2008 NUNAVUT ECONOMIC OUTLOOK

OUR FUTURE TO CHOOSE

Nunavut Economic Forum
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Nunavunmi Pivalliarnirmut Katimaniq
Forum économique du Nunavut

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by Impact Economics (Graeme Clinton) and Stephen Vail

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About Nunavut Economic Forum

The Nunavut Economic Forum is a broad group of member organisations which was developed to identify and share information on economic development activity in Nunavut. The primary focus for the organisation is to bring the members together to collaborate in the implementation of The Nunavut Economic Development Strategy, each within their own area of activity and expertise. Successful implementation of the Strategy depends on the actions of each of the stakeholders. Participation and collaboration are key components of progress.

Research for this report was conducted between April and July of 2008.

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SUPPLEMENTARY INTRODUCTION TO THE 2008 NUNAVUT ECONOMIC OUTLOOK

The Nunavut Economic Forum, representing close to 30 institutions and organisations across Nunavut, is committed to the pursuit of sustainable economic growth and a high quality of life for all Nunavummiut. The 2008 Nunavut Economic Outlook is a valuable contribution to this commitment by assessing the Territory's progress on socio-economic goals and can be used as a tool to evaluate the actions and strategies of all those with a role in supporting and improving the lives of Nunavummiut.

The research for this year's Outlook was completed in July with the final text written shortly thereafter. Just prior to the printing of this report, a financial crisis rocked the world economy. The enormity of this event demanded that a new introduction to the 2008 Nunavut Economic Outlook be written to reflect the impact of these events on Nunavut's economic forecast and to ensure the report is set within the appropriate context.

At the same time, it is important to understand that these world events do not, in any way, alter the evaluation of the current state of Nunavut's wealth-generating capital. Nor do they negate the medium- and long-term economic opportunities that exist throughout Nunavut's economy. Therefore, this year's evaluation of Nunavut's socio-economic performance and potential remains unchanged. Nunavummiut will continue to face the same challenges in advancing their economic and social objectives while coping with and adapting to the economic, social and environmental changes that future economic growth will bring.

OUR FUTURE TO CHOOSE

Nunavut's economic future is dependent on its society's choices—where to invest, what policies to put in place, and the role of Inuit Qaujimajatuqangit in economic activities, just to name a few. In the coming years, these choices will have a tremendous impact on economic opportunities across the Territory. But in keeping with the original purpose of the Nunavut Economic Outlook and its approach and methodology, the examination of these opportunities is not one focused exclusively on impacts of Gross Domestic Product (GDP), jobs, and income. Equal consideration is given to how the socio-economic landscape will change as a result of this economic growth, whether it is driven by the mining sector, construction, fishing, government or something else. We are most interested in how these changes will affect the average Nunavummiut in terms of their quality of life. Important questions include those related to participation in the economy as well as those seeking to understand Nunavut's ability to cope with and/or adapt to the economic, social and environmental change.

The first Nunavut Economic Outlook produced in 2001 suggested that the development of a regional economy implies progress toward three fundamental objectives:[1]

1. **Life sustenance:** Do people have adequate food and shelter, are they secure from violence, and are they in good health?
2. **Self-esteem:** Do people have positive images of themselves and their relationships with each other?
3. **Freedom of Choice:** Has the range of choices available to individuals and communities expanded or retracted?

These objectives are still relevant today. What we have found is that the answers to these questions generally hang on how Nunavummiut choose to respond to the opportunities and challenges. Can Nunavummiut collectively transform the proceeds from the new private-sector driven economy into an investment strategy for the Territory that will lay the foundations for a high and sustainable quality of life for future generations? And if so, how?

WHERE WE STAND TODAY: AN UPDATE ON NUNAVUT'S WEALTH-GENERATING CAPITAL

The framework incorporated in this assessment of Nunavut's socio-economic progress takes a broad view of development by looking at four areas associated with the creation of wealth. These include:

Economic or Physical Capital: Includes the structural and mechanical requirements of business and industry, such as transportation and energy/power systems, as well as public infrastructure (e.g., schools, and hospitals) and financial resources required for investing.

Human Capital: Refers to the overall capacity of people in terms of health, knowledge, education, and skills of people to be productive whether they are participating in the wage economy, active in the land-based economy, volunteering or supporting the family, or pursuing education (traditional or western) or training opportunities.

Social or Organisational Capital: Refers to how a society is organised to create wealth including the systems of governance and regulations, as well as the willingness of individuals to co-operate and work together at all levels of society in pursuit of collective goals.

Natural Capital: Includes the raw materials incorporated by economic activity, such as land, wildlife, minerals, energy, as well as the services provided by the environment such as clean water, air and soil required for healthy living, the healing effects of natural beauty and its promotion of human well-being, and the temporary storage of waste.

As illustrated in ***Exhibit 2-3: Framework for Sustainable Economic Development*** on page 5, investment in each type of wealth-creating capital can influence one, two or all three areas where we are measuring performance against society's ultimate goal.

The *2008 Nunavut Economic Outlook* investigates the status of Nunavut's four forms of wealth-generating capital and the impact of any recent changes on the Territory's growth. This will help determine whether Nunavummiut are moving in the right direction toward a high and sustainable quality of life. The results should be used by key stakeholders when making important policy decisions.

So how is Nunavut doing in terms of the four forms of capital? The highlights from this year's research are as follows:

Nunavut's *human capital* remains the Territory's biggest challenge. While there have been improvements in personal income resulting in the emergence of a new Inuit middle-class who have found success in the wage economy, a separation in the standard of living has emerged between this group and those that have not been as successful.

The latest available data show that for the most part, health and social conditions in Nunavut have improved only slightly since 1999 if at all. These findings confirm that improvements in the overall health status of Nunavummiut will be a long process requiring a steady and concerted effort that needs to be targeted principally at the essential factors that affect health (otherwise referred to as the "determinants of health") such as diet, providing for safe water and shelter, preventing communicable diseases, improving mental health including the prevention of suicides and addictions, and preventing chronic diseases such as diabetes.

Perhaps the single greatest challenge facing Nunavut's future wealth creation is ensuring the current and future generations of Nunavummiut graduate high school with an education that provides them with the necessary tools to succeed and to turn Nunavut's economic potential into real or tangible prosperity for the Territory. As it stands today,

- Nunavut's human capital lacks the necessary skills to participate fully in the economy.
- Inuit remain underrepresented in their public government due to a lack of skills in the required areas.
- Almost three quarters of Nunavut's working age population struggle with serious literacy and numeracy challenges or do not meet the minimum level required to participate in a modern knowledge-based economy.

Nunavut's *economic or physical capital* has increased as a result of receiving a much needed boost of investment spending from the public and private sectors in the past few years. A number of economic projects have intensified that has led to the development or planning of industrial infrastructure (e.g., the road connecting Baker Lake to the

gold deposit at Meadowbank and a commercial harbour in Pangnirtung). Expenditures on new hospitals and schools, public and private housing, and municipal infrastructure highlight the most recent changes. While the lack of adequate housing remains a serious issue, several more years of investment spending of recent proportions would narrow the Territory's infrastructure gap dramatically.

However, all indications are that this level of investment is not sustainable under the current economic conditions. The high cost of fuel and other inputs coupled with the pressures on government services from the growing population will result in a pull-back on capital spending by the Government of Nunavut.

We note here that with the recent crisis within the world's financial markets, world demand for industrial inputs has diminished rapidly. One result is a drop in the price of crude oil. This will have a positive impact on the territorial government's balance sheet if it can secure a portion of this year's bulk fuel purchase at this reduced price and at the very least will mean a lower fuel bill next year. These savings will not likely result in increased capital spending, but will limit the possibility of running a deficit and leave the government in a healthier financial position moving forward.

Nunavut's organisational capital continues to improve at many levels. Nunavut's collaborative efforts in raising awareness of its financial needs have produced several positive results over the past few years. New federal money such as the Strategic Investments in Northern Economic Development has provided some valuable start-up money for the Government of Nunavut's sector strategies, while the Gas Tax Fund has helped sustain government's capital spending in critical areas. On the downside, a lawsuit launched by Nunavut Tunngavik Incorporated against the federal government over issues related to the implementation of the Nunavut Land Claim Agreement will make it more difficult to develop positive working relationships.

There is a need for far greater support for community-based non-profit organisations that often work at maintaining and furthering important community and societal values. These organisations will be tested in the coming years given the economic growth from the mining sector that is sure to cause family and community disruptions. Many quality of life goals as they relate to social performance hinge on the success of these Nunavut's non-profit organisations.

Knowledge of the state of Nunavut's *natural capital* has benefited from investments in mineral exploration and geoscience. It has also benefited from scientific research stemming from the 4th International Polar Year and growing concern over climate change and its impacts on everything from polar bears to whales to fish stocks and of course on people. Other studies focused on Nunavut's caribou populations are showing some herds are declining, though the most severe cases appear to be in the western Arctic. This research is important to have, but without any comprehensive studies into Nunavut's food security or the value of its traditional harvesting activities, it is difficult for planners and policy makers to make informed decisions with respect to harvesting activities whether for commercial or subsistence purposes.

The results in Nunavut's wealth-generating capital points to progress toward a high and sustainable quality of life that will be measured not in years but more likely in decades and perhaps generations.

Over the next ten years, Nunavut's human capital will face tremendous pressures and will have to endure the most change. These changes include that of a rapidly expanding economy, growing social pressures from the emergence of the youth population—over half of the Territory's population is under 25 years of age compared to 31 per cent for Canada—the effects of climate change, technological pressures such as the growing access and use of the Internet, and more. The ability of Nunavummiut to deal with and ultimately leverage the opportunities embedded in these transformative changes is critical for Nunavut's future prosperity.

UPDATE ON NUNAVUT'S ECONOMIC PERFORMANCE

Nunavut's economy is best described as 'mixed', with valuable contributions coming from the wage-based economy and the land-based economy. In terms of the wage economy and prior to the recent collapse in the world economy, Nunavut found itself in a very strong position. Its economy grew by 13 per cent in real terms in 2007, contributing to a record low unemployment rate that fell below 9 per cent (based on an evaluation of Nunavut's ten largest communities). Increased employment for Inuit and non-Inuit Nunavummiut contributed to a 10 per cent increase in personal income. The recent Canadian Census, which highlighted the growth in real incomes across Nunavut, revealed a wholesale increase in the standard of living of Nunavummiut.

Most of the wage-based economic growth has come as a result of activities in the mining and exploration industry. Capital spending grew by an incredible 63 per cent in 2007, led by spending on non-residential construction (which would include those activities associated with mine development). Public- and private-sector spending on housing also contributed to the rise in capital spending, highlighted by the Nunavut Housing Initiative Program.

It would be easy to disregard the contribution of the land-based economy to the overall quality of life of Nunavummiut in the face of the recent wage-based economic growth, increased publicity surrounding Nunavut's mining industry and the potential for multi-billion dollar industrial projects. Such oversight would incorrectly diminish the land-based economy's role in adding positively to the economic, social and cultural well-being of Nunavummiut. Activities such as harvesting caribou, seals and Arctic char contribute to the welfare of Nunavummiut through their contribution to a healthy diet, education, community cohesion, cultural identity, social equality and Inuit productivity.

Ready access to land-based activities will increase in importance in the coming years for those unready or unwilling to participate in wage-based opportunities. Its importance is perhaps even greater now in the face of the recent downturn in the world economy, especially if it spells a prolonged period on economic stagnation within Nunavut. However, there are growing challenges facing this sector. Recent actions by the European Union and the United States restricting the import of seal products and polar bear hides will have devastating effects on those who rely heavily on the income produced by the harvest of these animals to support their own harvesting activities. These restrictions, along with growing concern over declining caribou numbers, jeopardise the future for commercial operations linked to these natural resources.

RENEWED ECONOMIC OUTLOOK

An economic outlook is a forecast of a region's economic future. The Nunavut Economic Outlook focuses on how Nunavummiut will be affected by the realisation of this future and what opportunities and challenges lay ahead as a result. It includes consideration of changes in world demand, trends within the Canadian economy, projections on population, and an estimation of private-sector activity and government expenditures. Economic outlooks can be useful for any organisation, community or individual in planning for the future.

Highlighting this year's outlook are six mine developments, including the gold deposits at Meadowbank and Hope Bay, the base- and precious-metal deposits at Izok Lake and High Lake, the Kiggavik uranium deposit and the iron deposit at Mary River. However, within weeks of completing this forecast, the financial turmoil in the American banking system boiled over affecting the world's capital markets. In the span of a few weeks, world liquidity seized, negatively impacting anyone looking for investors including the world's largest corporations. Nunavut will not escape the affects of this crisis. It would be safe to assume at this point all large-scale mining projects in the Territory are being re-evaluated by their respective owners based on an entirely new set of input prices and revenue schedules.

The forecast included as a part of this year's Nunavut Economic Outlook anticipated delays in mine developments of a year or more when compared to the schedule promoted by the mine owners. Under the new set of circumstances, we must now assume delays that are considerably longer. It is also reasonable to question whether some projects will be put on hold indefinitely, especially those which carry the greatest amount of risk and are the most expensive.

Despite the anticipated changes in mine scheduling, this year's economic outlook remains relevant and holds important information regarding the present and future economy of Nunavut. Above all else, the 2008 Nunavut Economic Outlook emphasises the critical importance of the preparedness of Nunavut's labour force, governing institutions and non-profit organisations to deal effectively with the change that rapid economic growth will have on Nunavut's society. The importance of this preparedness does not change in the face of economic collapse, in fact, it probably increases.

The growth in the mining industry to the degree demonstrated in this year's outlook would have affected economic and social performance immeasurably. Every economic objective within Nunavut would have been reached as a result of this development. Growth in the economy's gross domestic product, in its efficiencies and in its medium- to long-term sustainability (20 to 30 years at least) would have been achieved. Employment rates would have risen along with personal income and business opportunities. But as is clearly evident, this shift in focus toward mining does increase Nunavut's exposure to the world economy and fluctuations in global demand.

Similarly, through a well developed labour market, comprehensive and well-structured impact and benefit agreements, effective community institutions and a responsive government, many of Nunavut's social objectives might also have been realised (e.g., reduction in poverty levels). For these objectives, however, many challenges exist and must remain the focus of Nunavut's stakeholders in troubled economic times.

The update on the status of Nunavut's wealth-generating capital highlighted continued concern over the pace of capital development, and in particular, the continued poor results in key areas such as health, education and skills development. Because of the prediction of some delays in mining projects included in this year's Outlook, there is an opportunity for Nunavummiut to make some improvements prior to the real economic surge. The additional delay brought about by world economic events extends that opportunity, but success remains dependent on Nunavummiut making the right choices in preparation for a more prosperous future.

The crisis in the world's capital markets will not eliminate many of the existing impediments to industrial development that were examined in this year's Outlook. When the world economy recovers and Nunavut's industrial projects come back on line, so too will other projects across Canada and indeed right across the world. The constraints in Nunavut's labour market, potential bottlenecks in its regulatory regime, and shortfalls in venture capital that existed prior to the financial crisis and slowdown in the world economy will return unless improvements in the Territory's wealth-generating capital are made.

Even before accounting for the effects of a slowdown in the world's capital markets, the next two years were to be relatively slow ones for Nunavut's economic growth. While construction activities such as the Meadowbank Gold Mine and those associated with the Nunavut Housing Initiative will continue throughout 2008 and 2009, they are not expected to grow substantively over the levels recorded in 2007. Meanwhile, a slowdown in government spending will bring the average growth in gross domestic product (GDP) close to zero over the next two years. It is revealing to note that by 2010, the public sector's contribution to economic growth will have been flat for five consecutive years. This is an indication that if Nunavut's economy is to grow in the future, it will have to happen as a result of private-sector initiatives.

Other sectors of the economy, such as fishing, tourism and the arts are not expected to grow substantially over the short term either. These sectors will continue to provide a diversity of employment opportunities for Nunavut's growing labour force. However, they too will be exposed to world events and will not escape the effects of the economic slowdown.

Over the medium term, and especially throughout much of the next decade, Nunavut's GDP was predicted to double in size as a result of the contribution of mining. As mentioned, this growth would have brought about huge changes to the Territory's employment picture, personal income levels and its business capacity. At times, the economy was shown to grow by 30 per cent or more in a year. Over the five-year period from 2011 to 2015, real GDP was expected to average an unprecedented 10 per cent with positive annual growth rates remaining for the rest of the decade as the result of successive mine construction and operations coming online.

We can now expect a much more modest outlook over this five year period. It remains to be seen what projects come back online and when. Working under the assumption that the world's capital markets will recover in two or three years, then the growth predicted for 2011 to 2015 could appear in Nunavut over the 2016 to 2020 period. But as indicated in the Outlook, a market recovery does not guarantee these projects' development and Nunavut should not work toward that assumption.

Whatever schedule of growth is achieved, how the economy contributes to the quality of life of all Nunavummiut will be the true measure of the economy's success. All facets of Nunavut's society, including governments, private-sector corporations including those representing the interests of Inuit, and individual Nunavummiut will need to work collectively and constructively to this end. Lessons from other jurisdictions that have undergone rapid economic expansion such as the Northwest Territories provide examples, positive and negative, of how this type of growth can be managed.

If nothing else, the collapse in world financial markets has taught us that the collective actions and investments of Nunavummiut must focus on wealth-generating capital that not only prepares the territory for a future in industrial development, but also a future without it. This year's Nunavut Economic Outlook offers valuable information in making it our future to choose.

1 INTRODUCTION AND PURPOSE OF REPORT

Key Highlights

- The 2008 Nunavut Economic Outlook is the fourth report in a series initiated in 2001.
- These reports offer important insight into Nunavut's investments in wealth-generating capital, the challenges and opportunities associated with its socio-economic performance and potential and the progress of Nunavummiut toward a high and sustainable quality of life.
- The analyses contained in these reports are meant as a reference point for discussion by key decision makers.

The 2008 Nunavut Economic Outlook is the fourth report in a series that began with research in 2000 which led to the first Outlook published in 2001 by the Conference Board of Canada. This report was a the result of a tremendous collaborative effort on the part of the Government of Nunavut, Nunavut Tunngavik Incorporated and the Government of Canada through Indian and Northern Affairs Canada to work together in overseeing the research process.

Seven years later, the 2001 Nunavut Economic Outlook remains an important document in understanding the socio-economic foundations of Nunavut. The versions that followed have made valuable contributions to informed debate within Nunavut amongst its leaders, decision makers and other key stakeholders. As a series, these reports offer important insight into Nunavut's investments in wealth-generating capital, the challenges and opportunities associated with its socio-economic performance and potential, and ultimately, the progress of Nunavummiut toward a high and sustainable quality of life. More recently, the Nunavut Economic Outlook has served as a tool for measuring progress in the implementation of the Nunavut Economic Development Strategy.

Since 2005, the Nunavut Economic Forum has been the proprietor of the Nunavut Economic Outlook series and commissioned the 2008 Outlook subtitled "Our Future to Choose." This year's report will serve purposes in addition to those mentioned. The Nunavut Economic Forum will host the third conference on the economy in early 2009 called the Sivummut III Economic Development Conference. The Outlook will provide delegates with up-to-date information regarding Nunavut's socio-economic challenges and opportunities that will support the discussions and influence the decisions related to the policies that will shape Nunavut's social and economic growth path.

1.1 WHAT IS SIVUMMUT?

Sivummut is a process for establishing the fundamental approach to economic development in Nunavut, creating a broad-based development strategy, focusing collective energies and reporting on progress. As the collaboration between Nunavut's economic development agencies continues, it is anticipated that the Sivummut conference will be reconvened every five years. Previous conferences were held in 1994 and again in 2003.

The Sivummut II Economic Development Conference was a gathering of people involved in the creation and implementation of economic policy in Nunavut. Their input became the basis for the Nunavut Economic Development Strategy. A Sivummut III Economic Development Conference is being planned for early 2009.

1.2 WHAT IS THE NUNAVUT ECONOMIC DEVELOPMENT STRATEGY?

The Nunavut Economic Development Strategy (NEDS) is a comprehensive, modern and open approach to development, and is unique to Canada. Subtitled "Building the foundation for Our Future", it takes a broad view of economic development by identifying issues related to the land, people and communities in addition to more common economic concerns. It establishes a goal for Nunavut society to reach a high and sustainable quality of life defined by improved income and material wealth and by improving health status, education levels, cultural identity, civic engagement and social, political and economic freedoms. The Strategy has a ten-year timeframe and its recommendations established a new path of cooperation and coordination for organisations throughout Nunavut to work together in achieving success.

2 GENERAL APPROACH AND METHODOLOGY

Key Highlights

- The approach established for the Nunavut Economic Outlook goes beyond conventional economic measurements in order to understand the real and more meaningful progress of society.
- A framework is used that places the growth and development of people at the forefront of the analysis.
- This framework considers how society has defined its goal of a high and sustainable quality of life and develops measures and indicators that are best suited to evaluating progress toward this goal.
- The central component of the Nunavut Economic Outlook is an investigation of the status of Nunavut's wealth-generating capital.

The original Nunavut Economic Outlook published in 2001 established a *Framework for Understanding Economic Development* for the territory of Nunavut.[1] The framework was premised on the idea that one must look beyond conventional economic statistics to understand the real and more meaningful progress of society. The model rightly places the growth and development of people at the forefront of the analysis. So rather than reporting total production as the ultimate indicator of the success of a region, it looks at how society has defined its ultimate goal of a high and sustainable quality of life and develops measures and indicators that are suitable (see Exhibit 2-1).

Exhibit 2-1

Gross Domestic Product: uses and limitations as a measure of society's progress

Gross domestic product (GDP) is the most common indicator used to measure economic progress. However, it does not tell the entire story in that it does not describe how economic growth affects people specifically. It hides discrepancies within a population and disparities between communities, families and individuals. It only loosely implies anything with respect to community well-being, social inclusion, and environmental change, and then only over the long run.

