup>281</sup>

#### **Funding**

Initiatives such as Indian and Northern Affairs Canada's Targeted Investment Programs (TIPs) and Developing the Northern Market projects hold the potential to address tourism marketing concerns. These projects have (and will) contribute a total of \$1.11 million from 2006-2009 to Nunavut Tourism for a New Marketing Initiatives project in order to increase awareness and generate interest in Nunavut as a tourism destination.<sup>282</sup>

Additional funding-related initiatives include the Canada-Nunavut Rural Infrastructure Fund (MRIF) which supports smaller-scale municipal infrastructure projects that meet pressing infrastructure needs in Nunavut communities such as infrastructure necessary to support clean drinking water, separation and treatment of wastewater, local culture, recreation, and tourism.<sup>283 284</sup> In addition to this fund, Canada and Nunavut are each contributing an additional \$3.1 million to the existing Canada-Nunavut MRIF to benefit projects in Nunavut.<sup>285</sup>

The Building Canada Fund is also an additional source of money from which Nunavut can draw to address infrastructure related needs. The fund provides the Government of Nunavut with \$26.1 million annually for the next seven years in much needed capital infrastructure funding. This funding of \$182.7 million, over the life of the agreement will be allocated to projects that meet Canada's eligibility criteria by falling into one of three broad categories of which tourism falls into one.<sup>286</sup>

<sup>278</sup> *The Sivummut Economic Development Strategy Group. (June 2003). Nunavut Economic Development Strategy: Building a Foundation for the Future.*

<sup>279</sup> *Government of Nunavut (2002). The Time is Right: A Vision and Strategy for Tourism Development in Nunavut.*

<sup>280</sup> *Government of Nunavut. (unknown). Government of Nunavut Department of Economic Development and Transportation Business Plan 2006-07.*

<sup>281</sup> *Government of Nunavut. (unknown). Government of Nunavut Department of Economic Development and Transportation Business Plan 2006-07.*

<sup>282</sup> *INAC. (2007). Tukimut 2007 Edition – Marketing Tourism.*

<sup>283</sup> *Government of Nunavut. (2005). Municipal Infrastructure Backgrounder.*

<sup>284</sup> *Government of Nunavut. (2005). Municipal Infrastructure Backgrounder.*

<sup>285</sup> *Government of Nunavut. (2005). Municipal Infrastructure Backgrounder.*

<sup>286</sup> *Government of Nunavut. (February 20, 2008). Budget Address 2008-2009.*

### ***Tourism Initiatives***

Nunavut Parks and several communities in Nunavut are currently working on developing local and regional attractions in Coral Harbour, Kugaaruk, Clyde River, and Hall Beach. In addition, Nunavut Parks is planning additional site restoration at Kekerten and Sylvia Grinnell Territorial Parks.<sup>287</sup>

Seasonal tourism, which is a challenge for Nunavut, has in fact yielded -- and could continue to yield -- benefits for Nunavut. According to the GN, “There has been a significant increase in the demand and consumption of winter tourism products in Canada. Nunavut is well positioned in offering an extended winter season and unique winter products, such as dog sledding and floe edge trips”.<sup>288</sup>

### ***Remoteness***

Nunavut is well positioned to capitalize on the growing interest among travelers to have a unique and authentic tourism experience. The high cost associated with travel to Nunavut can in fact limit the quantity of tourists visiting the location and thus brand the territory as a unique and relatively untouched tourist destination. Remoteness and high travel costs -- while impeding the mass market -- are in fact helpful to attracting high-end, “elite” travelers who are not price sensitive and who do not want a trip that can be accessed by large numbers of people.<sup>289 290</sup> The growth in eco-tourism and the interest in cultural tourism also hold great future potential for Nunavut’s tourism industry.

### ***Expanding Market***

Driven primarily by the current ban on bringing polar bear trophies into the USA, Nunavut is looking to expand its target sport hunting market to Europe. By making Nunavut accessible to the European market, Nunavut could potentially see a growth not only in sport hunting but likely a growth in other tourism-related activities in the territory.

### ***Exploration Activity***

Nunavut’s infrastructure in every area is far behind any other part of Canada. Throughout Canadian history the expansion of physical infrastructure into remote areas has often been led by the mining industry. Communities can obtain significant benefits if a mining company utilizes Inuit workers/companies, and uses the community as a base from which it sources goods and services, and through which it directs all traffic into and out of the mine site. Once a mine makes a decision to use a community as a base, and critical infrastructure is put in place, the community may then become a viable hub for other activities, including tourism and other economic pursuits.<sup>291</sup> Given the current interest in mining exploration, the potential is great that Nunavut will see established mines in the future. In addition to building transportation infrastructure, it is likely that sewage, communication, and accommodation (i.e. hotels, etc.)-related infrastructure, to name a few, will also be developed. As mines establish and build supporting infrastructure, the tourism industry will likely benefit by building on the established infrastructure.

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<sup>287</sup> Nunavut Parks. (n.d.). *Park Planning: Park Projects*. Available [Online]: <http://www.nunavutparks.com/park-planning/park-project.html>. Viewed: June 2008.

<sup>288</sup> Government of Nunavut. (2002). *The Time is Right: A Vision and Strategy for Tourism Development in Nunavut*.