Long-term growth in GDP is a function of how and where society has chosen to invest. However, observing this correlation is made difficult by the presence of shocks; that is, changes that occur separate from a trend that can be positive or negative. Any shock will be reflected in the final GDP figure inclusive of the effect of society's spending choices.

Therefore, to truly understand the impact of these investment choices and the changing welfare of society, one must incorporate additional measures to determine more specifically how people are fairing given any increase or decrease in GDP.

What constitutes a high and sustainable quality of life depends on how a society chooses to define it. However, some basic elements seem to be common across most societies. For instance, we can be certain that the definition of a high and sustainable quality of life will include economic, social and environmental elements. What differentiates one group from another is how each chooses to weigh the importance of each of these elements and the types of trade-offs between particular objectives each group can accept.

Written statements that clarify the definition of a high and sustainable quality of life are often developed. They take the form of vision and mission statements, guiding principles, goals and objectives. An equally if not more accurate tool for understanding how a society defines its ultimate goal is by observing the choices it makes. For example, Nunavummiut have established the importance of Inuit values and culture, the protection of the environment, and the health of families and communities as areas of

particular importance.[2] But in addition to these principles, there have been clear and consistent actions that indicate the importance Nunavummiut place on standard of living within their definition of a high and sustainable quality of life. Standard of living is best affected by rising income levels, which implies the necessity of jobs and therefore economic growth.[3] After all, we would not grow the economy or even go to work if it did not contribute to the achievement of a high and sustainable quality of life.

Participation in economic activities is essential for Nunavummiut to reach their ultimate goal—this is true for both the wage- and land-based economies—though in this case the focus is on the former. Thus, one set of choices to watch carefully are those that indicate how Nunavummiut manage economic growth, the policies they put in place, and the extent to which people choose to and are able to participate. Observing these choices over the next decade will be of particular interest given the anticipated economic growth. Furthermore, because Nunavut's population is young with most people still under the age of 25, long-term economic planning is extremely important and will have a major impact on the Territory's ability to develop its labour force. Other things such as fairness in the distribution of economic benefits and the stability and efficiency of economic growth are also typical *economic objectives* that are important to observe over time.

There are other considerations. The *Nunavut Economic Development Strategy* (herein referred to as "the Strategy") emphasised *Healthy Communities* as a primary goal for Nunavummiut.[4] One element of this might be the reduction or elimination of poverty, which is considered by many as a necessary condition for the sustainability of society. A World Bank publication puts it like this:

> "The most critical problem of sustainable development is the eradication of poverty. That is because poverty is not only an evil in itself. It also stands in the way of achieving most other goals of development, from a clean environment to personal freedom."[5]

Outcomes such as healthy communities and a reduction in poverty suggest a need for an effective education system, good public health and accessible health care, greater social inclusion and social cohesion, safe and secure neighbourhoods, and strong cultural identity. These are all what we typically consider *social objectives* and are equally important as economic objectives for a society wanting to reach its ultimate goal.

Within environmental considerations, we can expect Nunavummiut to demand healthy living conditions (clean water, air and land), rational use of natural resources (within the context of traditional and commercial usage), sound environmental management of human activities, and appropriate evaluation of proposed uses of natural resources.[6] These are *environmental objectives* that must also factor into our understanding of economic development. Exhibit 2-2 shows a summary of typical components of society's objectives.

Exhibit 2-2

Examples of society's objectives

Economic	Social	Environmental
Growth	Full employment	Healthy living conditions (land, water, air)
Efficiency	Equity	Rational use of natural resources
Stability	Security	Sound management
Fairness	Education and health; Participation; Cultural identity	Appropriate evaluation of natural resources

The framework incorporated into the Nunavut Economic Outlook takes this broad view of economic development. But in doing so, it does create challenges associated with monitoring and evaluating progress. Evaluating changes in quality of life is complex. Non-economic measures and indicators are less quantitative than typical economic data and are rarely available on a yearly basis.

The solution adopted in the Nunavut Economic Outlook is to evaluate the growth in those things that help a society become wealthier, where wealth is defined not only by financial gains and progress in material well-being, but also through measures of social and family cohesion, the safety of communities, and the productivity and civic engagement of citizens.

Those *things* that result in wealth generation are called a society's *wealth-generating capital*—but are often referred to more simply as society's *assets*.[7] As these assets accumulate or improve, the opportunity for society to become wealthier also improves and thus we might expect society is moving closer to its ultimate goal. For the purpose of clarity, wealth-generating capital is separated into four categories. They include:

Economic or physical capital: This includes the structural and mechanical requirements of business and industry, such as transportation and communication systems, power generation, and commercial space. Physical capital can also serve to enhance social performance through safe and adequate housing, schools, and hospitals.[8] Financial resources are also a part of economic or physical capital; that is, the access to financial resources required for investing.

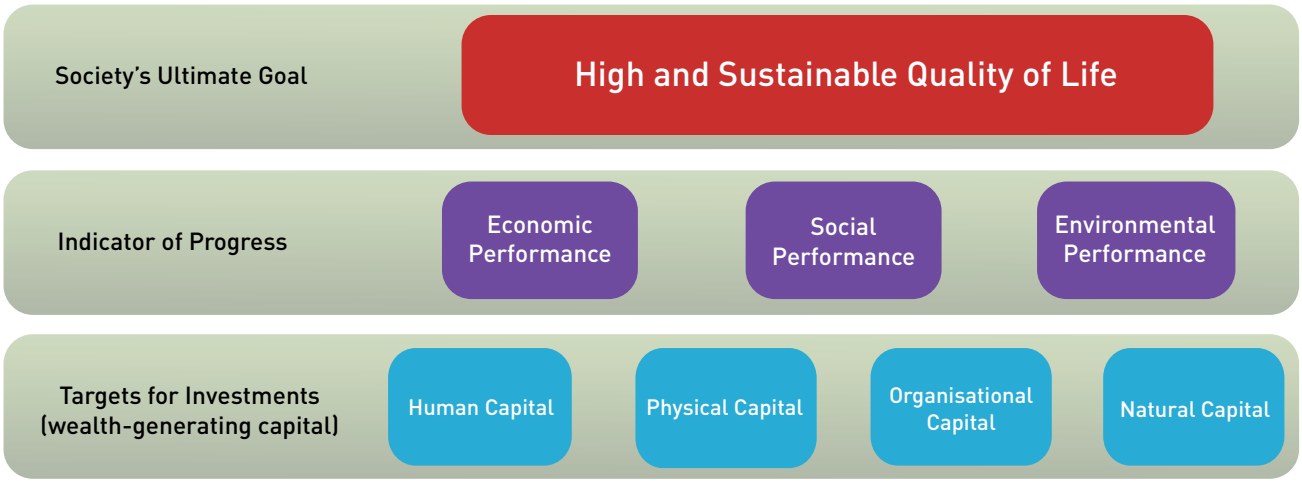
Human capital: Human capital is often spoken of in the context of the stock of human labour, more specifically, the quality of the labour force for the wage economy. But in its truest sense human capital is much broader. Human capital is the overall capacity—in terms of health, knowledge, education, and skills—of the members of a community to be *productive*.[9] Public programming for education, health and social needs are perhaps the most common investments in this area.

Social or organisational capital: This encompasses the business and social environment within which economic activity takes place and explains how a society is organised to create wealth including the systems of governance and regulations. Within social capital is the concept of *social cohesion* that deals with the willingness of individuals to co-operate and work together at all levels of society in pursuit of collective goals.[10] It is often summarised as the level of trust between individuals, families and organisations. Potential measures of social cohesion include voter turnout, crime levels, volunteerism, public participation in debate, and attitudes towards diversity. Social inclusion is another concept that falls within social capital and is also difficult to measure. It deals with the level and extent to which a society embraces all its members and develops policies and programs that promote greater inclusion in economic and social activities.

Natural capital: This includes the raw materials incorporated by economic activity, such as land, wildlife, minerals, energy, as well as the services provided by the environment such as clean water, air and soil required for healthy living, the healing effects of natural beauty and its promotion of human well-being, and the temporary storage of waste.[11] Investments directed toward environmental preservation fall under this category as do investments that enhance our understanding of natural capital such as geoscience or fisheries science.

As illustrated in Exhibit 2-3, investment in each form of wealth-generating asset can influence one, two or all three areas where we are measuring performance against society's goals.

Exhibit 2-3. Framework for sustainable economic development



The *2008 Nunavut Economic Outlook* is an investigation into the status of Nunavut's four forms of wealth-generating capital and the impact of any recent changes on the Territory's growth. Its purpose is to determine on an on-going basis whether Nunavummiut are moving in the right direction with respect to their ultimate goal. The analysis contained in this report is meant as a starting or reference point for discussion by key stakeholders when making important decisions.

The information to be incorporated in this Update includes (but is not limited to) the following:

- National and territorial socio-economic databases including Statistics Canada and any updates from Nunavut's Bureau of Statistics;
- Social statistics producers including the Canadian Institute for Health Information;
- Recent industry publications and reports;
- Key government/public reports both territorial and federal;
- The *World Economic Outlook* published by the International Monetary Fund; and,
- Discussions with the Nunavut Economic Forum and other selected stakeholders.

Endnotes

[1]Graeme Clinton and Stephen Vail, The Conference Board of Canada, The Nunavut Economic Outlook (Ottawa, 2001).

[2]These generalisations make up the principal components of several important documents for Nunavut such as the Nunavut Land Claims Agreement, Naujaat Challenge, Pinasuaqtavut, and the Nunavut Economic Development Strategy.

[3]The emphasis on standard of living is likely not the same as one might find in most of southern Canada, but is not so different from what one would find in more rural parts of Canada. The Nunavut Land Claims Agreement, the Nunavut Economic Development Strategy, political statements promoting devolution, Inuit Impact and Benefit Agreements, and the actions of Inuit development corporations signal an interest in economic participation which indicates an interest in greater economic and financial control and benefit.

[4]*Nunavut Economic Development Strategy: Building a Foundation for the Future*, Sivummut Economic Development Strategy Group, June 2003.

[5]Tantyana P. Soubbotina, *Beyond Economic Growth, 2nd Ed.*, The World Bank, World Bank Press (June, 2004) Chapter 1: What is Development?

[6]NLCA establishes a legal requirement that these environmental objectives are observed.

[7]Assets is a term used by the Sustainable Livelihood Strategy, see Department of ... for an explanation of the SLS, which is very similar to the framework incorporated in the NEO series.

[8]Definitions provided by the 2002 Nunavut Economic Outlook.

[9]Impact Economics with Stephen Vail, Community Economic Development Revisited: A Discussion Paper Investigating the Misunderstandings and Misdirected Implementation of CED Principles (Yellowknife, June, 2005), prepared for Aboriginal Economic Development Division, Indian and Northern Affairs Canada (NWT Office).

[10]M. Sharon Jeannotte et al., Buying in or Dropping Out: The Public Policy Implications of Social Cohesion Research (Department of Canadian Heritage: 2002).

[11]*Nunavut Economic Development Strategy: Building a Foundation for the Future*, Sivummut Economic Development Strategy Group, June 2003, page 29.

3 OUR FUTURE TO CHOOSE

Key Highlights

- It has long been said that there are countless opportunities for Nunavut's economy to grow. The time is fast approaching for many of these opportunities to be realised, meaning Nunavummiut must make choices regarding these opportunities and their own participation.
- How can Nunavummiut participate in and manage the impacts and benefits of the growing economy?

Nunavut's economic future is dependent on society's choices—where to invest, what policies to put in place, the role of Inuit Qaujimajatuqangit in economic activities. In the coming years, these choices will have a tremendous impact on economic opportunities across the Territory. There exists potential for growth in many sectors of Nunavut's economy, including its fishing, tourism, mining, and arts sectors. For example, this year's Outlook includes six mining projects that have a reasonable chance for development over the next ten to fifteen years.

But in keeping with the original purpose of the Nunavut Economic Outlook series and its approach and methodology, the examination of these opportunities is not one focused exclusively on impacts on GDP, jobs, and income. Equal consideration is given to how the socio-economic landscape will change as a result of this economic growth, whether it is driven by the mining sector, construction, fishing, government or something else. We are most interested in how these changes will affect the average Nunavummiut in terms of their quality of life. Important questions include those related to participation as well as those seeking to understand Nunavut's ability to cope with and/or adapt to the economic, social and environmental changes that will emerge as a result of the economic growth.

The seminal Nunavut Economic Outlook suggested that the development of a regional economy implies progress in the achievement of three fundamental objectives:[1]

Life sustenance: Do people have adequate food and shelter, are they secure from violence, are they in good health?

Self-esteem: Do people have positive images of themselves and their relationships with each other?

Freedom of choice: Has the range of choices available to individuals and communities expanded or retracted?

These objectives are still relevant today. While this Outlook does not attempt to answer these questions directly, the reader is encouraged to consider these three themes while reviewing the document. This exercise is particularly important when considering the current state of wealth-generating capital against the pressures and opportunities that will be created by the anticipated economic growth.

What we have found is that the answers to these questions generally hang on how Nunavummiut choose to respond to the opportunities and challenges. Can Nunavummiut collectively transform the proceeds from the new private-sector driven economy into an investment strategy for the Territory that will lay the foundations for a high and sustainable quality of life for future generations? And if so, how?

Endnote

[1]Adapted from Michael P. Todaro, *Economic Development in the Third World 4th Edition* (Longman, 1989) as cited in The Conference Board of Canada, The Nunavut Economic Outlook (Ottawa, 2001).

4 WHERE WE STAND TODAY: AN UPDATE ON NUNAVUT'S WEALTH-GENERATING CAPITAL

Key Highlights

- The Nunavut Economic Outlook is based on a holistic framework that assesses the Territory's progress in four areas associated with the creation of wealth: human capital, physical capital, natural capital and organizational capital.
- Nunavut's human capital remains best characterised by issues of poor educational attainment and low graduation rates, poor health results relative to other Canadians, and some divergence in personal income between an emerging employed Inuit middle-class and those who have been less successful in adapting to the new economy.
- Nunavut's physical capital—particularly its hospitals, schools, housing stock, and municipal infrastructure—has received a much needed boost of investment spending from the public and private sector in the past few years. However, the high cost of fuel and other inputs coupled with the pressures on government services from the growing population will result in a pull-back on government capital spending in the coming years.
- Knowledge of the state of Nunavut's natural capital has benefited from the mining sector's investment into exploration and geoscience, and scientific research stemming from the 4th International Polar Year and growing concern over climate change. However, more research is required into the state of Nunavut's food security and the value of its harvesting activities, whether for commercial or traditional subsistence purposes.
- Nunavut's organisational capital continues to improve at many levels. A concerted and coordinated effort by the Territories' formal institutions has been rewarded with new money to sustain government's capital spending and has provided valuable start-up money for the sector strategies. The trust built between Nunavut's organisations will be tested, however, after Nunavut Tunngavik Incorporated launched a lawsuit against the federal government over issues related to the implementation of the Nunavut Land Claims Agreement. The biggest test of Nunavut's organisational capital is still to come. As the wage-based economy expands, there will be increasing pressure on community-based organisations to help people deal with the socio-economic changes that will undoubtedly occur.

4.1 HUMAN CAPITAL

Human capital is often thought of as the stock of human labour, more specifically, the education, skills and aptitudes of the labour force as it relates to the wage economy. But in its truest sense human capital is much broader. Human capital is the overall capacity in terms of health, knowledge, education, and skills of people to be productive whether they are participating in the wage economy, active in the land-based economy, volunteering or supporting the family, or pursuing education (traditional or western) or training opportunities. Without sufficient levels of human capital, productive activities cannot be performed and thereby reduce a society's chance of achieving a high and sustainable quality of life.[1]
A study by Statistics Canada looking at 14 industrialised countries found that investing in human capital, such as education and skills training, "is three times as important to economic growth over the long run than investing in physical capital." Investments in literacy and women provide particularly high returns.[2]

An important aspect to the study of human capital is the ability of people to cope with and adapt to change; that is, an assessment of a society's vulnerability to change. Vulnerability is an issue that spans all four forms of capital. For instance, a community's infrastructure can be vulnerable to the effects of climate change. Similarly, a community's organisational capital, in particular, its social cohesion can be vulnerable to the effects of rapid industrial development. Over the next ten years, Nunavut's human capital will face tremendous pressures and will have to endure the most change. These changes include that of a rapidly expanding economy, growing social pressures from the emergence of the youth population, the effects of climate change, technological pressures such as the growing access and use of the Internet, and more. The ability of Nunavummiut to deal with and ultimately leverage the opportunities embedded in these changes is critical for Nunavut's future prosperity.

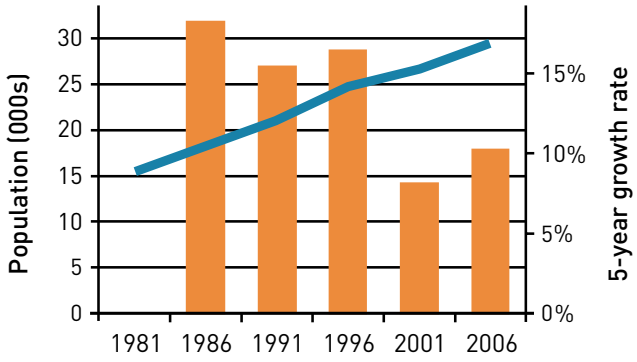
In this section, the essential components of Nunavut's human capital are studied. The purpose is to determine how and where improvements have been made since the original Nunavut Economic Outlook was written and to assess areas where Nunavut's human capital is most vulnerable to the changes.

4.1.1 Demographics

According to the latest Census, which has not yet undergone a post-censual coverage study and therefore is subject to adjustments, Nunavut's population in 2006 was 29,474 (see Figure 4-1). This is almost double the size recorded in 1981 when the population was 15,572.[3] Community by community population statistics are provided as an annex (see Annex 1).

Figure 4-1

Historical population trends, 1981 to 2006 (thousands and percent change)

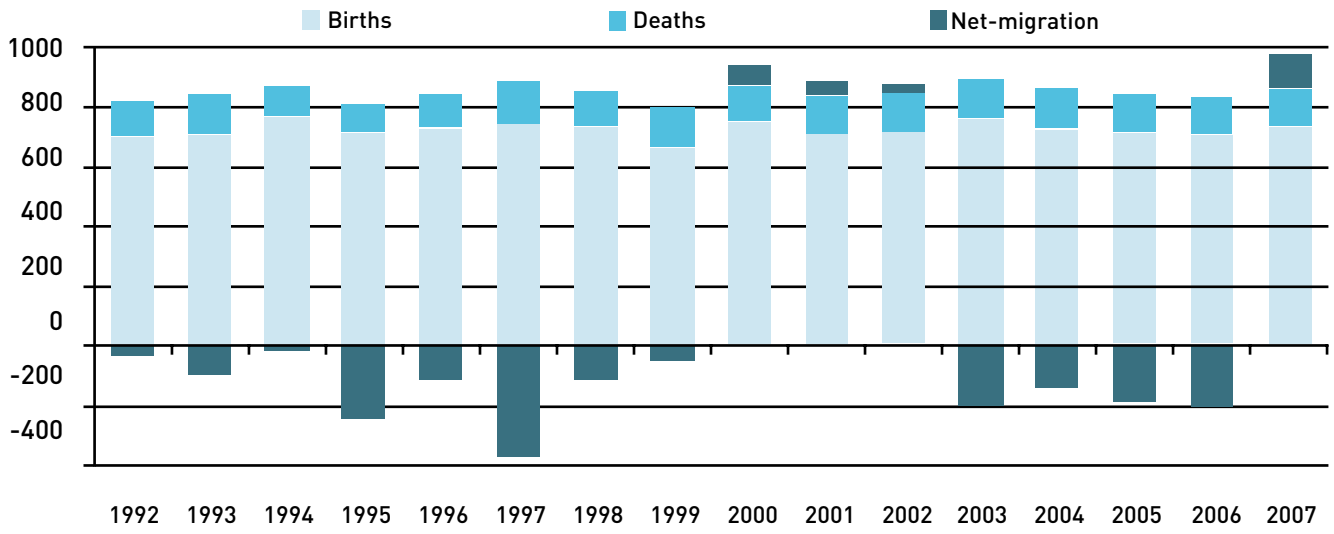


Source: Statistics Canada, Census 1981 to 2006

From 1981 to 1996, Nunavut led the country in population growth. This was almost entirely the result of a nation-leading fertility rate among women of child bearing age. In the last 10 years from 1996 to 2006, this trend has slowed to the point where some other regions of the country are seeing faster population growth in some years. The principal reason for this change is a shift in migration patterns, more specifically, a rise in out-migration. Figure 4-2 shows the data available for the sources of population change in Nunavut. There have been four years in the past 15 where Nunavut has been a net recipient of people migrating from other regions of the country.[4] Not surprisingly, those four years corresponded with significant economic events. The first period being 2000 to 2002 immediately following the creation of Nunavut which prompted a 21 per cent expansion of the economy over those three years (6.7 per cent compounded annually) and then more recently in 2007 when the economy grew by over 13.