<sup>289</sup> Government of Nunavut. (2002). *The Time is Right: A Vision and Strategy for Tourism Development in Nunavut*.

<sup>290</sup> Government of Nunavut. (2002). *The Time is Right: A Vision and Strategy for Tourism Development in Nunavut*.

<sup>291</sup> Government of Nunavut Department of Economic Development and Transportation. (2007). *Parnautit: A Foundation for Future – Mineral Exploration and Mining Strategy 2007*.

### 3.4.6 Communications

After two years of existence and more than 4,000 users, it is obvious that access to the rest of the world via broadband will change perceptions, expectations and Inuit life in general. What is also recognized is that Nunavut's broadband system needs better and more reliable connections, and its existing potential for further expansion should be utilized. Increasing broadband capacity is considered an important emerging opportunity to enhance Nunavut's economy.

#### Cost

In 2005 there was no consensus on the likely future cost of bandwidth, although there is now agreement that it will increase in price. According to one point of view, the demand for bigger volume applications will lead to the rising costs of their delivery. Opponents of this view believe that competition to the Nunavut Broadband Development Corporation is inevitable and it will help keep service affordable and give consumers a choice. In July 2005, the Nunavut Economic Forum indicated that Northwestel was working to put in place technology to deliver high-speed broadband to Nunavut.<sup>292</sup> As well, the Department of Economic Development and Transportation's current top three priorities are airport improvements, the development of small craft harbours and in the development of broadband infrastructure.

Since 2002, the Government of Nunavut has been working to improve the effectiveness of the broadband system. It recognized that specific research that develops techniques for maximizing available satellite bandwidth (e.g., compression and caching) will be needed in the future.<sup>293</sup>

#### Tourism, Retail, Arts and Crafts

Success in the tourism industry, as well as in retail and arts and crafts sectors is dependent on improvements in communication technology. Promoting Nunavut to the rest of the world as a great place to visit by virtual reality tours, and planning and reserving vacations online will facilitate tourism to the territory. Commerce will shift to e-commerce. On-line shopping will also help individual artists and other craft businesses to advertise and sell their products directly to customers at higher prices by avoiding third parties and middlemen. Improvement of efficiency and security of financial transactions by broadband technology will also positively affect the tourism, retail and cultural sectors.



Stencil demonstration by Jack Nuviyak of Rankin Inlet, 2007

Source: Government of Nunavut. Department of Economic Development and Transportation. *Sanaugait. A Strategy for Growth in Nunavut's Arts and Crafts Sector*. 2007

<sup>292</sup> Clinton, Graeme and Stephen Vail. *2005 Nunavut Economic Outlook: Update on 5 years of Progress – Final Report*. Prepared for Nunavut Economic Forum by Impact Economics. July 2005

<sup>293</sup> Government of Nunavut, Department of Sustainable Development, Community Economic Development and Trade Division, Nunavut Broadband Task Force. *Sivumuuqallianiq, Moving Forward: Strengthening our Self Reliance in an Information Age*. 2002

### ***Employment***

The increasing accessibility and use of broadband will generate employment throughout the newly emerging IT sector. Hardware specialists and technicians will be needed for installations and repair. Expertise in software applications, programming and database development will be required as people become more familiar with the Internet, and want to take full advantage of the possibilities it provides. Website designers will be busy updating and improving existing websites for Nunavut-based businesses and organizations, and creating new sites for those who do not want to lose in business competition. Also, there will be an increasing demand for those who can teach others how to use this technology.

### ***On-line Meetings***

Nunavut culture is based on the tradition of oral communication. Knowledge transfer and direct discussions have always played important role in community life. However, due to the very low population density in the territory and lack of infrastructure, direct communications among communities are a challenge, either geographically or financially. Broadband with its multi-point videoconferencing capacity will help to overcome these difficulties and link remote communities to each other. This service can also be used for conducting public meetings and consultations required for many government and private initiatives. On-line tele-consultations with the possibility of simultaneous interpretation can significantly reduce the cost of logistics if these meetings were conducted face-to-face.

### ***Access to Public Services***

Nunavummiut in remote communities face the same challenges when they need to access health, education, and other public services. Broadband has the potential to reduce travel costs as well as delivery of the service. For example, videoconferencing can facilitate patient-doctor interactions in the fields of diagnosis/care, mental health, and dermatology. In education, the broadband can increase opportunities to learn by providing access to distance learning programs and Internet-mediated teaching.<sup>294</sup>

### ***Preservation of Traditional Culture***

After only a little more than three years of widespread access, it is hard to predict how broadband will influence the Nunavut culture. Will it increase the domination of English-based culture? In order to preserve and promote Inuit culture, both audio-visual and written content of the broadband and its applications should further Inuktitut and Inuinnaqtun and traditional oral culture.<sup>295</sup>

### ***Distance Education***

The widespread availability of broadband internet would significantly improve the ability of the Department of Education to deliver educational programs in remote communities. The department fully recognizes that increased literacy levels, improved education levels and trades training all impact socio-economic development. Currently the size and isolation of many communities – distance, population, lack of infrastructure – makes the delivery of training very difficult; and the cost is often prohibitive for such small numbers of people. Broadband services would allow many more people in remote communities to access education and training programs in English and/or Aboriginal languages.