Figure 4-2

Sources of population change (percent of population)

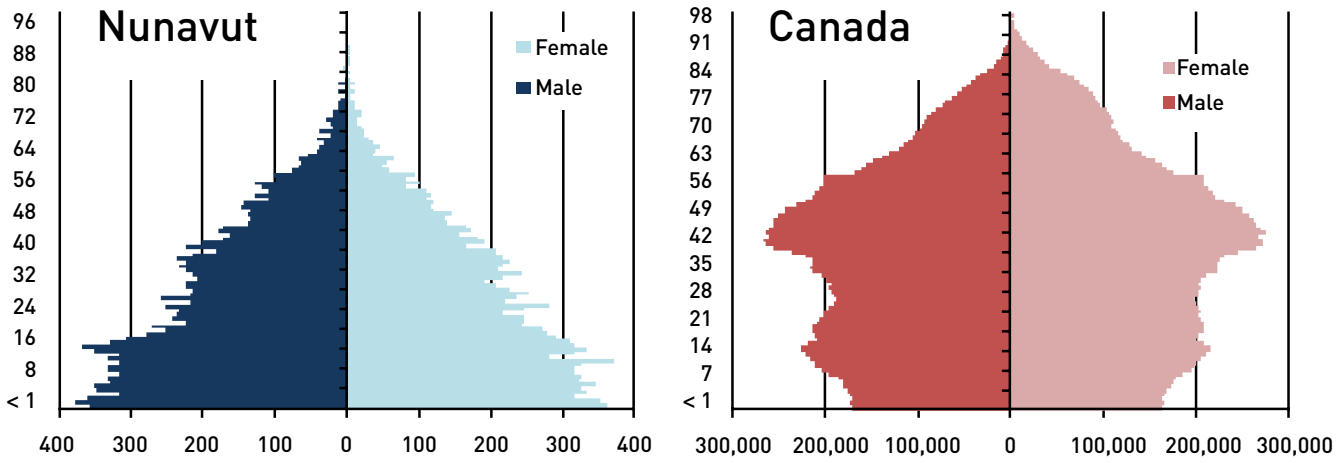


Source: Statistics Canada, Demography Division

A more detailed look at the demographic profile in Nunavut reveals a major divergence from the pattern found in the rest of Canada (see Figure 4-3). Nunavut society is not dominated by the baby boomer generation who were born between 1946 and 1964 and will be between the ages of 44 and 62 by the end of 2008. Rather, Nunavut's largest age-cohort consists of people between the ages 0 to 19 who represent 45 per cent of the entire population.

Figure 4-3

Population pyramids: Nunavut and Canada, 2006 Census (number of people)

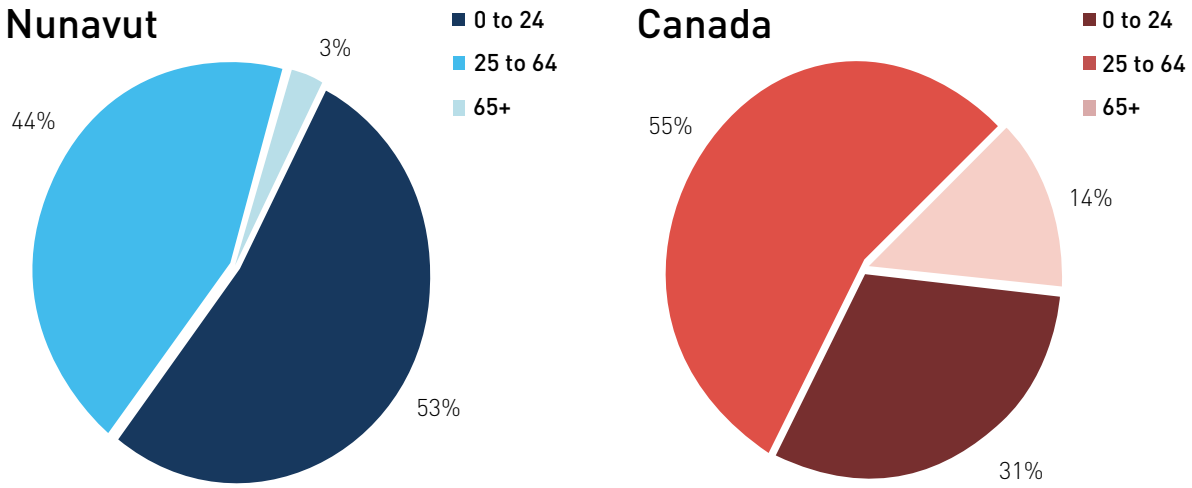


Source: Statistics Canada, 2006 Census

The slightly larger age-cohort (people aged 0 to 24) represent more than one half of the population.[5] This is compared to Canada as a whole where 31 per cent of the population are between the ages 0 and 24 (see Figure 4-4).

Figure 4-4

Demographic differences: Nunavut and Canada, 2006 Census (percent of population)



Source: Statistics Canada, 2006 Census

The implications of this large youth population are far reaching. The economic, social and political choices these people make over their lifetime will carry significant weight in Nunavut. Ensuring Nunavut's youth population emerge into adulthood with the necessary education, skills and aptitudes to make productive choices for themselves and for Nunavut is a challenge for the Territory that must be met. Later sections in this chapter discuss the Territory's progress in meeting this challenge.

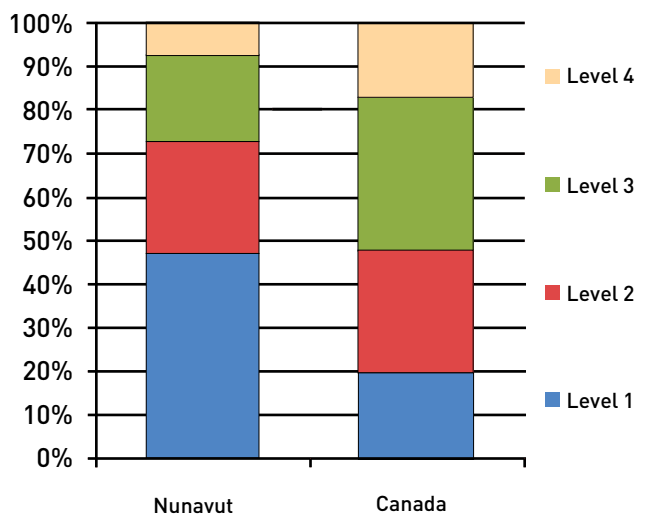
4.1.2 Education

Perhaps the single greatest challenge facing Nunavut's future wealth creation is ensuring the generation of Nunavummiut currently between the ages of 0 and 24 graduate high school with an education that provides them with the necessary tools to succeed and to turn Nunavut's economic potential into real or tangible prosperity for the Territory. As it stands today, Nunavut's human capital lacks the necessary skills to participate fully in the economy, while Inuit remain underrepresented in their public government due to a lack of skills in the required areas.[6] Moreover, the results from the *International Adult Literacy and Skills Survey* (IALSS) conducted in 2003 paint a poor picture of the current state of literacy and numeracy among adult Nunavummiut as defined by the survey (see Figure 4-5 and Figure 4-6).[7]

Almost three quarters of Nunavut's working age population struggle with serious literacy and numeracy challenges or do not meet the minimum level required to participate in a modern knowledge-based economy.[8] From this the *Nunavut Adult Learning Strategy* (NALS), released by the Department of Education in 2007, concludes that without a renewed commitment to improving literacy levels and adult education, the Government of Nunavut will not be able to meet its legal obligations under Article 23 of the NLCA, reduce the high levels of Inuit unemployment, or prepare for future sustainable economic and social development.[9] The NALS itself contains 122 recommended actions needed to address results such as those from the IALSS.

Figure 4-5

Proficiency levels: prose literacy (by level of competency)

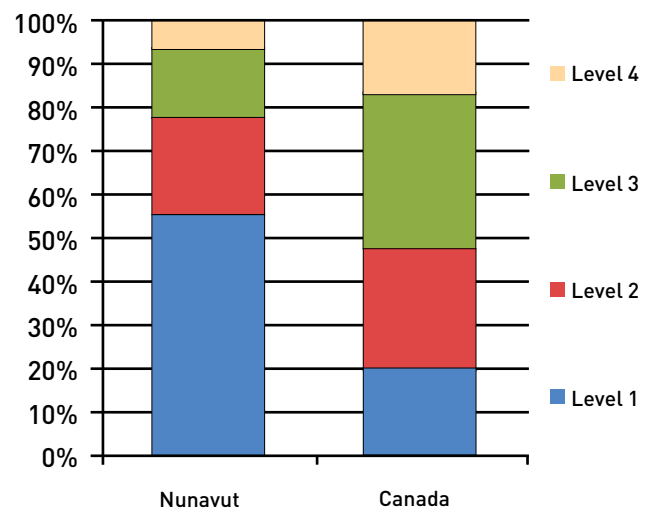


Notes: Prose literacy is defined as the knowledge and skills needed to understand and use information from texts including editorials, news stories, brochures and instruction manuals.

Source: Building on our Competencies: Canadian Results of the International Adult Literacy and Skills Survey. Catalogue no 89-617-XIE.

Figure 4-6

Proficiency levels: numeracy (by level of competency)



Notes: Numeracy is defined as the knowledge and skills needed to effectively manage the mathematical demands of diverse situations.

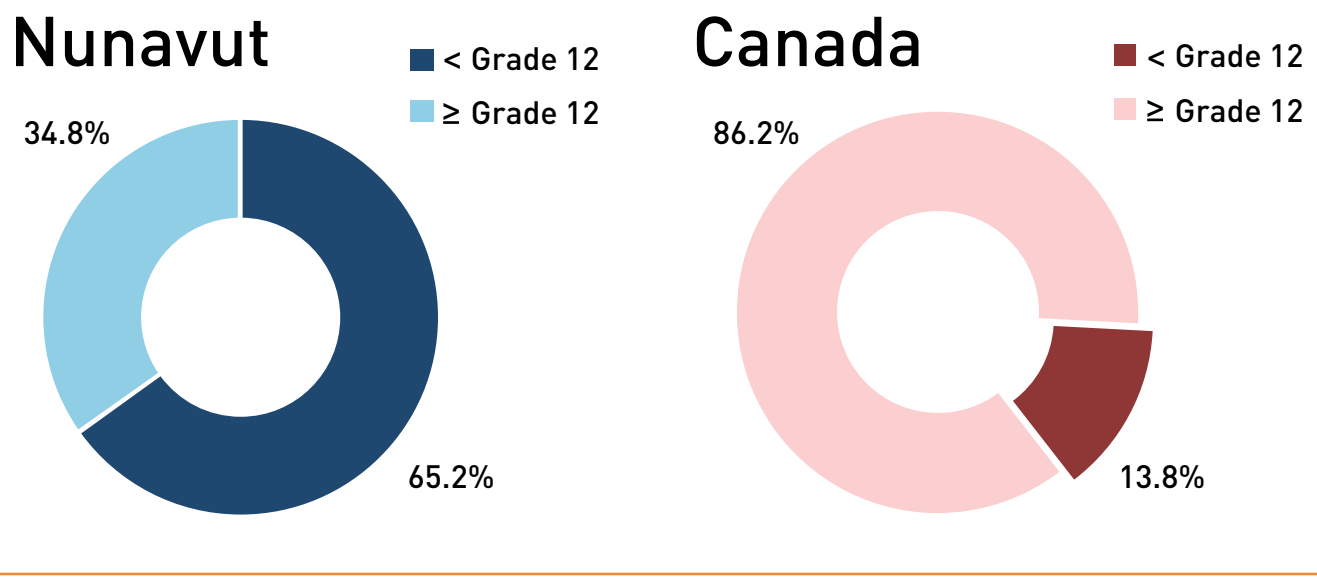
Source: Building on our Competencies: Canadian Results of the International Adult Literacy and Skills Survey. Catalogue no 89-617-XIE.

The extent of need in this area means that much of Nunavut's future success rides on successful outcomes from this NALS. Because of its importance, the Nunavut Economic Forum recommended in its *2005 Progress Review of the Nunavut Economic Development Strategy* (herein referred to as "the Progress Review") that organisations across multiple disciplines learn how they might incorporate aspects of the NALS into their operations, and indeed, this point was emphasised in the NALS itself.[10]

The results of the *2006 Census* reveal more of the same in terms of Nunavut's education shortcomings (see Figure 4-7). From the survey results, we see that less than 35 per cent of Nunavut's population between the ages 20 and 24 have graduated from high school. This compares to the nationwide average of 86 percent. For the population aged 25 to 64, the percentage of high school graduates improves to 54 percent.

Figure 4-7

Education status: percent of high school graduates aged 20 to 24 (percent of population)



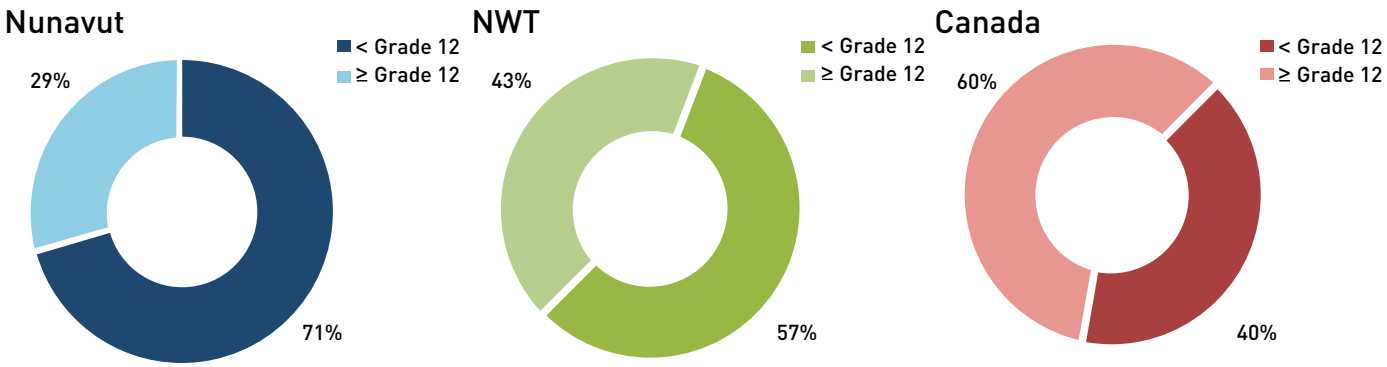
Note: < Grade 12 is equivalent to "No certificate, diploma or degree" as reported by the 2006 Census. ≥ Grade 12 is equivalent to "Certificate, diploma or degree" as reported by the 2006 Census.

Source: Statistics Canada, 2006 Census

Separating the statistics by ethnicity and comparing the results across jurisdictions reveals Nunavut's Inuit are lagging behind other Aboriginal groups (see Figure 4-8). The *2006 Census* shows 29 per cent of Inuit from Nunavut aged 20 to 24 have successfully completed high school. This compares to 43 per cent of the Aboriginal population in the Northwest Territories and 60 per cent of Aboriginal people across Canada.

Figure 4-8

Education status of aboriginal populations, aged 20-24 (percent of population)



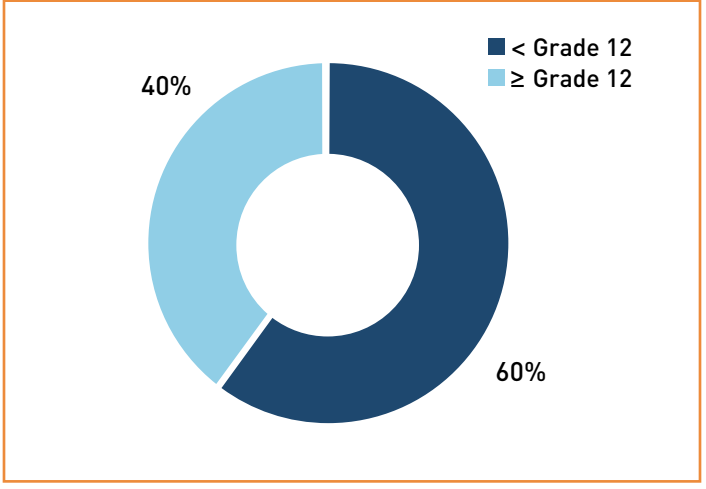
Note: < Grade 12 is equivalent to "No certificate, diploma or degree" as reported by the 2006 Census. ≥ Grade 12 is equivalent to "Certificate, diploma or degree" as reported by the 2006 Census.

Source: Statistics Canada, 2006 Census

One interesting finding from the Census data show the graduation rate for Inuit between the ages 25 and 64 is higher at 40 per cent (see Figure 4-9). This suggests that a number of Nunavummiut attain their high school accreditation as adults—which is further evidence of the importance of the NALS. A more disconcerting possibility is deterioration in performance within the education system. If this is the case, then there is an urgent need for reform and investment.

Figure 4-9

Inuit education status in Nunavut, aged 20-64 (percent of population)



Note: < Grade 12 is equivalent to "No certificate, diploma or degree" as reported by the 2006 Census.

≥ Grade 12 is equivalent to "Certificate, diploma or degree" as reported by the 2006 Census.

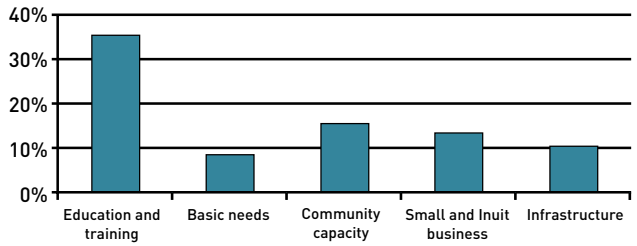
Source: Statistics Canada, 2006 Census

4.1.2.1 Update on Actions

The Nunavut Economic Forum surveyed its membership in 2005 on the priority areas for the organisation and for the Territory. The results showed a clear consensus toward education and training as the priority for Nunavut over the foreseeable future (see Figure 4-10).

Figure 4-10

NEF member survey results, priorities for Nunavut (top five)



Source: Nunavut Economic Forum Survey, 2005/06.

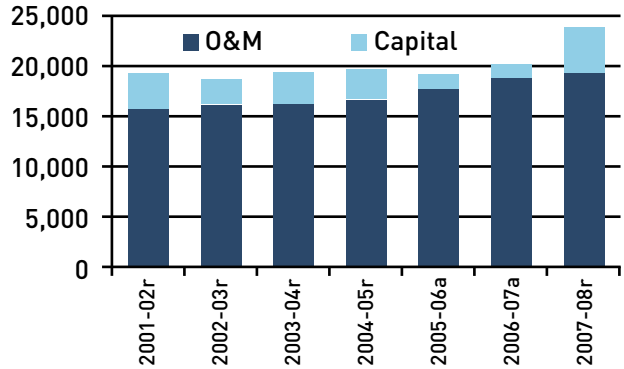
This result is consistent with the *Nunavut Economic Development Strategy* (the Strategy) in which 30 per cent of the recommendations made were related to education or training in one form or another.[11] These recommendations cover three principal education and training areas, including:

- **education of children**—improving the quality of public education, improving children's knowledge of history and culture, providing children better tools for life-long learning, increasing their contact with Elders, professionals, and peers from within Nunavut, throughout Canada and abroad, and instilling in them the confidence to make productive decisions regarding their future
- **education of the labour force**—enhancing skills in multiple disciplines, creating and/or evaluating training programs for young and old, developing or improving college courses, providing greater opportunities for training, increasing or initiating on-the-job, on-the-land and co-op programs, transferring skills whether from one industry to another or from one economy to the other (non-wage to wage)
- **education of public servants and public leaders**—at all levels of government, within all levels of bureaucracy, throughout various disciplines (teachers, nurses, economic development officers, etc.)[12]

For its part, the Government of Nunavut increased its financial commitment to education on a per capita basis in the 2007-08 fiscal year after relatively small increases over the preceding six years (see Figure 4-11). And in addition to the NALS, it continues to work on a new curriculum through the Department of Education.

Figure 4-11

Government spending on education per capita ($ per school aged person, 5–19)



Notes: a = actual; r = revised estimate.

Source: Government of Nunavut Department of Finance, Budget Main Estimates (2001 to 2008).

The actions outlined above give the impression that education and training are receiving adequate attention. But this does not in itself guarantee successful outcomes. Nunavut's government must continue to work to develop the right mix of programs, services and capital investments, but it is Nunavut's society itself that must become far more emphatic about the importance of education if changes are to occur. Small improvements are probably not good enough at this stage if future generations are to prosper from the economic expansion just underway.

4.1.3 Health Status

4.1.3.1 Health Status and Well-being

If we are to contain health care costs, we must promote wellness, prevent disease and injury, and address the expanding health care needs of our growing population.[13]

Is the health status of Nunavummiut improving? This is a reasonable question to ask with the 10-year anniversary of the establishment of Nunavut less than a year away. Sufficient time has passed to take stock in assessing whether there have been any positive changes in health and social conditions among Nunavummiut.

While this section will attempt to answer this question, we must begin by pointing out that it is a difficult task due to the lack of available data on Nunavut's health and social conditions, which is no doubt hindered by the Territory's small population. The 2005 Nunavut Economic Outlook did acknowledge that the Government of Nunavut's Department of Health and Social Services had produced as good a picture as possible in its 2004 report on comparable health indicators. However, no such report has been produced since then (nor by any other province or territory for that matter) so there is little new data to report.

The latest available data show that for the most part, health and social conditions in Nunavut have only improved slightly since 1999 if at all. These findings confirm that improvements in the overall health status of Nunavummiut will be a long process requiring a steady and concerted effort that needs to be targeted principally at the essential factors that affect health (otherwise referred to as the "determinants of health") such as diet, providing for safe water and shelter, preventing communicable diseases, improving mental health including the prevention of suicides and addictions, and preventing chronic diseases such as diabetes. While the upgrades to Nunavut's health and social infrastructure will serve to improve access to services for Nunavummiut, their impact on the Territory's overall health status will be less significant than any efforts directed toward these other priority areas. It is a formidable task but it is also an essential task.

Health

A key indicator of health status is life expectancy at birth, that is, the average age at which Nunavummiut are likely to have died. It has been duly noted in previous Nunavut Economic Outlook reports that there is an astonishing gap in life-expectancy between Nunavummiut and the national average. A recent study on life-expectancy in Inuit-inhabited areas between 1989 and 2003 confirms the existence of this gap.[14] The researchers found that life-expectancy for Nunavummiut for the period of 1999-2003 (68.2 years) is slightly lower than it was for the period 1994-1998 (69.4 years). While these rates are similar to those found in other Inuit populations in the circumpolar region, they are also similar to those found in Canada in 1946 and among developing countries such as Egypt, Thailand and Nicaragua. Moreover, since the average life-expectancy for Canadians continues to increase (79.5 years), the corresponding drop in life-expectancy among Nunavummiut has lead to an increased gap in life expectancy between the two populations.