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<sup>294</sup> Government of Nunavut, Department of Sustainable Development, Community Economic Development and Trade Division, Nunavut Broadband Task Force. *Sivumuuqalliani, Moving Forward: Strengthening our Self Reliance in an Information Age*. 2002

<sup>295</sup> *ibid.*

### **3.4.7 Oil and Gas Sector**

Nunavut is totally dependent on imported fossil fuels for its energy needs. The cost of imported fuel is dependent on the world price of crude oil and gas; therefore, sustained high oil and gas prices or supply shortages in North America may lead to the situation when a much greater portion of the GN budget will be spent on energy. This, in turn, may trigger further exploration of the territory's oil and gas reserves. Recently, the Council of the Federation projected Nunavut's gas production rate will reach 345 billion cubic feet per year by the year 2020, almost 6 percent of total projected Canadian production.<sup>296</sup>

#### ***Overcoming the Challenges***

There are potential challenges for petroleum development in Nunavut. Extreme climate with almost year-round ice cover, and remote location of discovered reserves will require highly technical facilities for their extraction. These factors, in combination with the lack of infrastructure needed to transport the product to markets, will lead to a high capital cost of the development of the territory's oil and gas resources. In addition, potential negative environmental impacts caused by production and transportation may be significant.

In accordance with its plan to facilitate oil and gas exploration and development activity in Nunavut, the GN's Department of Economic Development and Transportation has commissioned a study of the issues and challenges the petroleum sector is facing in the territory. The main goals of this study are encouragement of the development of the Melville Island gas fields within the next ten years, and accurate determination of Nunavut's oil and gas potential. The latter will greatly increase confidence of those investors who consider exploration of the fields where there have been no discoveries made (mostly outside the Sverdrup Basin). These other areas are considered a high risk. Also, investors' confidence in the territory's oil and gas sector will be boosted by the Department's announcement that in cooperation with Indian and Northern Affairs Canada (INAC), Natural Resources Canada (NRCan), National Energy Board (NEB), and the Geological Survey of Canada, it will make information about territory's petroleum resources publicly available.<sup>297</sup>

### **3.4.8 Energy**

#### ***Opportunities for the Energy Sector***

The high price of fuel, coupled with increasing energy demands from new or refurbished infrastructure and expected economic growth (particularly in the mining sector) provide a strong basis for examining future opportunities for alternative methods of generating energy, managing the resources and conserving its use.

#### ***Research and Strategies***

The *Ikuma II Report: Meeting Nunavut's Energy Needs: Structures and Strategies*, in 2002 indicated that "to solve its oil dependency problem the GN needs a strategy to manage costs, reduce use, and find alternatives".<sup>298</sup> Under *Pinasuaqtavut: 2004-2009*, the Qulliq Energy Corporation (QEC) is specifically instructed to find alternatives to diesel fuel for electricity production. The corporation will lead the development of a comprehensive energy strategy in partnership with appropriate GN departments and

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<sup>296</sup> Government of Nunavut. Department of Finance. *Nunavut Budget 2008-09: Supplementary Documents*

<sup>297</sup> *Ibid.*

<sup>298</sup> *Ikuma II Report: Meeting Nunavut's Energy Needs: Structures' and Strategies*, March 21, 2002

other organizations. This strategy will assist the government to manage energy issues over the next 10 years and beyond with specific targets and initiatives for the next two and five years.

QEC is actively pursuing measures to move away from dependence on fossil fuels, implement energy conservation measures and examine ways to increase human resource capacity for future energy needs. This section describes these key measures, followed by plans for future projects/initiatives.

### ***Residual Heat Programs***

Residual Heat Programs, currently operating in 8 communities, are planned to be expanded into more Nunavut communities over the coming years. As an example, the new Qikiqtani General Hospital is planning to use waste heat from the nearby power plant as its main source of heating.

### ***Conservation Initiatives***

A range of conservation initiatives are planned for the future. These include the following:

- Optimal Efficiency Plant Design – QEC engineers and consultants design new electrical operations and plants with a view to fuel efficiency to result in more efficient plants for many years into the future;
- Engine upgrades to reduce average fuel/energy consumption per piece of equipment;
- In-house initiatives for fuel conservation;
- Reducing the future demand for infrastructure through energy saving campaigns and greater use of combined heat and power;<sup>299</sup>
- Greater attention to maintenance of infrastructure such as water and heat leaks to achieve substantial savings;<sup>300</sup> and,
- Living units that share common heating and water systems to reduce energy and water consumption and lower costs.<sup>301</sup>

### ***Nuclear Power***

The potential for nuclear energy generation is also being explored. Under the principles introduced by the GN in response to significant interest in Nunavut's uranium resources in recent years, the GN believes that nuclear power generation will be an important part of global strategies for ensuring energy supplies while reducing reliance on greenhouse gas-emitting fossil fuels.<sup>302</sup>

### ***Improved Technology for Alternative Fuel Generation***

Improved technologies for developing alternative methods in fuel generation are being researched (e.g., wind, solar). In the future years opportunities will be created that are not available now.

### ***Increasing Capacity to Manage Increased Demands***

QEC will continue to expand its apprenticeships, internships and specialized training for employees, including electrical, line-person, diesel mechanic, warehousing and other trades.

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<sup>299</sup> Conference Board of Canada. "Infrastructure Planning for Nunavut Communities" January 2004

<sup>300</sup> Ibid.

<sup>301</sup> Ibid.

<sup>302</sup> Government of Nunavut Department of Finance, "Nunavut Budget 2008-09: Supplementary Documents

### *Alternative Generation Study*

A Nunavut-Wide Alternative Generation Study is planned. This involves an initial per-community survey of energy generation and fuel displacement opportunities in Nunavut, including wind, hydroelectric, run-of-river, residual heat and heat utilidor, alternative fuel and alternative sourcing.<sup>303</sup>

### *Iqaluit Area Hydro-Electric Generation*

The Qulliq Energy Corporation is proceeding with the third year of environmental review, monitoring and field and community work for hydro-electric generation for Iqaluit.<sup>304</sup> Three potential sites for the hydro-electric facility were identified in a pre-feasibility report: Armshow Long, Jaynes Inlet and Cantley Bay. Studies are being conducted on these sites, including environmental field studies, a socio-economic impact assessment, land use and Inuit Qaujimagatugangit studies and archaeological surveys.<sup>305</sup>

**Figure 72: Iqaluit Hydro-Electric Project**



Source: Qulliq Energy Corporation, "Iqaluit Hydro-Electric Project: Status Update", August 2007.

Iqaluit, Nunavut's largest community, already consumes 20 to 25 per cent of the diesel oil that the QEC buys every year to generate electricity.

The benefits of hydroelectric sites include:

- Local employment and training opportunities;
- Reducing greenhouse gas emissions;
- Stable and potentially lower electricity rates; and,
- Reduced reliance on fossil fuels and related storage and transfer issues and costs.

Depending on the site that is eventually chosen, the capital cost of a new hydro plant would range from a low of \$80 million to a high of \$550 million.<sup>306</sup>

### *Private Sector Generation*

Starfield Resources says it has enough precious metals at its Ferguson Lake project located 240 kilometres west of Rankin Inlet in Nunavut to create a mine that could last until 2030. By far the most unique aspect of the project is its energy generation plan. At the process plant in Rankin Inlet, the processing of the massive sulfides which host metals like copper will produce enough energy to power both the plant and the mine, with some electricity leftover for possible resale.<sup>307</sup>

<sup>303</sup> Qulliq Energy Corporation, "Corporate Plan 2007-2008"

<sup>304</sup> Ibid.

<sup>305</sup> Qulliq Energy Corporation, "Iqaluit Hydro-Electric Project: Status Update", August 2007.

<sup>306</sup> Ibid.

<sup>307</sup> Northern News Services (Guy Quenneville). (March 31, 2008). Kivalliq Mine Could Last to 2030.

Starfield plans to eliminate waste tailings by dissolving the mined ore in hydrochloric acid and creating hydrogen sulphide gas as a byproduct. Officials say burning the hydrogen sulphide gas can generate enough electricity to power the mine, as well as producing sulphuric acid that the company could sell.<sup>308</sup>

### **3.4.9 Arts and Crafts**

#### ***Defining the Arts Economy***

The focus group aimed at developing the arts economy, which was established by the Government of Nunavut in response to the Nunavut Economic Development Strategy, identified the following list of items as necessary to supporting the development of a thriving arts and crafts economy.

- An investment of \$110,000 to facilitate an increase in the quality of Nunavut art;
- An investment of \$225,000 to maximize artists' profits through their participation in the value-added chain;
- A means to protect intellectual property in order to secure market shares;
- An investment of \$75,000 to aid in international brand recognition and to secure market shares;
- An investment of \$50,000 to expand existing international market shares;
- An Investment of \$10,000 (in addition the existing CND\$90,000 in a database) for the maintenance of a database aimed at providing current and accurate information about the arts sector; and,
- Promotion and celebration of Nunavut's artistic contributions to the global society.<sup>309</sup>

Many of the suggestions outlined above address the challenges currently faced by the arts and crafts industry in Nunavut (see Current Arts & Crafts Sector, Section 3.3.9).

#### ***Funding & Investments***

The Strategic Investments in Northern Economic Development (SINED) program is a \$90 million dollar investment made by the federal government into northern economic development in the three territories. One of the industries identified in the scope of northern economic development -- and thus a potential SINED funding recipient -- is the cultural industry of which arts and crafts is a part. The SINED program supports several initiatives in this field, including the development of an artist entrepreneurial skills course and support for Nunavut's film industry.<sup>310</sup>

In addition to the SINED funding, the Government of Nunavut has committed to providing funding in the sum of \$2.5 million (in its 2008-2009 budget) to support implementation of key economic development strategies in several sectors including arts, crafts and sealing as a way of facilitating a thriving Nunavut economy.