Despite little change in life-expectancy, there has been some improvement in infant mortality. Infant mortality in Nunavut—deaths during the first year of life—while still 2 times higher than the Canadian rate, has fallen by 30 per cent between the periods 1989-1993 to 1999-2003, suggesting improvements are occurring but will need to continue.

Other important health status indicators are provided in Table 4-1. The latest data available for these indicators show little change for Nunavummiut since the first Nunavut Economic Outlook was undertaken in 2001. Premature mortality, as seen in terms of "potential years of life lost", remains significantly higher in Nunavut compared to Canadian rates. Much of this gap can be explained by the high rate of unintentional injuries and suicides in Nunavut—the key point here is that these deaths are preventable. Lung cancer mortality rates continue to remain high above Canadian rates.

Table 4-1

Select health status indicators for Nunavut and Canada – latest available figures (figures in parentheses are from 2001 Economic Outlook for comparison purposes)

Indicator	Nunavut	Canada
Life expectancy at birth, males	66.4 (68.3)	78
Life expectancy at birth, females	70.0 (71.3)	82.7
Infant mortality rate (per 1,000 live births)	10.0 (17.9)	5.4
Low-birth weight rate (percentage of live births less than 2,500 grams)	8.4 (7.4)	6
Potential years of life lost, unintentional injuries (rate per 100,000 population) (injuries due to causes such as motor vehicle collisions, falls, drowning, burns and poisonings)	4,031.30	612.2
Suicides and self-inflicted injuries (2001, age standardized rate per 100,000 population)	80.2 (68.6)	11.3
Lung cancer (mortality rate per 100,000 population)	110.5	47
Heart attack (Acute myocardial infarction), mortality rate per 100,000 population	40.8	47.5
Cancer Incidence, age standardized rate per 100,000 population; 2004	352.7	393.2
Self-assessed health status, male, (per cent reporting 'excellent' health)	20 (23)	22.5
Self-assessed health status, female, (per cent reporting 'excellent' health)	24 (24)	21.3
Self-rated mental health, Very good or excellent, males	64	73.2
Self-rated mental health, Very good or excellent, females	63.6	72.6
Cigarette smoking, (per cent of population)	53 (59)	19 (24)
Physical activity index, (per cent of males indicating "inactive")	58.5	43.5
Physical activity index, (per cent of females indicating "inactive")	61.6 (81)	50.2
Percent of males that did not visit a GP in past 12 months	53 (75)	25.3
Percent of females that did not visit a GP in past 12 months	38.5	13.6
% of population, 12+, who had contacts with dental professionals in the past twelve months	56.4	63.7

Sources: Statistics Canada, Canadian Institute for Health Information

On the positive side, Nunavummiut continue to show lower rates for heart disease and diabetes rates, thus far, remain low. Preventing and properly managing chronic diseases such as heart disease and diabetes will be a key challenge for Nunavut as well as for other Canadian provinces and territories.

Communicable diseases, such as tuberculosis and sexually transmitted diseases (STDs) are and must remain a major health concern for Nunavummiut and health care workers. The tuberculosis incidence rate is almost 17 times higher and the STD rate is 20 times higher than the Canadian rates. Poor socio-economic and infrastructure conditions in Nunavut contribute to the higher and alarming rates.[15]

A recent report, *Pilirjqatigiinniq* – Working together for the Common Good, identified the need to ensure the health and well-being of mothers and their young children:

> The health and well-being of mothers and their young children are important because they directly reflect the current health status of the people themselves, as well the community as a whole. It is generally understood that maternal and child health is a key predictor of the health and capacity of the next generation.[16]

According to the Government of Nunavut's Department of Health and Social Services (DHSS), Nunavut has the highest rate of pre-term delivery in Canada at 10.4%. Known risk factors for pre-term birth include single marital status, age of the mother, smoking, low or high weight gain, infection, drug and alcohol use as well as stress—these are all indicators of broader social conditions affecting well-being.

An interesting health indicator is self-assessed health status, that is, how people rate their health. Despite the lower life-expectancy rates and poor performance in a range of health indicators, Nunavummiut continue to self-report similar levels of physical health as other Canadians. However, there is a difference when it comes to self-reported mental health (9 per cent lower for both males and females in terms of reporting very good or excellent mental health).

Awareness of mental health and mental illness is gaining increasing attention in Canada, due in large part to the 2006 report of the Senate Committee on Social Affairs, Science and Technology of Canada, *Out of the Shadows at Last: Transforming Mental Health, Mental Illness and Addiction Services in Canada.* The report has led to the creation of the Mental Health Commission of Canada whose duties include advocating for reform of mental health policies and service delivery, as well as diminishing the stigma and discrimination faced by Canadians living with mental illness.[17] Hopefully, Nunavut can take advantage of this increased attention to mental health and mental illness at the national level to support its own efforts.

The lack of data on the health status of Nunavummiut will be addressed in part by the findings that will come out of the Qanuippitali, the 2007-2008 Inuit Health Survey currently underway. This innovative health study, with many Nunavut partners (e.g. Department of Health and Social Services and NTI) and Canadian partners (Government of Canada, International Polar Year, Canadian Institutes for Health Research and Northern Contaminants Program) has involved a random survey of adults and children in 24 communities over the course of 2007 and 2008. The survey will seek both clinical information as well as attitudinal information about general health, eating habits (including country food consumption), mental health and community wellness. The clinical information to be retrieved from adults include:

- Heart health including blood pressure, pulse and carotid artery health
- Blood glucose and diabetes risk
- Height, sitting height, weight, body composition and waist circumference
- Exposure to infection
- Bone health (women >40 years only)
- Nutrient status including vitamin A, vitamin D, iron, selenium and fatty acids
- Exposure to environmental contaminants

There is also children's survey component that will focus on ages 3-5 in the areas of nutritional health, healthy growth and bones, vision, and medical history. The 2007-2008 survey will serve as a baseline to compare with the next survey that will be undertaken in 7 years time.[18]

Social Conditions and Well-Being

Determining improvements in Nunavut's social indicators is more difficult. Generally, data on social indicators in Canada are few and infrequently updated: Like health care, this continues to be an area that suffers from poor monitoring and assessment of outcomes. As a result, not much data have become available on the Territory's social conditions since the first Nunavut Economic Outlook.

What indicators are available suggest that while there has been some improvement, the gap between Nunavummiut and other Canadians remains wide (see Table 4-2). Crime rates in Nunavut—both for property crimes and violent crimes—have dropped between 2003 and 2006. However, income levels, especially when given in terms of purchasing power, and adequate housing levels (discussed in this chapter) lag far behind the rest of Canada.

Table 4-2

Select Social Status Indicators for Nunavut and Canada

Indicator	Nunavut	Canada
Unemployment rate (2007 Labour Force Survey)*	8.9	6
Unemployment rate (2006 Census)	15.6	6.6
Dependency Ratio**	84.6	59.2
Rural Population (2006)***	56.8%	19.9%
Violent crimes per 100,000 population	6447 (7,943 in 2003)	951
Property crimes (rate per 100,000)	4,256 (7,221 in 2003)	3,588
Average number of persons in household	3.7	2.5
Median total income	52,300	60,600

Notes:

* In Nunavut, the Labour Force Survey is conducted in the 10 largest communities only. ** The ratio of the combined population aged 0 to 19 years old and the population aged 65 years and older to the population aged 20 to 64 years old. This ratio represents the number of dependents for every 100 people in the working-age population; Source: Statistics Canada reported in CIHI, Health Indicators, 2008. *** From 2006 Census

Sources: Statistics Canada.

There has been some ongoing work aimed at assessing well-being in Inuit communities, including those in Nunavut. Two measures have been developed to assess Inuit well-being at the individual and community levels: the Inuit Human Development Index and the Community Well-Being Index.

The *Inuit Human Development Index (Inuit HDI)* was developed by Indian and Northern Affairs Canada to compare the average level of well-being of Inuit and other Canadians. It is based on the United Nations Human Development Index used to measure and compare the quality of life among the world's nations. The index is based on three dimensions:

1. a long and healthy life,
2. knowledge and
3. a decent standard of living.[19]

The results are available between Census years 1991 and 2001. They reveal an improvement in the index for Inuit, particularly between 1991 and 1996. The gap in the HDI between Inuit and other Canadians narrowed as well, particularly due to improvements in Inuit levels of education. However, the gap did not decrease between 1996 and 2001 due largely to an increase in the gap in life-expectancy between Inuit and other Canadians.

The Community Well-Being Index (CWB), builds off the United Nations' Human Development Index (HDI) and examines the relative well-being of communities in Canada according to four dimensions: income; education, housing, and labour force.[20] The results place Inuit communities slightly higher in terms of well-being than First Nations communities but well below the average for other Canadian communities. The lack of adequate housing, particularly in terms of overcrowding, accounts for almost half of the discrepancy between Inuit and other Canadian communities' scores. Nunavut communities, as a group, scored higher than the community average for Nunavik, but lower than the community averages for Inuvialuit and Labrador. Results in the Community Well-Being Index also vary widely not only among the four Inuit regions across Canada but also among Nunavut's communities thereby showing that some communities are experiencing relatively high levels of well-being while others are not (See Table 4-3). On a positive note, the index results for Inuit communities have increased since the index was first computed in 1991.

The available data on health status, social conditions and well-being suggest that while there have been major improvements in some areas, the rate of improvement has slowed or even levelled off in recent years. This is a trend that must be closely monitored to determine whether it reflects a period of social adjustment or whether there are serious negative forces at play that can harm Nunavut's long-term social development.

4.1.4 Income and Wealth Distribution

Assessing income levels and how wealth is distributed are important considerations in understanding the state of human capital within a region. It is also true that personal and family income demonstrate the society's financial capacity to invest in and take advantage of opportunities. Personal income when considered within the context of its purchasing power is perhaps our best measure of standard of living, which is a key component of a high and sustainable quality of life.

Quality of life was defined earlier as something greater than one's standard of living, but it would be naïve to conclude from this definition that material well-being is unimportant.[21]

When asked to define happiness, people speak of family, health, education, religion, community, employment and even of their marital status, and may not mention money at all. But at the same time, we inevitably find in a wage-based society that on the whole, people with more money have better family situations, higher levels of health and education, and are engaged in more purposeful or productive work. Furthermore, at any given time, within a given country, people with lower incomes are far more likely to say that they are unhappy.[22,23]

Table 4-3

Community well-being (CWB): distribution of Inuit communities by Inuit region, 2001

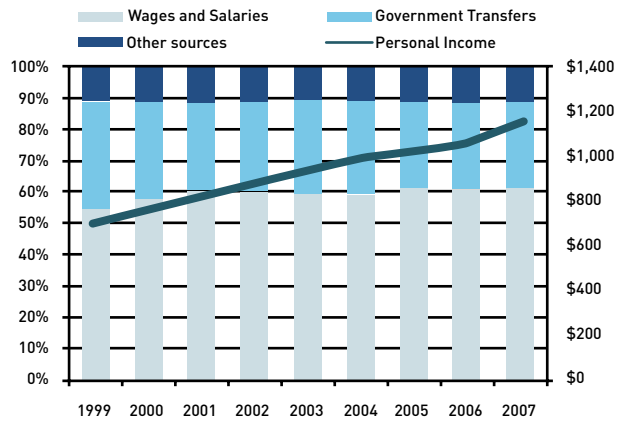
	CWB Score Range							
Region	**0.55-0.60**	**0.60-0.65**	**0.65-0.70**	**0.70-0.75**	**0.75-0.80**	**0.80-0.85**	**0.85-0.90**	**Total**
Labrador	0	1	2	1	1	0	1	6
Nunavik	1	6	3	3	1	0	0	14
Inuvialuit	0	1	2	2	0	0	1	6
Nunavut	**0**	**5**	**10**	**6**	**1**	**2**	**1**	**25**

Source: Well-being and Inuit Communities in Canada.

Income levels are rising in Nunavut, but dependence on government assistance has not dissipated much since 1999 and almost not at all since 2001 when wages and salaries constituted 61 per cent of total personal income and government transfers 27 per cent (see Figure 4-12).

Figure 4-12

Level and composition of personal income, 1999–2007 (percent of total, $ millions)



Source: Statistics Canada, 2007 Provincial Economic Accounts.

An investigation of these statistics reveals some noteworthy changes in Nunavut's personal income levels over the past 5 years. Nunavummiut personal income has grown by an average of 5.5 per cent per year (compounded annually) since 2002. But in terms of per capita growth, this average annual increase is somewhat lower at 3.9 percent. And when taking inflation into consideration, real personal income on a per capita basis has grown by a smaller percentage still, averaging 2.3 per cent annually (see Table 4-4). Nevertheless, real incomes are on the rise.

Table 4-4

Growth in personal income, 2002–2007 (5-year annual compound growth rate)

Personal income	5.5%
Personal income per capita	3.9%
Real personal income per capita	2.3%

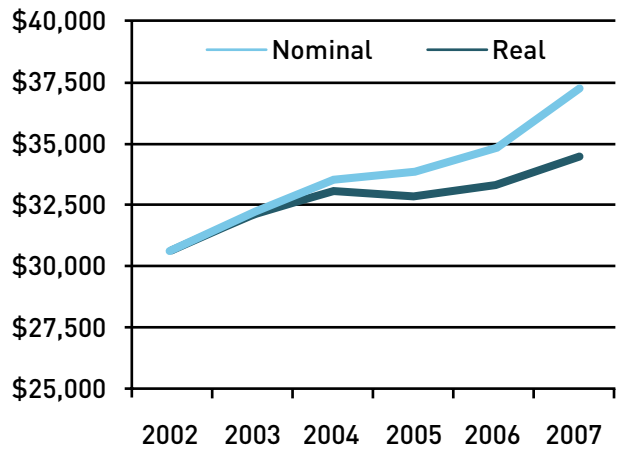
Source: Statistics Canada

The difference between real and nominal income is important. Real personal income takes into account the effects of inflation. If personal income grows by 1 percent, but the price of consumer goods and services also rise by 1 percent, then in *real* terms, the value of personal income (what it is worth in terms of its purchasing power) has not changed. Nominal income does not consider the effect of inflation and therefore can be misleading. In the example above, the 1 per cent rise in nominal income would be misconstrued as an increase in one's purchasing power if the increase in prices is not factored.

In the case for Nunavut, real income levels have been slow to increase over the past five years, but most of this is a result of a 6.4 per cent decline in nominal wages and salaries in 2005. That year, the overall decline in personal income was accompanied by a small increase in population and a slight increase in prices, resulting in the drop in real per capita personal income (see Figure 4-13).

Figure 4-13

Personal income per capita ($ per person)



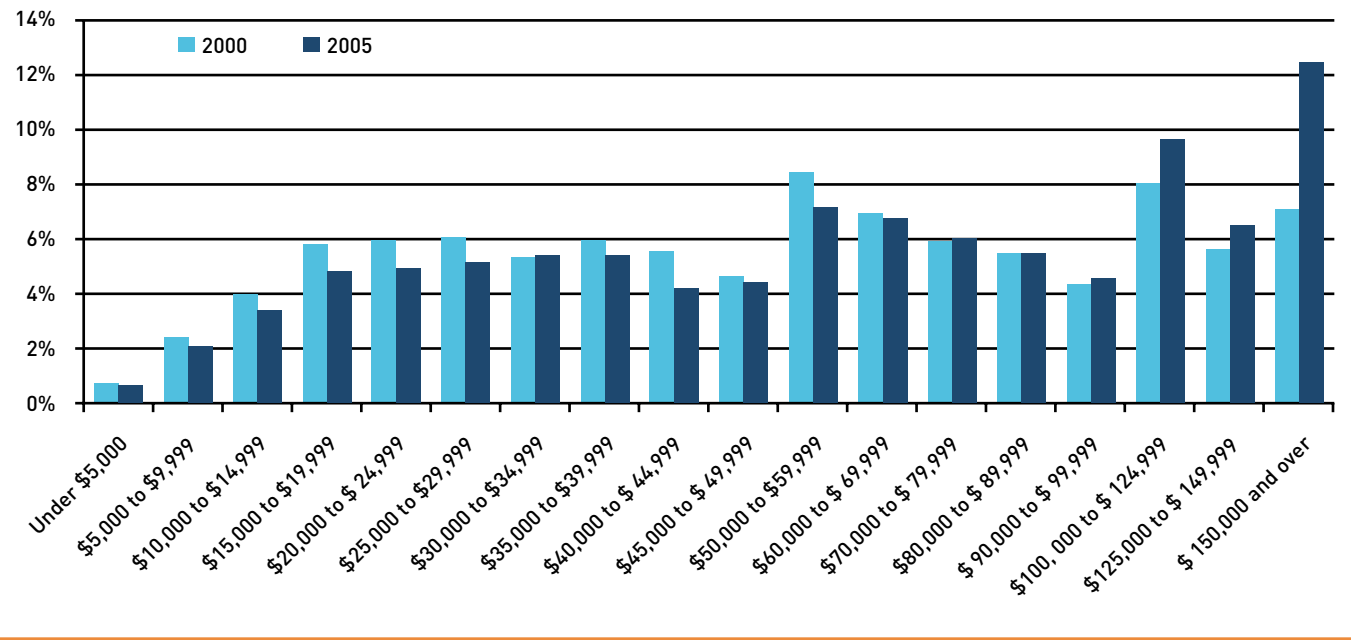
Source: Statistics Canada, 2007 Provincial Economic Accounts.

But in addition to average income levels, it is also important to understand the level of income disparity, and whether that gap is expanding or shrinking over time. Income distribution is an essential variable in understanding issues of social inclusion such as poverty, access to employment and discrimination. It will also be important to track changes in income distribution as the Nunavut economy expands from increased mining activity. Mine construction and operations will provide jobs to people who live in communities with little economic activity and few prospects. This is particularly important for non-decentralised communities. While this is most certainly a positive outcome, the changes will create a situation within communities whereby greater discrepancies between haves and have-nots will appear. Those with the skills, abilities and aptitudes to participate will see dramatic increases in their income. However, those unable to participate whether as a result of education, family responsibilities, or anything else, will see their standard of living fall in comparison creating social tension at the community level. Thus, an increase in personal wealth without mechanisms to share in that wealth may not contribute to Nunavut's goal of establishing *healthy communities*, and in fact, may contribute to a rise in social tensions. As will be discussed later, the demands on community-based organisations will increase dramatically over the forecast period because of issues such as this.

For the time being, comparing the results from the 2001 and 2006 Census confirms the personal income results from the *2007 Provincial Economic Accounts* described above—that Nunavummiut families are becoming wealthier (see Figure 4-14). In all of the income levels below $70,000 per family only one has seen an increase in the percentage of families at that level. Conversely, at every income level above $70,000 per family, the percentage of families at each of those levels has increased. It should be noted that this figure is reporting *real* income.

Figure 4-14

Distribution of income among Nunavut families*, 2000 and 2005 (percentage of economic families, constant $ 2005)



*Note: Nunavut Family is defined as Statistic Canada's Economic Family – refers to a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law or adoption.

Source: Statistics Canada – 2006 Census. Catalogue number 97-563-XCB2006023.

4.2 PHYSICAL CAPITAL/INFRASTRUCTURE

4.2.1 Housing

Shelter is one of life's basic requirements. And it is believed by many working in the area of population health that housing deprivation can negatively influence social and economic performance given its central influence on people's lives.[24] Adequate housing lowers a community's vulnerability to economic, social or environmental changes and provides the basis from which a society can build healthy and more self-reliant communities.

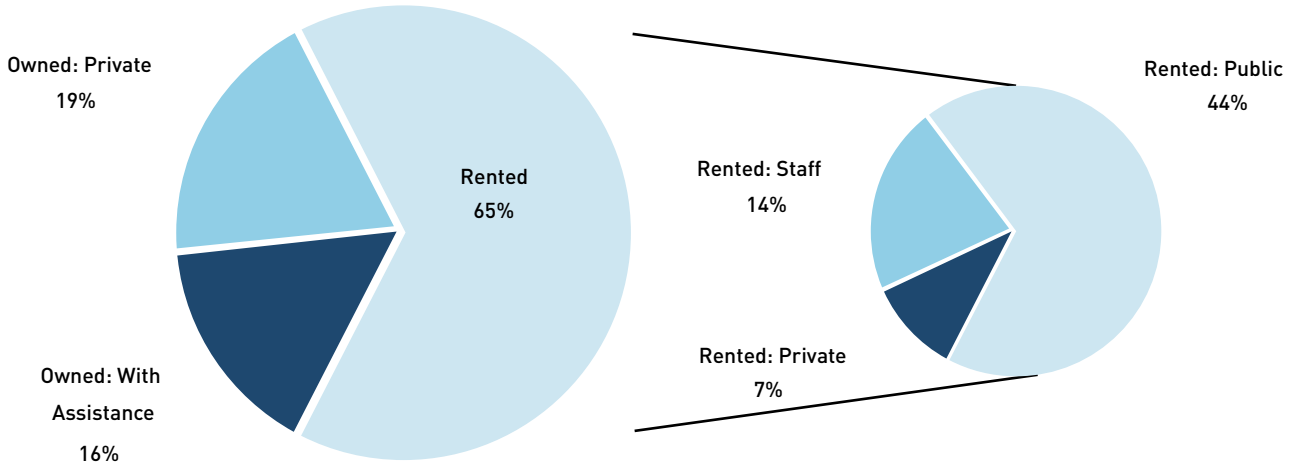
Nunavut's housing market is unique in Canada. Approximately 65 per cent of all homes in Nunavut are rented, with the vast majority of these homes being owned by the government (see Figure 4-15). Over half of the population lives in public housing compared to about 6 per cent in the rest of Canada. Likewise, unassisted private ownership accounts for 19 per cent of all homes in Nunavut compared to 70 per cent nationally. Costs of building and maintaining homes are unattainable for a majority of the population, due in part to the high cost of materials coupled with relatively low incomes. As such, many of the tenants of public housing cannot afford anything close to market rates for rent or the cost of utilities and do not assume the responsibility for maintenance and upkeep. These hefty costs fall on the shoulders of the Government of Nunavut.

Occupancy rates are high relative to Canada at approximately 3.3 people per house—Canadian rates are close to 2.4. However, as noted in the *2005 Nunavut Economic Outlook*, this occupancy rate is not so different from that experienced in the rest of Canada in the 1950s and 1960s. There is some validity to comparing between time periods, since it was at that time that Canada's demographic profile was similar to present-day Nunavut. Furthermore, it is not clear that public housing should strive to offer an occupancy rate equal to what the private housing market has created in southern Canada, or if these southern occupancy rates are desirable from the standpoint of efficient usage of Nunavut's scarce resources.

In the past few years, the Government of Nunavut has begun a process that will see an end to subsidised staff housing by 2015. If this plan is carried through to its completion, it will free up much needed capital within its budget, however, it is not clear what effect this policy will have in attracting and retaining staff and will most definitely require salary adjustments that would mitigate the initial savings.

Figure 4-15

Housing by ownership type – estimate (percentage of total dwellings)



Source: Nunavut Housing Corporation *Business Plan 2007-08*.

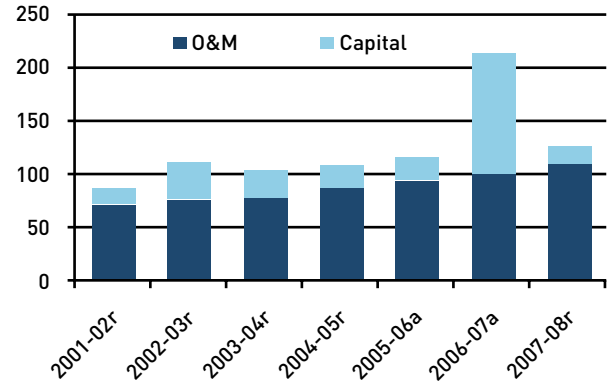
4.2.1.1 Details

According to Statistics Canada's *2006 Census*, the five-year period from 2001 to 2006 saw the number of dwellings increase by 864 to just over 9,000 units while the population grew by 2,729 leaving the occupancy rate unchanged at 3.3 people per dwelling (see Annex 2 for population and dwelling counts and occupancy rates by Nunavut community).[25]

The 4,086 public units owned by the Government of Nunavut house more than 15,000 Nunavummiut for an average occupancy rate of 3.8.[26] The annual cost to the government for building, operating and maintaining these homes exceeds $100 million and represents 12 per cent of its annual budget (see Figure 4-16). This financial burden will escalate in future years as the $56 million provided annually to the Government of Nunavut by the Canadian Housing and Mortgage Corporation declines reaching zero by 2037. The Nunavut Housing Corporation estimated the cost of utilities alone will exceed $50 million 2007-08. This figure will most certainly increase in the coming years given the dramatic rise in the cost of energy and the sharp rise in the number of units as a result of the *Nunavut Housing Trust Initiative*.

Figure 4-16

Government spending on housing ($ millions)



Notes: a = actual; r = revised estimate.

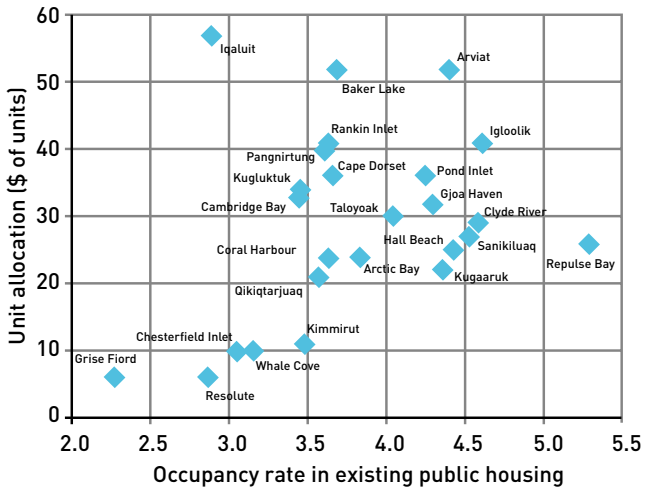
Source: Government of Nunavut Department of Finance, Budget Main Estimates 2001 to 2008.

4.2.1.2 Nunavut Housing Trust

In spring 2006, the federal government announced new spending on housing across northern Canada. Nunavut's share of the program was $200 million to be spent on public housing construction between 2006-2007 and 2009-10. This sum covers the construction costs of 725 public units, of which a majority will be cost-efficient five-plex type houses designed specifically for Canada's northern climate and the unique needs of the units' tenants, including such things as a space for country food preparation.[27] A diagram showing the allocation of units is provided in Figure 4-17. It is worth noting that prior to this program, a typical year would see Nunavut's total stock of housing grow by approximately 170 units with a portion being public housing. Through the Nunavut Housing Trust, this number should exceed 300 units.

Figure 4-17

Nunavut Housing Trust allocation (by number of units and occupancy rates)



Source: Nunavut Housing Corporation (Nunavut Housing Trust), Statistics Canada (2006 Census)

The four-year block funding has afforded the Nunavut Housing Corporation the opportunity to develop a delivery strategy with benefits beyond the new stock of houses. This strategy includes sponsorship of

- skills training,
- apprenticeships and
- community-based business development.

In addition, construction scheduling will be structured in a manner that encourages local participation. For example, workdays will not exceed nine hours per day and six days per week with a cap of 45 work hours per week. Construction activities will be split in order for local workers to participate in training programs. Unfortunately, a recent report by the Auditor General of Canada has cast some doubt into the Corporation's likely success with its delivery strategy (see Exhibit 4-1).

Exhibit 4-1

The Auditor General of Canada's Report on the Nunavut Housing Corporation[28]

In May of this year, the Auditor General of Canada submitted its report on the Nunavut Housing Corporation to the Legislative Assembly of Nunavut. It presented three key findings:

1. The Corporation does not monitor the activities of its community partners well enough to ensure that they comply with its policies and procedures in delivering the public housing program. Nor does it adequately monitor the maintenance of public housing units and the overall condition of its housing portfolio. It appears that these community partners do not fully comply with the Corporation's policies in assessing applications for housing, allocating public housing units, and rating the condition of units. Furthermore, the Corporation is not meeting its obligation to regularly assess the operations of its community partners, although this is a key monitoring activity required under its agreements with them.
2. The Corporation's delivery strategy for the Nunavut Housing Initiative did not plan for known risks, such as lack of interest in construction work among contractors and poor attendance of workers on some construction sites. As a result, the construction schedule for the first year suffered delays, and the education and training objectives of the Strategy as well as its objective of building 725 public housing units by 2010 might not be met.
3. Managing its own programs is a significant challenge for the Corporation, with 23 of its 89 positions vacant at the end of 2007. The Strategy represents a major addition to the workload of already stretched staff. The Corporation needs to develop a long-term strategic plan that clearly describes how it intends to carry out its responsibilities with the human and financial resources it has available.

The Auditor General of Canada did report that the Nunavut Housing Corporation was in agreement with the report and its recommendations and that it has indicated that actions are being or will be taken or are under consideration. Nevertheless, reports such as these that do pose a risk to future funding and are major impediments to devolution. As more and more of these critical reports pile up, the likelihood that future federal funding includes more stringent rules and reporting regulations increases.[29]

These houses should alleviate some of the pressure building within the public housing market, where the Nunavut Housing Corporation reports a waiting list of 1,000 families representing 3,800 people. Interestingly, this figure is almost identical to that reported in the original Nunavut Economic Outlook where it was suggested that at that time there were 1,100 families on the waiting list. So at the very least, the situation does not seem to be worsening.

With that said, a second and perhaps even a third round of funding of this magnitude will be necessary. Improvements to the quality and quantity of housing in Nunavut are necessary if the benefits of economic growth and increased participation are to translate into a high and sustainable quality of life. There is some evidence from the Northwest Territories that shows that the sudden income growth in small or isolated communities that has resulted from rapid economic growth has led to an out-migration of young and employable people from their home communities, with the lack of adequate housing being one of a number of contributing factors. A similar fortune awaits Nunavut if nothing is done to address shortfalls in basic human needs.

The *2006 Census* included analysis of migration patterns that revealed more and more Inuit are relocating to southern Canada and that presently 22 per cent of all Inuit in Canada live outside the North.[30] This is a 62 per cent increase in the last 10 years. The President of Inuit Tapiriit Kanatami has suggested that overcrowded housing is a primary reason for this demographic trend along with the pursuit of employment, poor government services, and education.[31]

The Nunavut Housing Trust Initiative is seen as a response to the *Nunavut Ten-Year Inuit Housing Action Plan* (herein referred to as the "Housing Plan") by the federal government. Developed collaboratively between the Government of Nunavut and Nunavut Tunngavik Incorporated, this Housing Plan provided some details on a $1.9 billion program to build 3,000 new houses to address existing needs, 270 additional units annually to meet the needs of the expanding population and funds to upgrade and repair many existing homes that are over 25 years old. In the *2005 Nunavut Economic Outlook* it was suggested that this proposal was too ambitious at $200 million per year, though it did serve to highlight the housing situation found in Nunavut. The $200 million over four years is more reasonable from a funding perspective, and realistically is more in line with Nunavut's capacity to build homes and its logistical challenges.

The Housing Plan, similar to the Nunavut Housing Corporation's *2007-08 Business Plan*, is based on estimates of population growth that are higher than the projections in this Outlook. Recent information regarding population trends in Nunavut suggest previous estimates of the population growing to 44,000 by 2020 are on the outside of this Outlook's 'high' scenario (this is discussed in greater detail later). This slowing trend in population growth will alleviate some of the future pressures on public housing demand in the future. Nevertheless, present and medium-term demand does suggest the program will require an extension beyond the 2009-10 fiscal year.

It should be noted that the private sector increased its real expenditures on housing in 2007 to the tune of $34 million. This is the highest level since the 1999 and 2000 calendar years.

4.2.2 Communications

Communications infrastructure is critical to the economic, social and cultural progress of Nunavut society. In particular, readily available access to high-speed broadband is now a necessity that few people in western society can operate without. This dependence is now a reality in Nunavut for everything from government and private-sector operations, banking and other financial services, education, health care, personal communications, shopping and entertainment. Simply put, society can no longer function efficiently without reasonable access to high-speed broadband. This infrastructure is and will continue to have a far greater impact on Nunavut society than would any other investment in transportation or communication infrastructure.

Ready access to high-speed broadband is an important step toward the long-term sustainability of Nunavut communities. Through easy access to the Internet, Nunavummiut, especially the younger age-cohorts, will gain a new perspective of the world in which they live. From this new understanding, their expectations will heighten—including expectations of their community, their government, their economy and their education. Perhaps most interesting, the mobility of young Nunavummiut will surely grow as the rest of Canada and indeed the entire world becomes less unknown.[32]

The *2005 Nunavut Economic Outlook* reported on the $10 million capital investment to put in place the necessary infrastructure to enable mass access to high-speed broadband. The result of this investment was the QINIQ Network launched that year (see Exhibit 4-2). In its first year of operations, the Nunavut Broadband Development Corporation (NBDC) estimated there were 2,000 accounts associated with this Network. The number has since doubled to 4,000.[33,34] This rapid expansion signals a growing demand for and recognition of the contribution that the Internet makes to peoples' lives.

Exhibit 4-2

Nunavut Broadband Development Corporation and QINIQ Network

- Nunavut Broadband Development Corporation (NBDC) is a non-profit corporation established to ensure reliable, affordable access to broadband is available in every Nunavut community.
- The QINIQ Network was developed through financial support from the Government of Canada, agencies of the Government of Nunavut, and Inuit land claim organisations.
- The Network is operated by SSI Micro Ltd., however, NBDC arranges all financing, ensures that borrowed funds are repaid, and works to ensure that the QINIQ Network remains available in every community for an affordable price.
- The cost for a personal account on the QINIQ Network is $60 per month after an initial set-up fee.

Source: Nunavut Broadband Development Corporation.

As noted in the exhibit, a personal account costs subscribers $60 per month, however, this fee does not cover the entire cost of the service which is estimated at $150 per account. The federal government provides NBDC with a subsidy for the difference, but only for the first 2,000 personal accounts. This has meant that the better-than-anticipated success of the QINIQ Network is actually causing substantial cost overruns for the operator. SSI Micro has no choice but to purchase additional broadband capacity through its satellite connections to ensure all users are provided adequate service, however, every additional user above the 2,000 mark costs the company as much as $1,000 a year. This is not sustainable and should be a concern for Nunavummiut. If the QINIQ Network were to shutdown without a reasonable substitute in place, those outside Iqaluit or those who can't access high-speed broadband through other sources such as the Government of Nunavut network would be forced to return to a dial-up service. In the modern age of the Internet, where site content and file sizes are created with an assumption of adequate bandwidth, this switch would make many of the services available through the Internet inaccessible.

The NBDC is currently seeking funding to ensure the Network is financially feasible for the operator. Meanwhile, there remain issues of increasing the amount of bandwidth available to service the increasingly bandwidth-hungry users and to better manage the bandwidth that is currently available. This entails an investment into greater technological efficiencies and educating users on managing their own accounts.

There are other networks operating in Nunavut. Northwestel offers digital subscriber line (DSL) service for people living in Iqaluit that connects people to the Internet through their telephone line. The Government of Nunavut operates its own network with bandwidth supplied by Ardicom. An increased number of Nunavummiut are now using Netcaster, though this does require the user to have a relatively strong proficiency in information technology. Statistics on the number of accounts, service costs and available bandwidth from private suppliers is not publicly-available information. However, it would be reasonable to assume they too are suffering from inadequate bandwidth given this is not an issue exclusive to Nunavut but a global one that will only worsen until technology is developed to address it.

To put the growing demand for bandwidth into perspective, it is estimated that the bandwidth consumed globally in 2007 to support the website YouTube alone exceeded the world's total bandwidth consumption in 2000.

Web could collapse as video demand soars
Daily Telegraph, April 9, 2008

4.2.3 Public Infrastructure

Public infrastructure is a form of physical capital that impacts all aspects of a society's performance (see Exhibit 4-3). Nunavut continues to suffer deficits in many areas of its physical capital. With infrastructure playing such a vital role in modern society, it is worrisome that Nunavut suffers deficits in so many areas.

The pressures facing Nunavut's public infrastructure have not changed markedly since the 2005 Nunavut Economic Outlook. These include:

- in addition to new infrastructure, there is a growing need to replace existing infrastructure that is fast-approaching or long-past the end of its lifespan;
- this existing infrastructure is also under increased pressure from a growing population and an increase in economic activity—municipal facilities as well as the stock of housing in many communities were not designed to meet current demands;
- meeting new National standards for municipal services such as water supply, sewage systems and waste disposal are already far beyond Nunavut's financial capacity;
- global climate change will bring severe weather that is more frequent and intense, melting permafrost and shoreline erosion—many of Nunavut's buildings, roads and airports were not built to a standard that could sustain further environmental pressure;[35] and,
- raising awareness amongst Canadians of Nunavut's infrastructure plight has been difficult in the face of many competing infrastructure shortages in more populated, southern regions of the country.

Exhibit 4-3

Examples of how public infrastructure relates to economic, social and environmental performance in a community

Economic performance is affected by:	Social performance is affected by:	Environmental performance is affected by:
• Telecommunications networks	• Recreation, community and cultural facilities	• Waste water treatment
• Transportation links	• Safe and healthy housing	• Solid waste disposal
• Reliable energy sources	• Health care and social support facilities	• Recycling programs
• Business development centres	• Education and training facilities	• Energy sources and use
• Housing (in terms of labour mobility and at-work performance)	• Protective services (e.g. fire fighting equipment, correctional facilities)	• Treatment of hazardous waste

Source: *2005 Nunavut Economic Outlook;* Department of Community and Government Services

On this last issue, there has been some progress made in the last few years. The Nunavut Housing Trust is perhaps the best example of this. The federal government singled out Nunavut's particular need for public housing and as a result delivered the lion's share of the available program funds to Nunavut[36]—it is more typical to see funding dollars divided evenly between the three territories or see the division of funds be based on population.

By the same token, other infrastructure issues remain outstanding. In 2005, the Government of Nunavut in cooperation with the federal government's Fisheries and Oceans Canada developed the *Nunavut Small-Craft Harbour Report* that identified the need for marine infrastructure in seven communities at a cost of $41 million over a five- to seven-year time period.

Commercial fishing, particularly the shrimp and turbot in the eastern Arctic, has the most immediate and greatest potential to create non-government employment, promote entrepreneurship, develop management capacity, and perhaps most importantly instill pride, confidence and hope in the 29,000 plus inhabitants of the territory.[37]

In the most recent federal budget, $8 million was committed over the next two years for the construction, operational and management costs associated with new marine infrastructure in Pangnirtung.[38] This represents the first and only financial response from the federal government associated with the report.

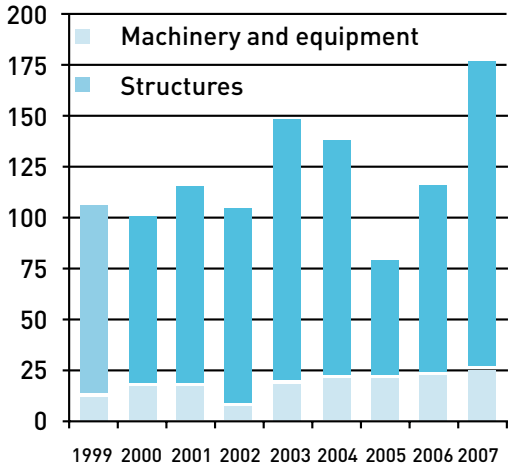
4.2.3.1 Details

According to Statistics Canada's 2007 Provincial and Territorial Economic Accounts (PEA), real government capital spending reached an all time high in 2007 equalling $177 million (see Figure 4-18). Of this total, $148 million went into the construction of infrastructure, including public works, schools, hospitals, and public housing.

Figure 4-19 provides details from the Government of Nunavut's annual budgets on how it has distributed its capital spending between departments. Nunavut has benefited over the past several years from a number of federal programs that have provided specific funding for capital projects such as the Municipal Rural Infrastructure Fund, Building Canada, Gas Tax Fund, Nunavut Housing Trust and others. These programs have provided the territorial government with the means to spend in excess of $150 million on capital investment in four of the last five fiscal years (2003-04 to 2007-08). The *2005 Nunavut Economic Outlook* suggested that this level of sustained capital investment is required for the territory to begin to close its infrastructure gap based on the result of capital needs calculations performed by the Department of Community Government and Services.[39]

Figure 4-18

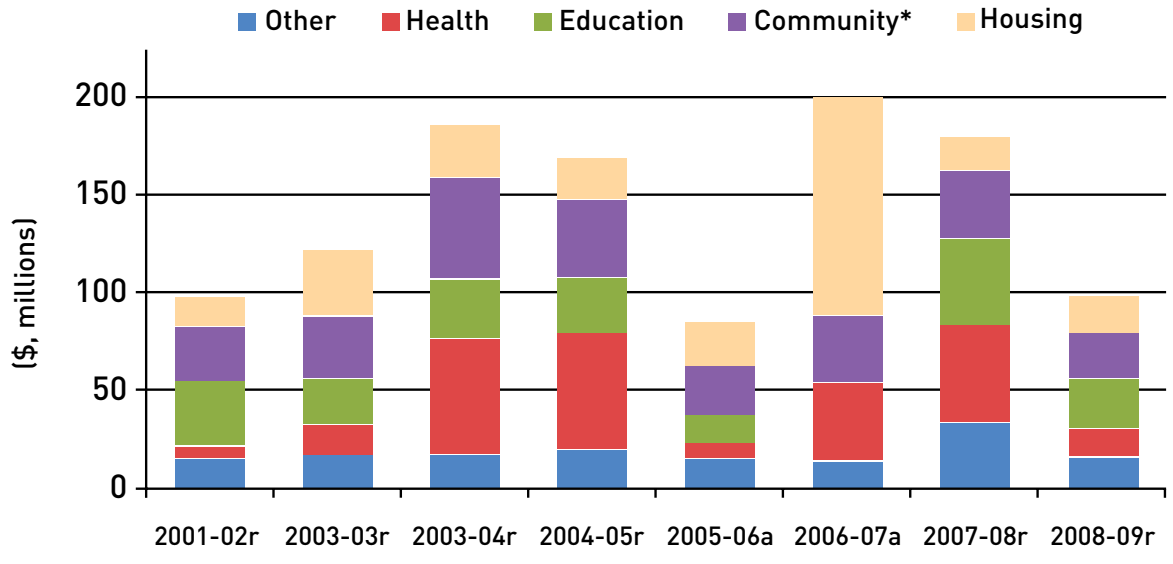
Real government investment, 1999-2007 ($ millions, chained (2002) prices)



Source: Statistics Canada 2007 *Provincial Economic Accounts*

Figure 4-19

Government capital spending by department ($ millions)



*Notes: Prior to 2003-04 Community and Government Services included Transportation. a = actual; r = revised estimate.

Source: Government of Nunavut Department of Finance, Budget Main Estimates (2001 to 2008).