#### ***Expanding Existing Markets***

Driven by fluctuating international perspectives on activities such as sealing and sealskin products, Nunavut is looking to develop other seal related markets within its existing Canadian consumer market as a way of ensuring the territory's economy is buffered against international trends. A strategy for

<sup>308</sup> CBC News. (March 31, 2008). *Starfield Resources Develops 'Green' Way to Process Ore at Nunavut Mine.*

<sup>309</sup> Government of Nunavut. (2005). *A Strategy for Growth in Nunavut's Arts and Crafts Sector.*

<sup>310</sup> Nunavut Economic Forum. (January 2008). *Qanijjuq: Preparing for the Journey.*

expanding the seal market may be to capitalize on Health Canada's recent finding that seal meat, as a country food, is an important source of protein.

### ***Expansion of the Arts Economic Sector***

According to the Sivummut Economic Development Strategy Group in 2003, by 2013 "the arts economy sector will contribute at least \$50 million annually to the territorial economy, while providing 2,250 full time jobs"<sup>311</sup>, and contribute to maintaining high rates of participation of thousands of Inuit. The Group also projected that the membership of Nunavut Arts and Crafts Association will double between 2003 and 2013. The Group predicts that, "there will be a coordinated system in place for marketing the work of Nunavut's artists, in which government agencies and private sector will work in partnerships, and Nunavut film commission will expand its role to becoming a development corporation supporting a growing industry in film, television and new media".<sup>312</sup> According to the government's art strategy, it is anticipated that annual sales of Inuit art could double if the sector developed.

### ***New Markets***

The move by Nunavut's Department of Economic Development and Indian and Northern Affairs Canada to promote Nunavut artists as potential participants in marketing and licensing the Vancouver 2010 Olympic and Paralympic Winter Games' Inuksuk, will facilitate, if successful, greater international recognition of Nunavut's arts and crafts and may lead to the creation of a greater arts and crafts consumer base<sup>313</sup>.

### ***Garment Industry***

In 2003 the following was forecasted regarding the sealing industry and its impact on the garment industry of 2013:

- "A vibrant fashion industry will develop in Nunavut using sealskins (ring seal) in high-end garment production as well as in smaller scale arts & crafts;
- International trade barriers to sealing, such as the U.S. Marine Mammal Protection Act (MMPA), will either be overcome, or optional trade avenues will have been opened to lessen their impact. Regulatory processes will be streamlined;
- Sealskin prices will continue to rise, and the European market for Nunavut sealskins will continue to grow; and
- Nunavut's sealing strategy will be recognized internationally as a sustainable economic activity providing significant support to Inuit communities".<sup>314</sup>

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<sup>311</sup> Sivummut Economic Development Strategy Group. (June 2003). *Nunavut Economic Development Strategy: Building a Foundation for the Future*.

<sup>312</sup> Sivummut Economic Development Strategy Group. (June 2003). *Nunavut Economic Development Strategy: Building a Foundation for the Future*.

<sup>313</sup> Government of Nunavut Department of Finance. (Unknown). "Nunavut Budget 2008-09: Supplementary Documents."

<sup>314</sup> The Sivummut Economic Development Strategy Group. (June 2003). *Nunavut Economic Development Strategy: Building a Foundation for the Future*.

### 3.4.10 Wildlife

#### *Forecasts for Future of Wildlife Harvesting Activities*

Predictions for the future of wildlife harvesting are positive. In 2003, the Sivummut Economic Development Strategy Group released its forecast for wildlife harvesting in the year 2013. It stated that the number of harvesters will be maintained or will increase and that the role played by women in the harvesting economy will be fully recognized in economic development policies and programs. It also estimated that the allowable harvest of caribou and muskox will amount to \$35 million annually in food and value-added production. It foresees the operation of small-scale meat processing plants in four Nunavut communities, with at least two of these certified for international export to Europe.<sup>315</sup>

The group also made predictions specific to seal harvesting, estimating that these activities will return to pre-1980 levels and will provide good income opportunities for harvesters. This forecast may be the result of the group's belief that promotional initiatives will result in broader international understanding of the importance of sealing to the people of Nunavut and that international trade barriers will be overcome or optional trade avenues will be found to lessen their impact. It was also estimated that sealskin prices will continue to rise, along with growing demand from the European market for Nunavut sealskins.<sup>316</sup>



Source: Terriplan Consultants

These forecasts do not include a consideration of the impacts of climate change. Changing weather patterns and thinning ice in the north are not only a threat to animals but also restrict hunting, as fragile and unpredictable ice presents a safety hazard for people relying on it for travel and hunting. Caribou herds also react to changing terrain, moving in less predictable migrations. Reductions in ice have already been observed. In the summer of 2007, it was reported that 1.3 million square kilometres of ice disappeared from the permanent Arctic ice pack.<sup>317</sup> Climate change could affect both subsistence and commercial harvests, particularly with respect to polar bears.

<sup>315</sup> *The Sivummut Economic Development Strategy Group. (2003). Nunavut Economic Development Strategy: Building a Foundation for the Future.*

<sup>316</sup> *Ibid.*

<sup>317</sup> *Sudbury Star. (March, 2008). Aboriginals at Risk in Warming Arctic.*

Wildlife research is key to economic development and to understanding the economic impacts of events like the collapse of the Southampton Island caribou herd and the U.S. restrictions on polar bear hide importation. Understanding future changes to the physical environment remains a principal challenge.