Throughout 2003 and 2004, health care received the greatest share of capital dollars, with new infrastructure built in Iqaluit, Rankin Inlet and Cambridge Bay. In 2006, the spike in housing investments was the result of the Nunavut Housing Trust. Because this is a four year program, one should expect to see higher spending levels in the 2007-08 and 2008-09 fiscal years as well, though this is not reflected in the government's latest budget. In the fiscal year (2007-08) spending was more balanced across health, education and community infrastructure. Some of the larger public investments made in that fiscal year are reported in (see Table 4-5).

Table 4-5

Selected planned capital projects, 2007-08 fiscal year ($ millions)

Cultural Infrastructure	
Folk School (Clyde River)	$5.8
Education Infrastructure	
Inuksuk High School (Iqaluit)	$3.2
NAC Student Accomodations	$12.0
New School (Sanikiluaq)	$2.0
Sakku School Renos (Coral Harbour)	$2.6
NAC Student Accomodations	$4.8
Trade School (Rankin Inlet)	$1.9
Elementary School Renos (Gjoa Haven)	$12.3
Health Infrastructure	
Continuing Care Facility (Igloolik)	$5.5
Qikiqtani General Hospital (Iqaluit)	$23.2
Continuing Care Facility (Gjoa Haven)	$5.5
Community Infrastructure	
Sewage Treatment Plant (Rankin Inlet)	$3.6
Sewage Lagoon and Solid Waste (Kugluktuk)	$1.7
Airport Replacement (Arctic Bay)	$8.4
New Sewage Lagoon (Clyde River)	$1.5
Water Treatment Plant (Taloyoak)	$1.5
Community Hall (Gjoa Haven)	$2.0

Note: Projects exceeding $1 million of the 2007-08 fiscal year were reported.

Source: Government of Nunavut 2008-09 Capital Estimates.

4.2.3.2 Health and Social Infrastructure

While Nunavut's health status has not improved since the Territory was officially established, the past few years have featured an increase in the stock of health care infrastructure. Foremost has been the opening of the new Qikiqtani General Hospital in Iqaluit in October 2007 featuring 35 beds, an expanded in-patient unit, increased day surgery beds and birthing rooms.

Other facility upgrades in Nunavut include:

- New regional health centres in Rankin Inlet and Cambridge Bay (Fall 2005); however, the Kitikmeot Health Centre was damaged by fire in 2007 and is currently being repaired.
- A new health centre for Pangnirtung and new continuing care centres for Gjoa Haven and Igloolik to be operational in fall 2008
- Future health centres for Repulse Bay, Taloyoak, and Arctic Bay

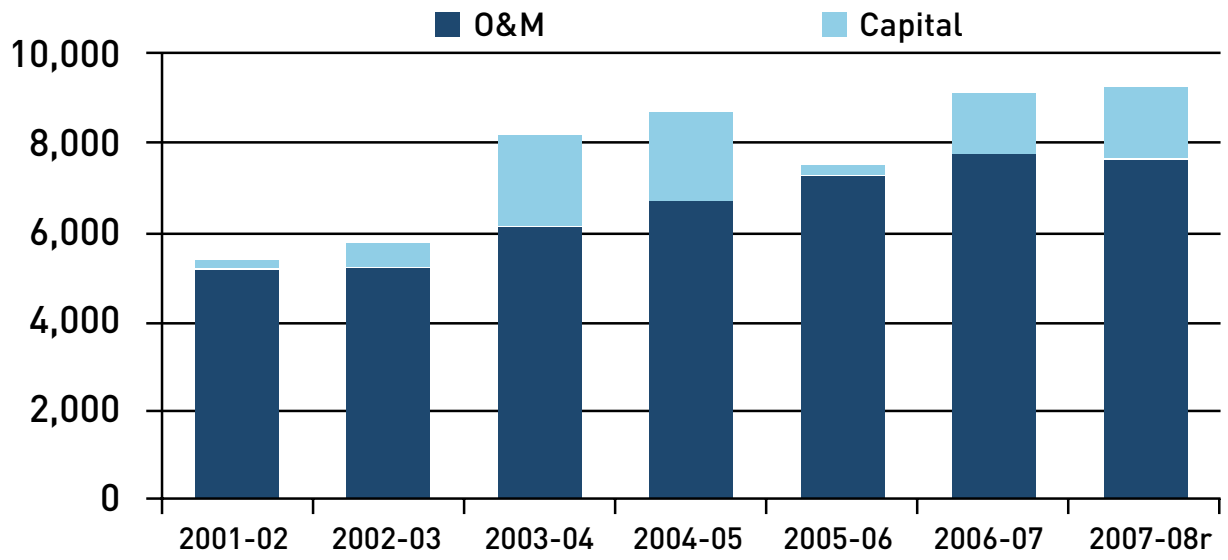
In addition, Nunavut has instituted a well-developed telehealth network (Ikajuruti Inungnik Ungasiktumi or IIU) connecting all communities to regional facilities for testing and treatment—something that Nunavut should be a leader in given its large geographical expanse. Furthermore, the Government of Nunavut recognises the value of developing an electronic health record that can consolidate a patient's data making it easier to provide integrated care (e.g., an electronic health record can identify interactions with different medications that may be prescribed, share test results faster between providers).

Nunavut continues to be the largest spender on health care per capita ($10,903) in Canada while the Canadian average is $4,867. The Department of Health and Social Services has the largest budget in the GN (26 per cent of total budget).[40] Figure 4-20 shows the continuous growth rate on government spending on health and social services expenditures. Much of the increase in health care spending has been directed at increasing the availability of services in Nunavut. The increase in health care infrastructure is intended to provide care closer to home and from an administrative point of view, to reduce the reliance on transporting patients and their escorts out of the territory. Over a third of Nunavut's health care budget is for travel and transportation costs so reducing this budget item can translate into investments into Nunavut's health care system.

It should be noted that the public health budget, an important and usually cost-effective contributor to the health of a population, only represents 3 per cent of the Department of Health and Social Services budget. The department recognises that increased focus and spending on public health initiatives can help reduce the demand for health care services.

Figure 4-20

Government spending on health and social services per capita ($ per person, all ages)



Notes: r = revised estimate.

Source: Government of Nunavut Department of Finance, Budget Main Estimates (2001 to 2008).

To accompany the increase in health care facilities, Nunavut requires an increase in its supply of health care professionals. And the government has been taking steps to increase its supply including a progressive benefits package and a greater reliance on nurses trained in Nunavut through the Nunavut Nursing Recruitment and Retention Strategy. In addition, training opportunities are becoming available for Nunavummiut in several areas including Maternal care worker and Midwifery Program, Mental Health Training Program, Community Therapy Assistant Program, Home Care and Community Care Program, high-risk obstetrics and x-ray training,

Another issue related to this increase in health care delivery is quality. It will be important that the greater reliance on Nunavut-based care will not translate into a reduction in the quality of care. In late 2005, the Baffin Regional Hospital did not pass an accreditation review. The Department of Health and Social Services has stated that it will focus on ensuring quality care is provided in Nunavut.[41]

A major issue with respect to social services infrastructure is the lack of child care spaces. In many communities, the wait for a registered child care place is 2 years or more. A 2006 study tour of child care facilities in Nunavik (Northern Quebec) found that this less prosperous jurisdiction has a more developed child care system than found in Nunavut.[42] For instance, despite having three times the population, Nunavut has 959 full-time child care spaces compared to 815 for Nunavik. Not only are there more spaces available per capita in Nunavik but the cost for families is cheaper in Nunavik and the facility staff are paid more as well. These results are a function of society in Quebec that values early childhood education and is willing to pay for it through public policy choices. Given Nunavut's young population, the proven effect that good early child education can have on a child's development and the potential labour shortage in Nunavut, these choices might also serve the needs of Nunavummiut as well.

4.2.3.3 Impact of Rising Energy Costs on Capital Spending

It is of some concern how the recent rise in oil prices might affect the Government of Nunavut's spending plans, and in particular, how it will impact investments in infrastructure. It has been suggested that with a barrel of oil selling for $135, the government will have to find an estimated $85 million within its current budget to cover the higher fuel costs.[43] A more likely scenario for the Government of Nunavut will be to borrow the money or seek financial assistance from the federal government. The territorial government spends more than $50 million on utilities for its public housing units alone and its total fuel bill which includes all purchases and subsidies exceeds $260 million annually.[44]

Over the medium term, with all other things being equal, the Government of Nunavut will have difficulties managing this increased financial burden and therefore one can expect additional transfers from the federal government to help cover the costs—whether the transfer occurs through an existing program or a temporary arrangement is not known. Over the long term, assuming the world market for oil stabilises, the inflationary pressures caused by the higher cost of living will force up wages and salaries and government taxes and subsidies which will ultimately mitigate the real effects of increased price of oil.

Nevertheless, over the short term, spending by Nunavummiut and their government will be negatively impacted by the higher cost of energy.

4.2.4 Industrial Infrastructure

The *2005 Nunavut Economic Outlook* reported on the state of stranded resources throughout the Territory, in particular, the lack of infrastructure that would facilitate the development of economic opportunities. The list of resources and the needed infrastructure include inland mineral deposits without the necessary road or port infrastructure, fish stocks without adequate marine infrastructure, and tourism without appropriate community infrastructure.

4.2.4.1 Accessing Mineral Deposits

A road connecting Baker Lake to the gold deposit at Meadowbank has been built that will facilitate the development of a mine there. Otherwise, all other infrastructure projects to access mineral deposits are in the planning or regulatory stages. Bathurst Inlet Port and Road continues its journey through the regulatory process. This despite the fact that the federal government determined in early 2005 that the project required a "Part 5" environmental review meaning the responsibility and accountability of evaluating the project's environmental impact statement and making the final recommendation to the federal government was given to the Nunavut Environmental Review Board rather than a federal environmental assessment panel ("Part 6"). It was generally thought this would result in a quicker review process. It should be noted that this project has not yet secured enough support within government or industry to cover the cost of development and therefore may not proceed regardless of the final decision by the regulators.

There are other land transportation and port facilities being planned to access mineral deposits. A road and port will be a part of OZ Minerals' plans to access and develop the zinc deposits at High Lake and Izok Lake. At the time this report was being written, OZ Minerals announced it will not use the Bathurst Inlet Port and Road, but instead opt for its own infrastructure that will run straight north from Izok Lake and pass several other mineral properties owned by the company.[45] The High Lake Environmental Impact Statement contains plans for a port at Gray's Bay and a 50 kilometre

road to the proposed mine site. However, this mine development will now be put on hold while OZ Minerals pursues its Izok Lake property.

Miramar had been planning to put infrastructure in place at Hope Bay in order to access its Doris North gold deposit; however, with the company being purchased by Newmont Mining, the planned schedule and infrastructure requirements have been postponed until the parent company determines how it will access those resources. The site will be serviced by barge from Hay River and aircraft from Yellowknife until a new mine plan is developed. With a new plan will come the need for a second round of environmental review, therefore, this project is now at least five years from construction start-up.

Finally, Baffinland Iron Mines Corporation has announced initial construction plans for its mine at Mary River. Contained within those plans are a railway to Steensby Inlet and a port facility there. The company has already constructed a temporary road from Milne Inlet that it currently uses and will continue to use throughout the project's life if and when equipment too large for the railcars is needed. This project, like Izok Lake, is still required to complete its engineering and undergo an environmental review. Baffinland does not, by itself, have the financial capacity to build the Mary River infrastructure estimated at $4.1 billion and will therefore require one or a number of partners if the project is to move past the regulatory stage.

4.2.4.2 Additional Infrastructure Projects

As discussed earlier, the federal government's Budget 2008 includes an $8 million commitment to fund the development of a commercial harbour in Pangnirtung. In the same budget, the government also committed to refurbish the existing deep-water docking and refuelling facility at Nanisivik for use by the Canadian Armed Forces.

In addition to the private sector port facilities being planned, the City of Iqaluit developed a proposal for a deepwater port in 2005. Its estimated price at that time was $49 million, which is surely below the actual cost given the increased price of industrial inputs.[46] This proposal has not received enough support to include in the forecast for the *2008 Nunavut Economic Outlook*.

Qulliq Energy Corporation announced earlier this year that after an extensive study of several rivers in the area, that Jayne's Inlet had been selected for potential hydro development that would supply Iqaluit with its power needs.[47] Estimates based on a facility at Armshow River, a location previously considered by Qulliq Energy Corp., pegged the cost of construction there at $200 million with that facility producing as much as 15.5 megawatts of power. Iqaluit's current demand is in the 6 megawatt to 9 megawatt range. An investment in hydro-power of this magnitude would reduce Nunavut's oil consumption by 12 million litres.[48] The selection of Jayne's Inlet will be followed by a more detailed feasibility study. The timeline for this construction project will remain uncertain until the results of that study are completed. A study of potential hydro facility sites near Rankin Inlet is also underway.

4.3 SOCIAL AND ORGANISATIONAL CAPITAL

Social and organisational capital speaks to how a society is organised and functioning to create wealth. In Nunavut's case, this refers to how the Territory has organised itself in terms of government, the not-for-profit and voluntary organisations (often referred to as civil society) and the private sector. Social capital also speaks to the level of trust among its players to organise and work collaboratively. This latter concept also includes the issue of social cohesion—the manner in which individuals, communities and institutions get along. For example, one could ask whether the environment within a community, region, organisation and within society itself is best characterised by one of cooperation, mutual respect, and openness or with examples of distrust, isolation, and social exclusion.

Social and organisational capital are difficult assets to measure, unlike human and physical capital, there are few statistics collected specifically for this form of capital. The policies of government, the role and influence of non-government institutions and the manner in which decisions are made help understand the organisational capital of a jurisdiction.

The previous Outlooks reported on the formation of Nunavut and its choices in organisational structures and institutions. Leadership was initially devoted to establishing a government appropriate for Nunavummiut, including such things as decentralisation of government departments and implementing a policy to provide preferential treatment in contracting to local businesses.[49] Likewise, Nunavut Tunngavik Incorporated, representing Inuit interests under the *Nunavut Land Claims Agreement*, has spent the past several years working on the Agreement's implementation.

In recent years, there have been more efforts by the main political and economic leaders to work together to set concrete directions for Nunavut's economy. This has involved the creation of several coalitions and collaborative projects and the development and release of several strategic plans for action, the most noteworthy being the *Nunavut Economic Development Strategy* released in 2003.

In 2007, Nunavut Tunngavik Incorporated launched a lawsuit against the federal government over issues related to the implementation of the Nunavut Land Claims Agreement. It is uncertain how long it will take to resolve this case, or what impact it will and is having on the working relationships between these two parties. It does suggest however that there remains a serious issue of poor cohesion and trust at the higher levels of these institutions.

4.3.1 New Sector-Specific Strategies

Following the release of the *Nunavut Economic Development Strategy*, the Government of Nunavut began a process of creating made-in-Nunavut strategies that established frameworks to guide the development of several important areas of the economy. Over the past three to five years, the government has completed all but two of these strategies (see Table 4-6) and in the case of the new curriculum, aspects of that work are being rolled out as they are completed.

Table 4-6

New sector strategies

Sector	Status
Fishing	Completed
Sealing	Completed
Mining	Completed
Arts and Crafts	Completed
Carving Stone	Completed
Tourism	In progress
Transportation	Completed
Housing	Completed
Adult Learning	Completed
K-12 Curriculum	In progress

Source: 2005 Progress Review of the Nunavut Economic Development Strategy, Qanijijuq II.

Impressively, all of these strategies have maintained the fundamental principles established within the Nunavut Economic Development Strategy. A concerted effort was made to ensure that the strategies gave some attention to maximising benefits across all forms of wealth-generating capital. For instance, the Government of Nunavut's mining strategy *Parnautit: A Foundation for the Future* encourages industry to enhance the Territory's wealth-generating capital while going about the business of mining and exploration (see Table 4-7).[50]

A similar approach was adopted by the other strategies. For example, the Nunavut Housing Trust Initiative that has come about in part through the *Nunavut Ten-Year Inuit Housing Action Plan* includes education and training, business development and labour participation elements.[51] The Nunavut Fishing Strategy, which was developed in cooperation between the government and Nunavut Tunngavik Incorporated, is also focused on the development of wealth-generating capital.[52]

Table 4-7

Parnautit: A Foundation for the Future

Key elements

- sound legislation, regulations and policies
- community benefits
- infrastructure development
- environmental stewardship

The united approach to economic development across sectors is a strong indication of the level of co-operation that exists between key institutions in Nunavut, in particular, between the Government of Nunavut and Nunavut Tunngavik Incorporated. It also shows a lasting commitment to the principles established collaboratively that formed the basis of the *Nunavut Economic Development Strategy*.

The challenge now for the government and its partners is finding resources to propel these strategies forward; a task recognised in the *Strategy* and later reiterated by the Nunavut Economic Forum in its review of the progress of the *Strategy*'s implementation. A clear and well-designed

framework cannot improve one's situation if it cannot be followed because of financial or any other constraint. Nunavut has done well in lobbying the federal government for support in this area. It has been able to access funds from the *Strategic Investments in Northern Economic Development* program to support the initial steps in implementation of these strategies, including carving stone, arts and crafts and fishing, but with particular emphasis on mining.[53]

4.3.2 Investing in Organisational Capital[54]

As Nunavut's economy grows, the pressures on its institutions will mount, from the largest government departments to the smallest community-based support groups. Their collective ability to deal with this pressure will underpin the level of success achieved and the amount of wealth captured by Nunavummiut from the economic growth.

Most of the institutions responsible for helping individuals and communities adapt to the new economic opportunities are non-profit or non-government organisations. Two reports completed in 2007 investigating Nunavut's non-profit sector have shone light on its role in supporting Nunavut society.[55,56] They noted, as did the *Progress Review*, that finding mechanisms to support these organisations is critical to Nunavut's success.

> The success or failure of organisations [that are based in communities and that were established to support people along with organisations] such as Nunavut Economic Developers Association, Nunavut Arts and Crafts Association, and the Nunavut Broadband Development Corporation can have a tremendous bearing on socio-economic outcomes at the community level, and can often contribute to the success or failure of comprehensive programming efforts of the Government of Nunavut, Nunavut Tunngavik Incorporated, of Indian and Northern Affairs Canada.[57]

One cannot underestimate the importance of ensuring communities understand the implications of progress in the wage economy. There will be some who find economic growth difficult to embrace because of the impacts on families, financial responsibilities, and income disparity that are inevitable in any economy undergoing a significant transformation. Local support groups not only help individuals and communities understand and cope with these changes, they also help in developing investment strategies that reduce vulnerabilities.

A lot of what communities can do to improve its own sustainability does not require substantial support or oversight by government or other large institutions. What is required are people that can initiate an activity and become the champion of that initiative as well as strong local organisations that can take over a new initiative and not have it be dependent on the original champion. Exhibit 4-4 lists some actions that can reduce a community's vulnerabilities by enhancing its human capital, improving social cohesion and lowering distrust. These actions do not require large sums of money, but do require investments of time and effort into community-based organisational capital.

Failure at the community level to cope with and adapt to the changes that economic growth, and in particular, the growth flowing as a result of mining sector activities is a risk factor associated with this year's Nunavut Economic Outlook. Unlike other risk factors such as those associated with the timeline for mining developments, a community's vulnerability to change is more difficult to evaluate or track and therefore receives little attention until signs of distress surface which can be years after the economy underwent a major expansion. Furthermore, this risk factor will have little bearing on GDP and therefore can be disregarded as inconsequential, but nonetheless can have a real impact on the quality of life of individuals, families and communities.

Exhibit 4-4

How can a community lower its vulnerabilities to change?

- Work to create a safe environment in which to raise families. This could include working to keep the community clean and free of crime.
- Develop mechanisms to ensure families have access to nutritious food choices including local foods.
- Offer support to the local health care providers by offering strong public health programs focusing on illness prevention. This might include initiatives to support healthy pregnancies and mothers.
- Create early childhood learning opportunities and lend support to the local education system by teaching traditional skills.
- Establish mechanisms to celebrate the community's past, its knowledge and culture.
- Offer opportunities to develop a healthy spirit including, for many communities, opportunities for healing.
- Organise programs for children and youth including inter-generational programs that help transfer knowledge.
- Establish open systems of governance and emphasise community involvement through volunteering. This can raise levels of trust that leads to strong social cohesion among the local population.

Source: Impact Economics, *Community Economic Development Revisited Discussion Paper.*

4.4 NATURAL CAPITAL

Natural capital includes the land, air and water present within a region. It also includes minerals, animals, fish and plants. A society's ability to access, exploit and preserve natural capital is important in its economic, social and environment performance. Investments into natural capital typically fall into one of two categories.

1. **Investments into the knowledge of natural capital:** this covers everything from geosciences and fisheries science to studies into climate change, caribou stocks and mercury levels in local water, fish and animals. These investments come from public and private sources. Investments in knowledge are discussed in this chapter.
2. **Investments into the preservation of natural capital:** these investments are more common within the public sector and include investments in municipal infrastructure such as waste, water and sewage management. Establishing parkland is also included here as is the clean-up of contaminated sites such as the DEW Line projects. Because these types of investments are also investments in physical capital and/or are tied to industrial activities, they are covered in other chapters in this report.

4.4.1 Caribou Management

In November 2007, the Minister of the Environment from within the Government of Nunavut announced the government had begun to develop a "comprehensive *Caribou Management Strategy*" for Nunavut. This strategy will address three critical goals. It will work to conserve caribou populations for future generations, provide the minimum necessary interference with the many Nunavummiut that rely on caribou, while not unduly inferring with the development of Nunavut's economy.[58] The government suggested the strategy would be developed in cooperation with the Nunavut Wildlife Management Board and Nunavut Tunngavik Incorporated.

This is an important but challenging undertaking for the government who must act to protect the environment and caribou resources, but who must also work to grow the economy, create jobs, and raise the standard of living for Nunavummiut. At the heart of the strategy will be questions that ask Nunavummiut to choose between economic opportunities and social or environmental concerns. For example, what is the impact of mining on the health of caribou? And, how far will the government go to protect the resource? For example, would an application for a mine be refused because of its potential impact to a caribou herd? Would the size of the mine affect the decision?