### ***Government Assistance***

The Government of Nunavut has taken steps to assist those people facing challenges in wildlife harvesting. The fur pricing program is one such step. Under this program, the government purchases 6,000 to 9,000 skins every year, for a total income of \$500,000 for hunters. More than 800 hunters benefit from this program. The Government of Nunavut is also working with other jurisdictions to respond to the anti-sealing movement and trading bans.<sup>318</sup> In addition, a course offered at Arctic College in fur production and design teaches students traditional sewing of sealskins. It is hoped that this will help develop a successful fur fashion industry in Nunavut and support a domestic market for sealskins.<sup>319</sup>

There is also interest in assisting hunters in finding wage labour to supplement or replace harvesting activities. Hunters have skills and knowledge that can be transferred to jobs such as conservation or wildlife officers, eco-tourism operators, hunting or fishing guides or commercial harvesters.<sup>320</sup> In 2001, the Government of Nunavut created a Special Economic Initiatives Fund to help certain communities in developing economic alternatives to the harvesting of polar bears.<sup>321</sup> Programs such as this one create options for Nunavut residents and help diversify the territory's economy.

### ***3.4.11 Mining***

The report of the 2008 Nunavut Economic Forum states that, "mining is important for Nunavut's future. Not only can it bring a large number and variety of job and business opportunities to the territory, it also represents economic growth that is entirely private-sector driven, private-sector investment is particularly important for Nunavut where the public purse is already overburdened".<sup>322</sup>

### ***Human Resource Development***

The GN Department of Finance states that, "In order to strengthen Inuit participation in the mining industry further, the Government of Nunavut has allocated funds towards trades training. These funds will go toward building and staffing a trades school in Rankin Inlet, and to expanding Nunavut Arctic College's Community Learning Centre in Pond Inlet. Both projects are anticipated to reach the construction stage in 2008".<sup>323</sup>

The 2008 Nunavut Mining Symposium was designed in a way to attract youth. The reason for targeting a younger audience is the fact that historically the Inuit in Nunavut have not fully participated in mining initiatives in the territory and with the anticipated development in mining and need for a local labour force, youth could fill this critical need.<sup>324</sup>

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<sup>318</sup> *Government*

<sup>319</sup> *Canada's Arctic Journal (Jan/Feb. 2008). Above and Beyond- The Bearded Ones. Economic Development Strategy Supports Tradition: Developing a SEaskin Fashion Industry in Nunavut.*

<sup>320</sup> *Clinton, G. (2005). 2005 Progress Review of the Nunavut Economic Development Strategy Final Report. Prepared for Nunavut Economic Forum by Impact Economics.*

<sup>321</sup> *Conference Board of Canada. (2002). Nunavut Economic Outlook: An Examination of the Nunavut Economy.*

<sup>322</sup> *Nunavut Economic Forum. (2008). Qanijjuq: Preparing for the Journey, January 2008*

<sup>323</sup> *Government of Nunavut Department of Finance. "Nunavut Budget 2008-09: Supplementary Documents*

<sup>324</sup> *Nunavut News / North (author: Guy Quenneville). (April 7, 2008). Mining Symposium Returns to Iqaluit.*

### ***Job Creation***

Based on the 2007 Parnautit report, there are approximately 1,500 new mine-related jobs likely to be created within the next 10 years. Assuming that this projection is met -- and based on current population totals and potential projections -- approximately 12% of Nunavut's labour force will be involved in mining within the next decade.<sup>325</sup>

In February of 2008, Baffinland Iron Mines Corporation stated that construction of its Pond Inlet mine would begin in 2010. The mine is expected to be operational for approximately 25 years and is slated to employ between 400 and 500 individuals during the course of its operation. Added to this is the announcement made by Starfield Resources that its Ferguson Lake precious metals mine in Rankin Inlet could remain operational until 2030. Starfield's announcement could signify a considerable growth in employment for the territory.

In addition to potentially employing 400 to 500 individuals, the Baffinland Iron Mines Corporation outlined, in 2008, an interest in providing training to approximately 200 Inuit women and the elderly in the mining community to provide assistance with constructing the mine.

### ***New Developments***

Of those projects identified as having strong mining development potential (see Section 3.4.1.2) there are approximately three significant mining projects anticipated to go into operation in the near future: Newmont's Doris North and Agnico-Eagle's Meadowbank gold mines are scheduled to open in 2010; and Baffinland's Mary River iron mine is expected to go into production in 2014. Including these three operations, it is anticipated that by 2016 Nunavut will have approximately eight new operating mines which will carry with them associated job and spin-off business creation.<sup>326</sup>

Historically in Canada, development and expansion of infrastructure into remote areas has often been spurred by the mining industry. New mining explorations / developments in Nunavut can mean both the growth and expansion of mining within all areas of the territory and growth and development of other profit earning sectors such as tourism and arts and crafts.