These conflicting goals of the wage and non-wage economy are already coming into play. Recently, the Hunters and Trappers Organisation from Igloolik introduced a two-year ban on any tourism related to walrus including eco-tourism and sports hunting because of concerns those activities were negatively impacting the health of the animals.[59]

The Nunavut Caribou Strategy will have to complement some existing caribou management efforts, including that of the *Beverly and Qamanirjuaq Caribou Management Board* and the *Barren-land Caribou Management Board*. Among other things, these groups are attempting to verify the existing stock of animals in each herd and are mapping the migration of the herds against the existing mineral exploration activities throughout the Kivalliq region. There appear to be many difficulties in completing these studies, but in many cases, the information collected is showing a downward trend; and in some studies, a severe downward trend.

In May 2008, the *Beverly and Qamanirjuaq Caribou Management Board* released a report on the socio-economic contribution of these herds on Manitoba, Saskatchewan, Nunavut and the NWT. This report suggested the harvesting activities associated with these herds are worth $12 million to Nunavut, which includes subsistence harvesting along with commercial harvesting and tourism (outfitters).[60] This study was an update of work completed in 1990 and uses numerous assumptions in order to arrive at its estimate.

Whether or not you agree with the methodology adopted for this study, the results provide useable data that, at the very least, can be the grounds for discussion. For example, it estimated the total annual harvest from within the two herds for subsistence purposes equals 7,400 animals and that the economic value of these animals net of production costs is $8.7 million or $1,175 per animal. This assumes each animal provides 100 pounds of meat of which one half is high-grade, and that if not harvested and consumed, Nunavummiut would substitute similarly-graded beef purchased from the local grocery store. Of the remaining animals harvested each year, outfitters account for 690 for a net value of $2.6 million or $3,770 per animal while commercial harvesters account for 625 animals that have a net value of $570,000 or $912 per animal.[61] These results are not dissimilar to studies conducted on the differing economic values of the arctic char fishery, which show the greatest economic gains come from sporting activities followed by subsistence use with the lowest return per animal being commercial usage.

The commercialization of country foods is discussed in Chapter 5. The results from this study should be considered alongside that discussion. Given the economic value attached to subsistence harvesting, Nunavut's economic planners should be looking seriously at the trade-off between industrial development and traditional economic pursuits.

4.4.2 International Polar Year

March 2007 marked the beginning of the *International Polar Year* (IPY) (see Exhibit 4-5). This global initiative has brought increased focus and world attention to climate-related issues that are impacting Nunavummiut. In the coming years, the IPY activities will result in a wealth of knowledge in multiple subjects important to Nunavummiut and their environment.

The research being carried out in association with the IPY is not limited to natural sciences. Canada is participating in numerous socio-economic research endeavours including the study of northern peoples, culture, language, traditional knowledge, economics, tourism, and political development just to name a few as a part of the IPY activities.

Future socio-economic analysis will benefit from this research. Of particular interest to the Nunavut Economic Outlook will be research on climate change adaptation strategies. How Nunavummiut are impacted by rising temperatures, melting sea ice, shoreline erosion and the changing habitat for caribou, fish, polar bears and other important species from subsistence and cultural perspectives will depend largely on their collective ability to anticipate, plan and adapt to those changes. Thus, it is important that Nunavut's leaders learn from research processes like the IPY and combine this knowledge with Inuit Qaujimajatuqangit in creating effective adaptation strategies.

Exhibit 4-5

What is the International Polar Year?

The IPY is a large scientific programme focused on the Arctic and the Antarctic from March 2007 to March 2009. IPY, organized through the International Council for Science (ICSU) and the World Meteorological Organization (WMO), is actually the fourth polar year, following those in 1882-3, 1932-3, and 1957-8. In order to have full and equal coverage of both the Arctic and the Antarctic, IPY 2007-8 covers two full annual cycles from March 2007 to March 2009 and will involve over 200 projects, with thousands of scientists from over 60 nations examining a wide range of physical, biological and social research topics. [62]

Six IPY research themes have been defined as follows:

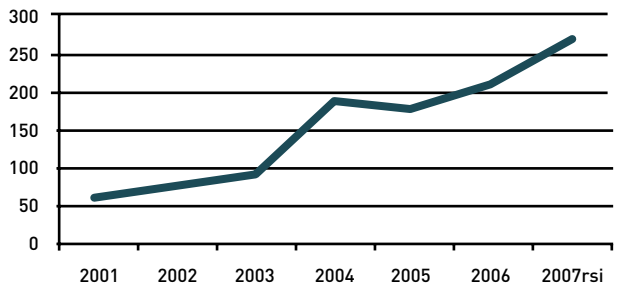
1. Status: to determine the present environmental status of the polar regions;
2. Change: to quantify, and understand, past and present natural environmental and social change in the polar regions; and to improve projections of future change;
3. Global Linkages: to advance understanding on all scales of the links and interactions between polar regions and the rest of the globe, and of the processes controlling these;
4. New Frontiers: to investigate the frontiers of science in the polar regions;
5. Vantage Point: to use the unique vantage point of the polar regions to develop and enhance observatories from the interior of the Earth to the Sun and the cosmos beyond;
6. Human Dimension: to investigate the cultural, historical, and social processes that shape the sustainability of circumpolar human societies, and to identify their unique contributions to global cultural diversity and citizenship.[63]

4.4.3 Mineral Discoveries and Exploration

For the past several years, Nunavut has been attracting a healthy share of the Canadian mineral exploration dollars with the total expenditures rising from just over $50 million in 2001 to more than $250 million in 2007 (see Figure 4-21). In 2004, the focus of the exploration and deposit appraisal expenditures was diamonds, with construction of the Jericho Diamond Mine (Jericho) following one year later (see Figure 4-22). More recently, with the price of diamonds falling and the operational challenges at Jericho that has led the mine to close, the focus of exploration companies has shifted to include a more diversified group of minerals, including gold, nickel, lead, zinc, iron, uranium, copper, and rare earths.

Figure 4-21

Mineral exploration and deposit appraisal expenditures ($ million)

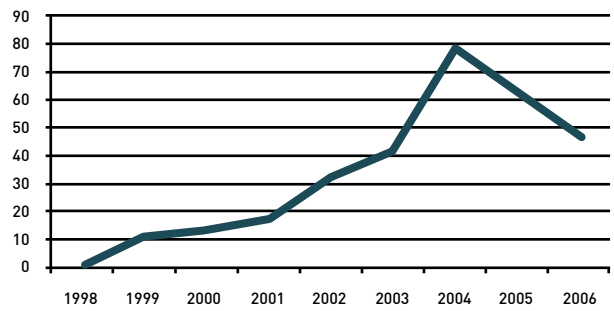


rsi = revised spending intentions.

Source: Overview of Trends in Canadian Exploration Expenditures.

Figure 4-22

Diamond exploration and deposit appraisal expenditures ($ million)



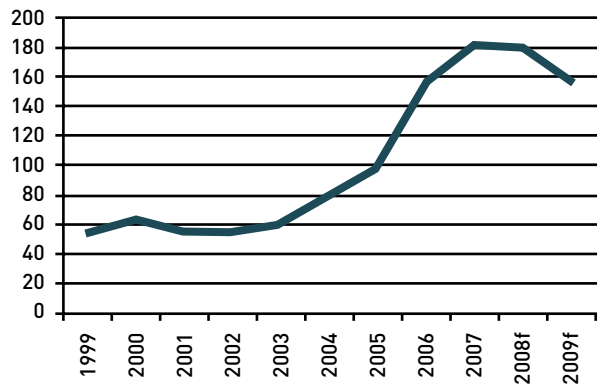
Source: Overview of Trends in Canadian Exploration Expenditures.

While mineral prices seem to have reached a plateau (see Figure 4-23), the world demand is still high which is fuelling the continued outlay of exploration expenditures. These prices make the prospect of having to build road and/or port infrastructure feasible in certain cases, which is bringing a number of mineral deposits into play—not only those that can now afford the additional capital expenditure, but also those that might take advantage of that infrastructure once it is in place.

A major contributor to the 2007 exploration and deposit appraisal expenditures is the work at Meadowbank that is scheduled to open in 2010. This work should continue throughout 2008 (see Figure 4-24) and into 2009. Meanwhile, Baffinland increased its exploration expenditures from $26.5 million in 2006 to $87.5 million in 2007 at its Mary River property.[64] Investments should remain high over the next few years as the company advances the property to a development stage. Activities should remain robust at other sites, including Izok Lake, the Hope Bay properties, the Kiggavik properties, George Lake, the Churchill properties, Ferguson Lake, Hackett River, and others.

Figure 4-23

Metals price index, 1999 to 2009 (index 2005=100)

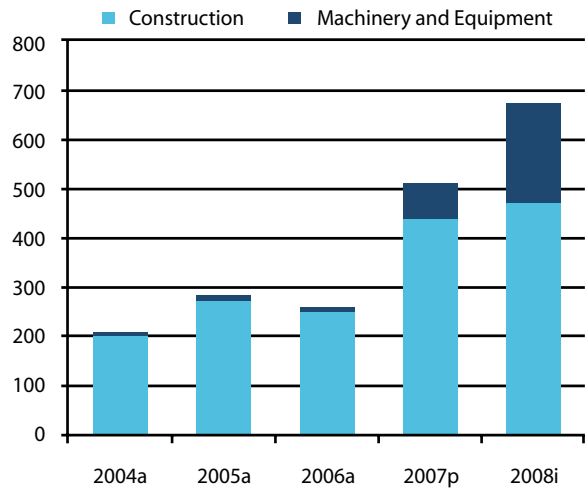


Note: f represents a forecasted price, Metals Price Index includes Copper, Aluminum, Iron Ore, Tin, Nickel, Zinc, Lead, and Uranium Price Indices.

Source: IMF World Outlook, Commodities Forecast.

Figure 4-24

Public and private investment intentions, mining, oil and gas extraction ($ millions)



Notes: a = actual; p = preliminary; and i = intentions.

Source: Statistics Canada, *Private and Public Investments in Canada*, 2008 (Catalogue no. 61-205).

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5 UPDATE ON NUNAVUT'S ECONOMIC PERFORMANCE

Key Highlights

- Nunavut's economy continues to feature an important land-based economy alongside its wage-based economy. The socio-economic contribution of this land-based economy to the quality of life of Nunavummiut appears to have remained constant over the past ten years.
- Recent events both inside Nunavut and outside Canada, including the European Union's proposed ban on seal products and the United States' protection of the polar bear, have shown how vulnerable Nunavut's commercialised harvesting activities are to environmental and external forces. At the same time, a new market within Nunavut might prove to be a growth opportunity for the commercial harvesting industry as a growing middle class of Inuit are purchasing more and more country foods from retailers.
- Nunavut's wage-based economy advanced a nation-leading 13 per cent in 2007, after a setback in 2005 when the economy's growth stalled as a result of a sizeable pullback on spending by the public sector. Nevertheless, the Government of Nunavut remains dependent on federal transfers as its principal revenue source.
- Most of the growth in 2007 can be attributed to a 63 per cent increase in capital spending, of which non-residential construction contributed the most followed by public and private residential construction. The mining industry initiated most of the increased private-sector capital spending while the Nunavut Housing Trust Initiative accounted for most of the public-sector's increased capital contribution.
- The larger economy has resulted in an improved employment picture. The unemployment rate across Nunavut's ten largest communities has dropped below 9 per cent which is the lowest rate ever measured. This has resulted in an increase in personal income in excess of 10 per cent in 2007.

5.1 NUNAVUT'S LAND –BASED ECONOMIC PERFORMANCE

The first *Nunavut Economic Outlook* devoted some time to describing the land-based or traditional economy; that is, traditional pursuits such as hunting, fishing, trapping and the production of clothes largely for subsistence purposes. The first Outlook noted the lack of data on the size of Nunavut's land-based economy. The report also noted that the land-based economy represents far more than economic activity—"it is an integral part of the cultural and social processes of the Inuit way of life."[1] There have been no full-scale attempts to establish an estimate since then. Many of the figures quoted today are from work completed 20 to 30 years ago and should be considered out-of-date and lacking the kind of rigour necessary to be useful in any analytical or policy-driven discussion. It should be noted that some work on a smaller scale has been completed that estimates the value of a portion of the caribou harvest in the Kivalliq region of Nunavut.

Country food that is attained through harvesting is a key component within Nunavut's land-based economy and continues to be an important economic activity and highly sought source of food for many Nunavummiut. The reliance on country food reduces the amount of food imports and has a much smaller environmental footprint in comparison to the production and importation of substitutes to this

local food. The reliance on country food also lessens the threat of food insecurity—studies show that a significant portion of Inuit living in the Arctic cannot afford to purchase all the food they need.[2]

Unfortunately, there is little to report in terms of recent estimates on the size of Nunavut's land-based economy. With the exception of the research conducted by the *Beverly and Qamanirjuaq Caribou Management Board* reported in Chapter 4 that suggested Nunavut's subsistence harvest of these herds can be valued at $8.7 million, most research efforts are currently directed toward assessments of the stock of resources, including the size and health of caribou herds, fish stocks, polar bears and others. More research into the economics of these activities is warranted and would be in the best interest of Nunavut stakeholders to undertake. For example, greater research into food security would provide valuable information that will be needed in terms of climate change adaptation strategies, and more immediately, in an assessment of the impact of higher fuel prices on traditional hunting and fishing activities and the effect that might have on local standard of living and quality of life.

In addition to the study of the caribou in the Kivalliq region, data does exist at a territorial level that could form the basis of initial research. The *Nunavut Wildlife Harvest Study* was released in 2004 that contains five years of data on harvesting activities right across Nunavut.[3] These data could be combined with preliminary findings from the *2001 Aboriginal Peoples Survey* on harvesting activity that support the view that the harvesting of country food remains a significant socio-economic activity for many Nunavummiut.[4] The survey found that 70 per cent of Inuit in Nunavut participate in harvesting country food. Country food made up about half or more than half of the meat or fish eaten in 73 per cent of households in Nunavut. And nearly half of all children in Nunavut ate wild meat five to seven days a week. Finally, 96 per cent of Inuit households in the Arctic reported sharing harvested food with others outside of their home.

Interestingly, 49 per cent of Inuit adults in the Arctic (including Nunavut) predicted that harvesting activities would not change over the next 5 years while another 21 per cent predicted that the activities would increase, largely due to the increase in population leading to greater involvement in land-based activities. Of the 13 per cent who thought that harvesting activity would decrease, the main reason given was the view that there would be fewer resources to harvest—in other words, the predicted decrease was due to a diminished supply of resources not due to a drop in interest.

The most pressing story related to Nunavut's land-based economy is its future and in particular two factors that can have a significant effect. First, a major preoccupation is the effect that changes to the environment will have on the supply of wildlife. This not only includes potential declines in animal numbers but also potential increases in toxins in the harvested animals leading to decreases in safe consumption levels.

The second preoccupation is the escalating cost to participate in the harvesting of country foods. While it can lead to less reliance on costly imported foods, the rise in gasoline costs and machine and equipment costs could force many harvesters out of this activity. As indicated at the outset of this section, Nunavut leaders need to keep a close eye on the sustainability of its land-based activity given its overarching importance to their constituents.

5.1.1 Commercialisation of Harvesting Activities

While interest remains high for maintaining a strong land-based economy, Nunavummiut have been actively pursuing opportunities to expand these practices into the market economy. Attempts have been made to develop country food industries such as musk ox and caribou meat. However, maintaining these operations on a sustained basis has not been easy. This is due to several factors not the least of which is the supply of country food itself. Problems associated with annual harvests, such as the caribou harvest on Southampton Island, can eliminate a

food processor's primary supply of product. One producer recently started importing unprocessed meat from the south in order to keep the plant machinery operating and to keep staff employed. A clothing manufacturer that incorporates seal skins in its designs reported a need to import skins from Africa because of an inability to obtain an adequate supply of local pelts. When one combines these recent events with the results of the *Beverly and Qamanirjuaq Caribou Management Board* caribou study that suggested commercial activities provided the lowest economic return to Nunavummiut per caribou, some doubt is cast on certain aspects of the commercial country-foods industry.

Perhaps the most interesting market that has the greatest potential for growth is the local market within Nunavut. During the research conducted for the *2001 Nunavut Economic Outlook*, the consensus was that the export market was the best opportunity for Nunavut's high-end caribou, musk ox and char products and that local Inuit and non-Inuit consumers had no appetite for local foods sold in a store or restaurant. More recently, with the general rise in Nunavummiut wealth and the emergence of an Inuit middle-class, producers are finding many products have an ample local market. Smoked char and dried caribou products are good examples. There is also a growing local market for fur fashion.

5.1.2 World Markets and Nunavut's Land-based Economy

In recent months, world attention has turned to the sustainability of the polar bear population. At the same time, the European Union has renewed its opposition to the Canadian seal hunt that jeopardises Nunavut's traditional sealing economy.

The concern with polar bears relates to research that shows there will be a dramatic drop in the number of polar bears due to the melting of polar ice. The concern culminated in the United States Fish and Wildlife Service (USFWS) decision to list polar bears as a threatened species throughout its entire range. It says the threat is so grave that in the next 50 years the world's polar bear population will likely drop by more than 30 per cent. Under the *US Endangered Species Act*, a species is listed as "threatened" when it is at risk of becoming "endangered" within the foreseeable future throughout all or a significant portion of its range.

The effect of this decision will all but eliminate any interest that hunters from the United States might have had in taking part in a polar bear hunt since they will no longer be permitted to import the trophy animal back into their country. Rough estimates suggest that an average hunter will spend $40,000 for a polar bear hunt, and as an industry, hunters spend an estimated $1.5 million a year. It should be noted that the $40,000 spent on a hunt covers all costs, including airfares, hotels, food, government permits, outfitter fees and gratuity.

The Government of Nunavut along with several other northern stakeholders have opposed this designation questioning the data used by the US government in making its decision. While the Government of Nunavut can allow polar bear hunts to continue for its own citizens, the US ban illustrates how the vulnerability of commercialising traditional activities to natural forces as well as international public opinion. Furthermore, the polar bear issue shows once again the difference of opinion between western scientists and traditional knowledge. Previous experience with the beluga whale suggests that traditional knowledge has shown to be accurate.

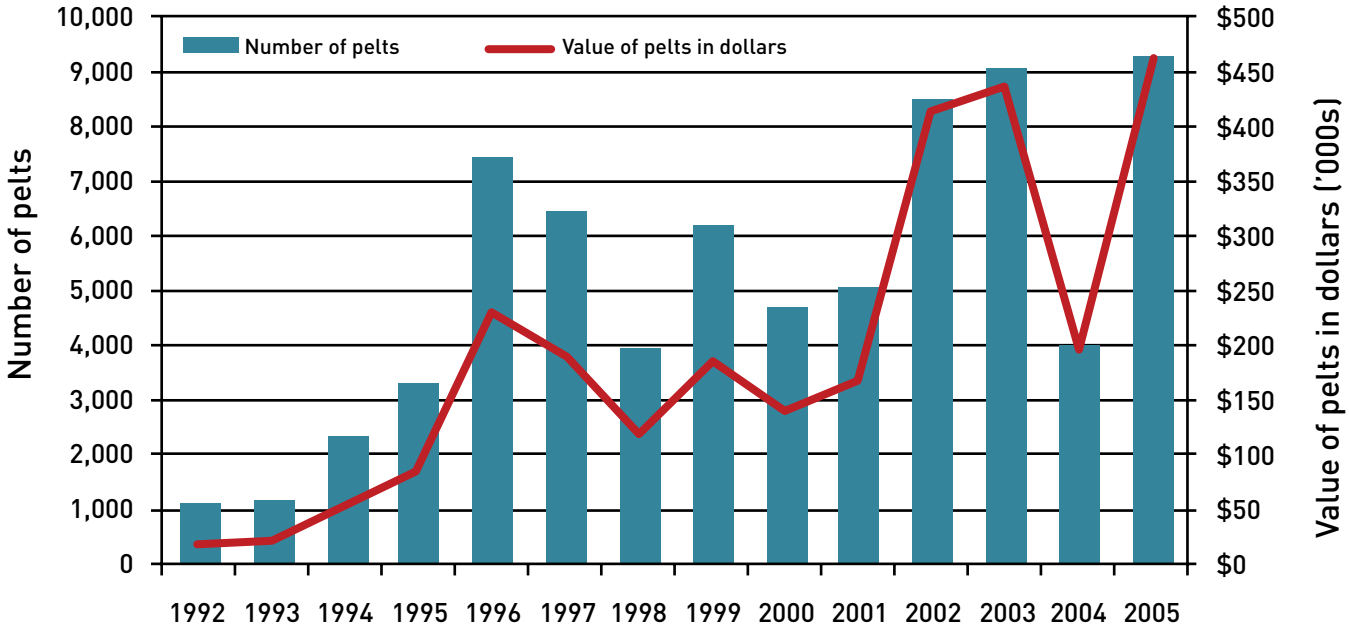
Similar to the polar bear hunt is the issue of the seal industry. The European Union (EU) has been moving forward proposing an EU-wide ban on the import of seal fur products in order to stop Canada's annual seal hunt.[5] The outright ban will be put to a vote in summer of 2008 over the issue of "inhumane" killing of seals. Seal hunting for subsistence purposes is not the focus of protests. However, the selling of seal products by Nunavummiut will no doubt be negatively affected. It is from the sale of the pelts that some Inuit earn enough money to purchase the necessary equipment and fuel to get out on the land and harvest for their family or community. The reduction in the value of the skins will severely limit the income that supports subsistence hunting. The price of seal pelts has dropped from its most recent high of $105 in 2006 to just $33 today.[6] The last European ban on the importation of sealskins, which was in the mid- to late-1980s, had a severe effect on Inuit social and financial well-being.