Nunavut Tunngavik Incorporated (NTI) has recently developed policies stating it will allow uranium related activities on Inuit Owned Lands (IOL) providing those activities are approached in an environmentally and socially responsible manner. As a result of this development, companies, who were once prohibited from uranium mining on IOL can now try to identify new deposits and revisit historic discoveries such as Lac Cinquante, which is estimated to contain 11.6 million pounds of uranium oxide. At the current price of US\$75 per pound of uranium, companies as well as the Inuit who own the land may see significant profits".<sup>327</sup>

The recent 2007 discovery by Diamonds North of one of the best diamond discoveries in Canada's recent history has resulted in positive reaction both on stock prices and in terms of diamond exploration interests in Nunavut specifically in terms of junior mining company interests. Interest and exploration activity are likely to continue to grow given that in November 2007, Peregrine Diamonds said it had discovered three diamond-bearing kimberlites on its Nanuq property in Nunavut.<sup>328</sup>

<sup>325</sup> Government of Nunavut Department of Economic Development and Transportation. (2007). "Parnautit: A Foundation for the Future – Mineral Exploration and Mining Strategy 2007.

<sup>326</sup> Government of Nunavut Department of Finance. "Nunavut Budget 2008-09: Supplementary Documents

<sup>327</sup> Dias, D. (April, 2008). No More Taboos. *Financial Post*.

<sup>328</sup> UPhere Business (Author Drew Hasselback). (March 2008). *Picture Imperfect – All is not well with the Arts. – The Glorious Ups and Humbling Downs of Diamond-Hunting: Diamonds North and Tahera head in opposite directions.*

### ***Government Initiatives Promoting Process Efficiencies & Access***

Regulatory and general process and transportation inefficiencies have been identified by the Canadian Mining Industry as a key factor hampering minerals and mining development. The themes identified in Nunavut's Consultation Guide (Capacity Development, Community Participation in Capacity Development, Infrastructure Development, Business Development, and Effective Approvals Processes) indicates that federal and territorial governments are working toward making Nunavut a more attractive exploration and development hub for mining proponents.

Through the theme areas the government has committed to streamlining the regulatory and approvals processes, making them more efficient, and outlining clearly and consistently the requirements of each process to potential proponents.<sup>329</sup>

In addition to process and physical access barriers, mining faces constraints in terms of public perception. Mining is an invasive undertaking which for all intents and purposes is unsustainable and is environmentally and socio-economically impactful. As a way of addressing the socio-economic concerns of mining, the Government of Nunavut, in 2008, announced it will receive \$5.1 million from the federal government to monitor local communities for socio-economic impact of new initiatives.<sup>330</sup> A better understanding of the impacts of mining is likely to facilitate better mitigation strategies for future initiatives.

### ***Research & Development***

An environmentally friendly way of processing ore has been proposed by the Ferguson Lake mine site in Nunavut. Starfield Resources Inc. plans to eliminate waste tailings, by instead dissolving the mined ore in hydrochloric acid and creating hydrogen sulphide gas as a byproduct, which can then be sold or used to provide the local community with a source of electricity. Given that a challenge faced by mining is its impact on both the environment and the community (socio-economic impact) an environmentally friendly approach to mining may open the doors for less community objection to mining projects and thus increase the quantity of operating mines in the territory.<sup>331</sup>

### ***Commodities & the Global Marketplace***

The current push to invest in commodities, given the increase in global political uncertainty, has meant a renewed and growing interest in Nunavut as a commodity rich area. This renewed and growing interest could result in future mining development in Nunavut which could have significant implications in terms of financial yields for both the territory and local communities.

## **4.0 CONCLUSIONS**

This report has provided a detailed picture of the socio-demographic and economic conditions and trends in Nunavut, compared to that in other jurisdictions, including the Northwest Territories, Manitoba, Saskatchewan, Alberta and Canada overall. A review and analysis was conducted of current drivers and trends, and future economic development opportunities for the Nunavut economy. The analysis of demographic trends, economic issues and opportunities provides a comprehensive overview of

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<sup>329</sup> Government of Nunavut Department of Economic Development and Transportation. (2005). "Consultation Guide towards a Nunavut Mineral Exploration and Mining Strategy: 2005

<sup>330</sup> Nunavut News / North (author: Guy Quenneville). (April 7, 2008). Mining Symposium Returns to Iqaluit.

<sup>331</sup> CBC News. (March 31, 2008). Starfield Resources Develops 'Green' Way to Process Ore at Nunavut Mine.

information to support the Nunavut Planning Commission's work as it proceeds to develop a land use plan for Nunavut.

Key findings from the Study are as follows:

## **1. Demographic Trends**

### ***Current***

While Nunavut occupies approximately one-fifth of Canada's total land mass, it is comprised of the smallest population of any of the provinces and territories in the country. The population size has, however, continued to increase over time, although the growth rate has begun to slow. The majority of Nunavut's population resides in the Baffin Region, and more specifically in Iqaluit, the capital city. Although Nunavut has a decentralized government, meaning that government departments are located throughout the territory, the majority of federal and territorial government positions are located in Iqaluit, which accounts in part, for its large size.

The majority of Nunavut's population identifies itself as Aboriginal, or more specifically as Inuit (84%). In fact, almost half (49%) of all Inuit in Canada live in Nunavut. Compared to the rest of the country and selected provinces and territories, Nunavut has by far the greatest number of individuals who identify themselves as Aboriginal. Nunavut (and the NWT) also has a different population profile than most of the provinces. The territory is composed of more males than females and there are a greater number of individuals under the age of 15 years and a lesser number over the age of 75 years. This means that in the coming years, there will be a large number of individuals beginning to join the workforce. Improving the current educational capacity will be the key to ensuring these workers have the education and training needed to access good paying jobs.

Nunavut's total population is composed mainly of individuals who have no educational certificate, diploma or degree (57.3%). This percentage is higher when the Aboriginal population is considered on its own (68.7%). Only a very small percent of the total population in Nunavut (9.0%), and a smaller percent of the Aboriginal population (2.0%), have attained a university certificate, diploma or degree. Those individuals who are involved in academic pursuits are primarily engaged in the fields of 'architecture, natural resources and conservation' and 'business management, and public administration'.

The limited educational attainment explains, in part, the lower than average labour force participation and employment rates in Nunavut and the higher than average unemployment rates. It also explains the lower than average median income of the total population 15 years and older living in Nunavut. The median earnings, however, are the same as the national average for the total population and higher than the national average for the Aboriginal population. This reflects the fact that individuals working in the North are paid more than their southern counterparts because of the high cost of living in northern regions.

In Nunavut, individuals in the workforce are participating primarily in industries such as 'other services', 'business services', educational services' and 'retail services'. Those individuals who are working are typically engaged in occupations such as 'sales and service occupations', 'trades; transport and equipment operators and related occupations', 'business; finance and administration occupations', and 'occupations in social science; education; government service and religion'. There is a direct relationship between an individual's education level and his/her average employment income. Residents of Nunavut with a university certificate, diploma or degree above bachelor level earn the highest income, but many of these people are government workers transplanted from the south.

### ***Future***

Given the status of the current data available from the Nunavut Bureau of Statistics and Statistics Canada, developing population projections from 2006 – 2031, with a reasonable degree of confidence, is not possible at this time.

## **2. Existing Economy**

Nunavut's mixed economy depends on both the wage-based economy and the much smaller land-based activities such as hunting, crafts and fishing. Since the creation of the territory, the public sector has been the principal engine of the Nunavut economy. The domestic economy is progressing at a healthy pace. Job creation is strong and income levels are rising as a result of government and private industry expansion. Nunavut has benefited especially from recent mining industry activity, following several years of declines resulting from the closures of several major mines.

Nunavut shows great economic potential. Confidence remains high for its economy over the 2006 to 2010 timeframe with respect to mining in particular, as well as tourism, arts and culture and fisheries.

### ***Mining***

In 2007, mining exploration hit a new record in Nunavut, due in part to high commodity prices globally. Nunavut is recognized as one of Canada's most attractive jurisdictions for mineral exploration and investment (diamond, gold, metals and uranium). Stronger mining activity in coming years has the potential to contribute to the social and economic health of Inuit, particularly with respect to infrastructure, employment and training. However, the lack of a road network, ports and harbours, paved runways, geology maps and skilled workforce make exploration and mineral development in Nunavut much more expensive than in other Canadian jurisdictions.

### ***Fishing***

The Nunavut commercial fishing industry is young, and has experienced significant growth in recent years. Greater allocations of turbot and shrimp; major investments in offshore fishing vessels; and increased participation by Inuit have all contributed to a healthy industry. The vast majority of Nunavut's communities, however, currently lack the necessary infrastructure to support the docking of fishing vessels. Investments required in fisheries include small craft harbour and port facilities, marine service centres, processing plants and cold-storage operations, as well as investments in human capital and fisheries science. The projected effects of climate change on northern fisheries is also an area requiring investment in future research activity. Nunavut is also limited by its minority share in offshore fisheries.

### ***Tourism***

The tourism sector in Nunavut has great, but as yet untapped potential. Marketing of the territory as an attractive tourism destination is done primarily through website advertising, promoting Nunavut as "untamed", "unspoiled" and "undiscovered". To facilitate the development of the tourism industry, Nunavut has invested in an advertising campaign, a visitor exit survey, research into developing a *Travel and Tourism Act*, and developing a Parks and Special Places Guidebook. Further Investments are required, relating to infrastructure, broadband communication, human resource development, improved product development and marketing strategies as well as the need to simplify procedures for tourism operators.

### *Arts and Crafts*

The arts and crafts sector is an increasingly important contributor to Inuit well being, providing economic income while supporting traditional activities such as hunting and sealing. Growth in the sector, however, is dependent on improvements in communication and transportation infrastructure and trade. Other challenges include availability of raw materials, provision of safe workplaces, training and improved access to domestic and international markets.

### *Harvesting Activities*

Harvesting activities in the Nunavut non-wage economy include “hunting for household consumption and community distribution, as well as for the commercial sale of meat and skins. Muskox, caribou and seals comprise the major species that are harvested in the territory. The annual replacement cost of the harvest of country food has been estimated at \$30 million”.<sup>332</sup> There is a need for ongoing monitoring and assessment of any proposed legislative and export proposal that could negatively impact the people and the economy, both wage-based and subsistence, of Nunavut.

## **3. Future Economic Opportunities**

Although the public sector remains the major player in Nunavut’s domestic economy, recent advances in the private sector, primarily in the mining and construction industries, will result in more private-sector jobs. In the future, the growth is expected to shift towards three areas in the private sector: mining, fishing and construction. With growth in Nunavut economy coming from sectors other than government, the economy will be more diversified and will lessen the territory’s dependence on federal transfers.

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<sup>332</sup> *Government of Nunavut Department of Finance, ibid*