From Figure 5-1 one can see that the income generated from sealing has approached $500 thousand in recent years, but market conditions similar to those of the early 1990s could reduce this revenue source to 1/10th of its current level.

Depending on the export market for northern animal products developed from caribou, polar bear and seals is clearly risky. But from the standpoint of subsistence, Nunavummiut will struggle without it. This places enormous pressure on the key stakeholders with a role in finding and securing markets whether local, national or international. It also emphasises the necessity to diversify the products and markets such that producers are not dependent on a single buyer or market.

Figure 5-1

Number and value of hair seal pelts produced, Nunavut, 1992-2005



Source: Statistics Canada. Table 003-0013.

5.2 NUNAVUT'S WAGE-BASED ECONOMIC PERFORMANCE

After a setback in 2005 when the economy showed no real growth as a result of a sizeable pullback on spending by the public sector and a continuation of declines in exports, Nunavut's economy has begun its march forward. Table 5-1 provides a detailed account of Nunavut's economic progress over the past five years with 1999 included for the purpose of comparison with the Territory's first year after separating from the Northwest Territories. Annex 3 contains real GDP data at market prices for 1999 through 2007.

In the most recent year (2007), the culmination of increased public and private-sector spending on fixed capital, $60 million and $250 million respectively, has resulted in the greatest annual economic growth in Nunavut's nine-year history at 13 percent. Moderating the effect of this increased investment spending was a third year of little to no growth in government's real operating expenditures, which includes spending on wages and salaries. Other noteworthy results include another year of strong growth in real consumer activity at 5.6 percent. The increased capital spending has brought with it a rise in imports since all construction materials and machinery and equipment are

Table 5-1

Real Gross Domestic Product at market prices, expenditure-based, 2003–2007 ($, millions chained (2002) prices)

	1999	2003	2004	2005	2006	2007
Personal expenditure on consumer goods and services	**354**	**443**	**460**	**476**	**499**	**527**
Durable goods	17	27	29	31	34	37
Semi-durable goods	39	52	54	56	60	65
Non-durable goods	105	123	124	126	131	136
Services	192	241	255	263	274	291
Net government expenditure on goods and services	**710**	**824**	**876**	**911**	**903**	**905**
Government gross fixed capital formation	**104**	**146**	**136**	**75**	**114**	**177**
Structures	92	127	114	55	91	148
Machinery and equipment	14	20	23	23	25	28
Business gross fixed capital formation	**172**	**236**	**304**	**368**	**373**	**619**
Residential structures	38	19	19	19	21	34
Non-residential structures	92	147	226	274	277	456
Machinery and equipment	45	72	61	79	78	136
Domestic Demand	**1,340**	**1,649**	**1,776**	**1,830**	**1,889**	**2,228**
Exports of goods and services	**239**	**167**	**165**	**152**	**184**	**195**
Exports to other countries	168	57	54	30	54	63
Exports to other provinces	72	110	112	124	130	132
Deduct: Imports of goods and services	**794**	**887**	**967**	**990**	**1,045**	**1,242**
Imports from other countries	241	264	276	283	314	407
Imports from other provinces	553	623	689	706	733	845
Net Exports	**-555**	**-720**	**-802**	**-838**	**-861**	**-1,047**
Gross Domestic Product	**783**	**950**	**988**	**986**	**1,020**	**1,153**
Economic Growth (Annual)		*-0.1%*	*4.0%*	*-0.2%*	*3.4%*	*13.0%*

Source: Statistics Canada's *2007 Provincial and Territorial Economic Activities.*

brought in from southern Canada or abroad. Meanwhile, the small rise in exports over the past two years can, in part, be explained by the shipment of diamonds extracted from the *Jericho Diamond Mine*.

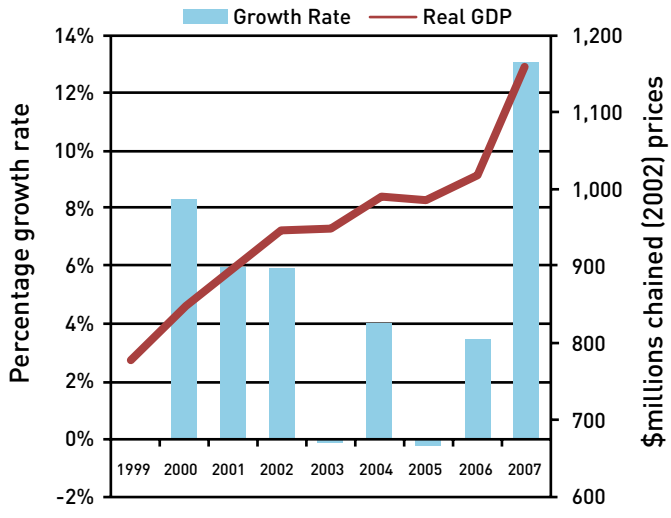
The year's impressive growth is in line with expectations. And while the flat growth in 2005 was not a part of the forecast produced for the *2005 Nunavut Economic Outlook*, the expansion in 2007 has brought Nunavut's economy back to what was anticipated as its growth path, which has averaged 5 per cent since 1999, compounded annually (see Figure 5-2).

5.2.1 Nunavut's 'Domestic' Economy

As will be discussed in greater detail in Chapter 6, the increased expenditures in the mining sector will influence GDP statistics more and more over the next several years, causing dramatic swings upward and downward in the year-over-year growth rates. What will be important when viewing these figures are the details that make up the overall GDP figure that reveal more accurately how Nunavummiut are performing with respect to this changing economy. For the remainder of this chapter, details on Nunavut's domestic economic performance are analysed.

Figure 5-2

Growth in real GDP at market prices (per cent change, $ millions)



Source: Statistics Canada *2007 PEA*.

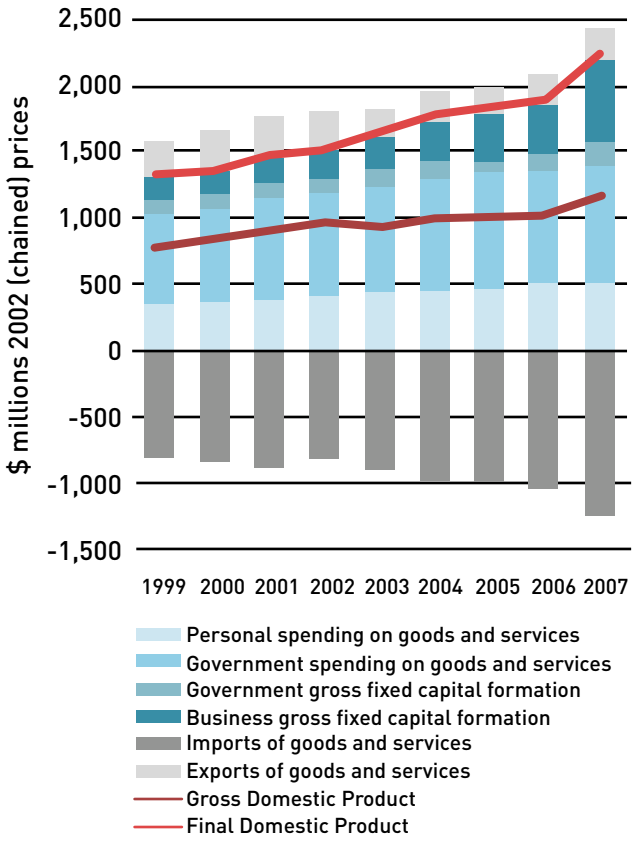
Figure 5-3 reveals graphically the components of gross domestic product and domestic demand that will be analysed. The difference between the two is essentially a region's trade balance. In Nunavut, where most goods and services are imported, the trade balance is large relative to the size of the economy. In the most recent calendar year (2007), Nunavut's trade deficit exceeded $1 billion within a domestic economy worth $2.2 billion.

5.2.2 Consumer Spending

The growth in real consumer spending continues to outpace the growth in population, posting a 5.6 per cent gain in 2007 and having averaged 5 per cent since 1999,

Figure 5-3

Components of real GDP at market prices and domestic demand, 1999–2007

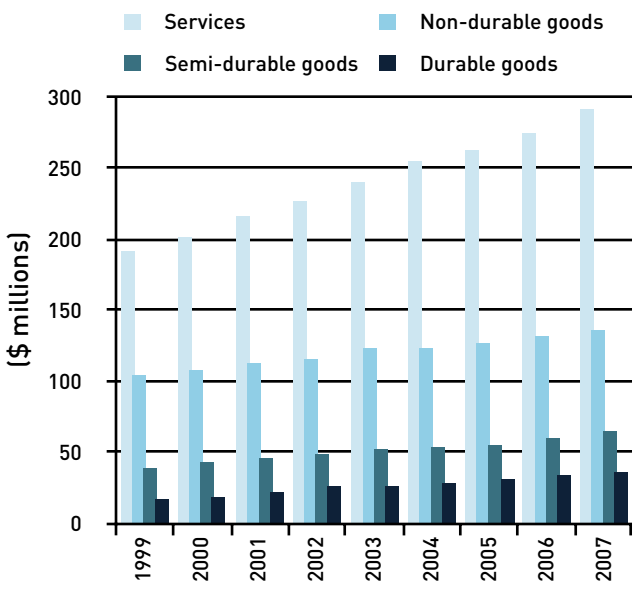


compounded annually. From Figure 5-4, one can see that all segments of consumer spending are advancing. However, a closer look at the details shown in Table 5-2 reveal the greatest proportional growth has been and continues to be in durable and semi-durable goods, averaging 10.2 per cent and 6.6 per cent respectively. These consumer categories include such things as cars, furniture and clothing. The growth in consumption of non-durable goods is more in line with that of the growth in population averaging 3.3 per cent since 1999 when compounded annually and 3.8 per cent in 2007. Non-durable goods include such things as food and fuel.

These results are in line with expectations. Employment has improved steadily over the past nine years and in particular in the last two. This has resulted in an increase in personal disposable income. The fact that the focus of spending has been durables and semi-durables suggests pent-up demand in these areas and is in part a reflection of the increased housing stock. One can expect this trend to continue into the future as more and more previously unemployed or low-income Nunavummiut gain access to the benefits of the growing wage economy. The increased housing stock will also drive the demand for furnishings.

Figure 5-4

Value of consumer spending by segment



Source: Statistics Canada *2007 PEA*.

Table 5-2

Growth in real consumer activities (percentage change)

	2007	Since 1999*
Durable goods	8.8%	10.2%
Semi-durable goods	8.3%	6.6%
Non-durable goods	3.8%	3.3%
Services	6.2%	5.3%
Total	5.6%	5.1%

Note: *compounded annually.

Source: Statistics Canada *2007 PEA*.

The extent to which current and future consumer spending occurs locally will impact the extent to which the local economy is able to grow and prosper alongside the growth in personal wealth. The amount of direct importing that consumers are doing themselves is not something measured by Statistics Canada's *Provincial and Territorial Economic Accounts*. However, the difference between personal disposable income and total personal expenditures on consumer goods and services provides an estimate of this statistic. Statistics Canada records this difference as personal savings, but that definition assumes a statistically insignificant portion of consumer activity is taking place outside the region's borders. This assumption does not hold in Nunavut where ordering direct from southern suppliers represents a significant portion of consumer activity. Therefore, from a reasonable estimate of the savings rate for Nunavummiut, it is possible to determine personal expenditures on imported consumer goods and services (see Figure 5-5).

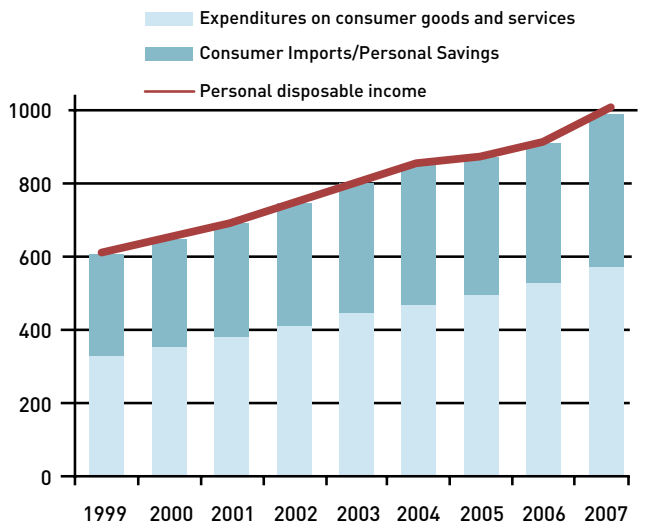
The consumer expenditure data deserves further consideration. Section 4.1.5 described changes in income and wealth distribution revealing across-the-board growth in family incomes. However, the pace of growth in personal

income in real, per capita terms has been slow and has not kept up with the pace of real, consumer spending. This statistical anomaly could occur if consumers were reducing their savings in order to consume more, but that seems an unlikely explanation for Nunavummiut who would not have a significant reserve of savings to draw from. A more plausible explanation is that the consumer activity of those Nunavummiut who are benefiting from the economic activity and higher wages is overshadowing the lack of activity by the segment of the population whose personal income has risen by a much smaller margin. A further explanation could be an increased debt load for those that can obtain the credit such as for the purchase or lease of a vehicle.

If this theory holds, it would be further evidence of a widening income gap between haves and have-nots in Nunavut. In this case, the "haves" are really an emerging middle class of Inuit that are using their newly-acquired wealth to increase their standard of living through material consumption. This form of spending is often referred to as conspicuous consumption because it is easy for others to see, and it can have a negative effect on those within society that are not able to participate and benefit. How a society chooses to address issues of income disparity and other issues of social cohesion are important when measuring that society's social progress. This is an important theme in this year's *Nunavut Economic Outlook*; that is, how will Nunavut maintain the strength of its communities and its social fabric in the face of rapid economic change.

Figure 5-5

Consumer spending and saving activities ($ millions)



Source: Statistics Canada *2007 Provincial and Territorial Economic Accounts.*

5.2.2.1 Employment and Income

Labour force data are now available from 2004 based on Statistics Canada's *Labour Force Survey* (LFS) that has been adapted for the particular circumstances found in Nunavut (see Table 5-3).[7] The latest results from this survey show that in Nunavut's ten largest communities, the unemployment rate has dropped from 13 per cent in 2004 to 8.9 per cent in 2007. In so doing, the economy has absorbed 1,600 new entrants into the labour market by adding 1,700 jobs. Also important is the improved participation rate, which is the percentage of people

Table 5-3

Labour market activity

	2004	2005	2006	2007
Total population aged 15 and over	**13,600**	**13,700**	**13,800**	**14,100**
Labour force	8,600	8,600	9,100	10,000
Employment	7,400	7,500	8,200	9,100
Unemployment	1,100	1,100	900	900
Participation rate (%)	63.1	62.5	65.9	70.6
Unemployment rate (%)	**13.0**	**12.5**	**10.3**	**8.9**

Source: Statistics Canada, *Labour Force Survey*

15 years of age or older who have joined the labour market. It has grown from 63.1 per cent in 2004 to 70.6 per cent in 2007, with most of this gain coming in the last year. This signals two important changes; one, that jobs are being created and two, a growing interest and optimism within the population to participate in the wage economy.

Table 5-4 provides data on Inuit labour force activity, which is an interesting component of the new *Labour Force Survey*. In the four years from 2004 to 2007, the Inuit unemployment rate has dropped from 18.4 per cent to 12.3 percent, while their participation rate has climbed from 54.8 per cent to 63.1 percent. Inuit have had success accessing the jobs offered by mining and exploration companies and have benefited from the growth in construction as well as the increased employment for DEW Line clean up, where the percentage of Inuit employees is routinely very high.[8]

The employment picture is not so good once you leave the ten largest communities. The *2006 Census* includes labour force questions that apply for the entire Territory. From that survey, the labour market activity is reported for a single point in time, in this case for 2005, so it is not entirely comparable with the data produced by the *Labour Force Survey*. However, it does provide a picture of the labour market across all 25 communities where the average unemployment rate was 15.6 per cent (see Table 5-5). For the 15 communities not included in the Labour Force Survey, the unemployment rate is much higher at 22.7 percent. The full labour market results from the *2006 Census* are provided in Annex 4.

Table 5-4

Labour market activity (Inuit population)

	2004	2005	2006	2007
Inuit population aged 15 and over	**10,100**	**10,200**	**10,300**	**10,600**
Labour force	5,600	5,600	5,900	6,700
Employment	4,500	4,600	5,100	5,800
Unemployment	1,000	1,000	900	800
Participation rate (%)	54.8	54.3	57.2	63.1
Unemployment rate (%)	18.4	17.2	14.4	12.3

Source: Statistics Canada, *Labour Force Survey*

Table 5-5

Comparing measures of labour market activity, 2005

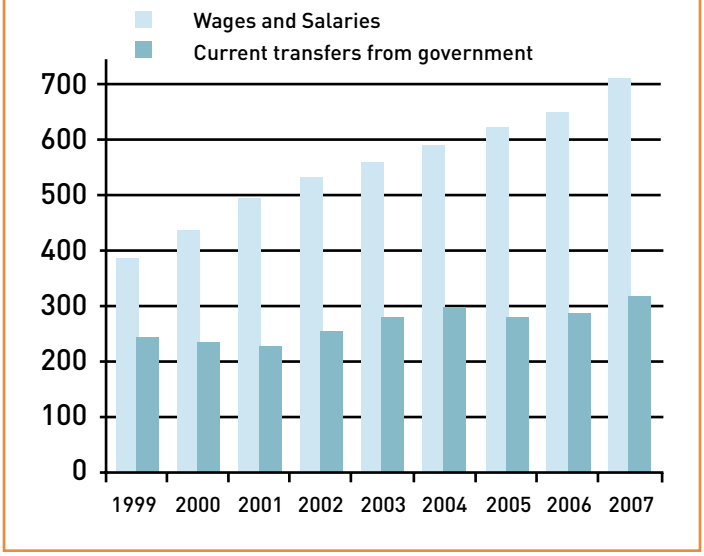
	LABOUR FORCE SURVEY	CENSUS		
	Ten largest communities	Ten largest communities	All other communities	All communities
Population aged 15 and over	**13,700**	**12,960**	**6,355**	**19,340**
Labour force	8,600	8,725	3,880	12,635
Employment	7,500	7,655	3,000	10,670
Unemployment	1,100	1,085	880	1,965
Participation rate (%)	62.5	67.3	61.1	65.3
Unemployment rate (%)	12.5	12.4	22.7	15.6

Source: Statistics Canada, *2006 Census* and *Labour Force Survey*

An increase in wages and salaries corresponds with the increased employment (see Figure 5-6). Since 1999, wages and salaries have grown by an average of 8 per cent compounded annually, while transfers from governments have grown by an average of 3.4 percent. In 2007, both forms of income expanded by almost 10 percent. Typically, such a large increase in government support payments would signal an economic downturn, but in Nunavut's case, the rise can be attributed, in part, to an increased number of people qualifying for employment insurance. This is important because that qualification opens the doors to numerous programs and services available through employment insurance, including skills training.

Figure 5-6

Main source of income ($ millions)



Source: Statistics Canada *2007 Provincial and Territorial Economic Accounts.*

A negative mark on the Territory's near-term employment outlook will be job losses at Tahera's Jericho Diamond Mine that employed 35 Inuit directly, with another 125 owing their jobs, at least in part, to contracts with the mine. All of the Inuit employees at Jericho resided in one of the five Kitikmeot communities. Delays in activities at the Hope Bay gold property will mean these employees cannot simply transfer from one mine site to another. Other mineral development projects in the Kitikmeot region are at least five years away from beginning operations.

5.2.3 Government Spending

The original *Nunavut Economic Outlook* acknowledged the economy's reliance on the public sector and suggested that the long-term prospects for economic growth were not good for Nunavut if it were based entirely on government expansion. Specifically, the original report said that growth in the public sector would initially exceed a sustainable rate, but eventually other sectors would have to step forward in order for the Territory's economic growth to keep pace with that set by the population. This time is fast approaching if we are not there already.

The past several years have seen substantial increases in federal transfers to the provinces and territories. This trend will begin to dissipate given the latest round of changes to Canada's health and social transfer and equalization programs, including Territorial Formula Financing, which is explained briefly in Exhibit 5-1.

Exhibit 5-1

What is Territorial Formula Financing?

- Territorial Formula Financing (TFF) is an annual unconditional transfer from the Government of Canada to the three territorial governments that gives territorial residents access to a range of public services comparable to those offered by provincial governments, at comparable levels of taxation.
- TFF helps to fund essential public services in the North, such as hospitals, schools, infrastructure and social services, and recognizes the high cost of providing public services in the North, as well as the challenges territorial governments face in providing these services to a large number of small, isolated communities.

Determining the size of transfer

- The size of the annual transfer is based on the difference between a proxy of territorial expenditure needs and the territory's capacity to generate revenues on its own.
- The calculation excludes 30 percent of territories' measured revenue capacity in an attempt to promote economic growth (or put another way, so as to not discourage growth).
- Natural resource revenues continue to be treated outside of TFF.

Source: Department of Finance Canada, Federal Transfers to the Provinces and Territories (http://www.fin.gc.ca/FEDPROV/tffe.html)

For the current 2008-09 fiscal year, the Government of Nunavut's budget equals $1.07 billion, of which $970 million will be spent on operations and maintenance. Over 90 per cent of this spending will be paid for through transfers from the federal government which will climb to $994 million or $31,379 per person this year (see Table 5-6).

Table 5-6

Federal transfers to Nunavut ($ millions)

	2005-06	2006-07	2007-08	2008-09*
Health and Social Cash Transfers	32	33	35	36
Territorial Formula Financing	821	844	893	944
Total Transfers	865	890	941	994
Transfers per capita	28,728	29,106	30,139	31,379

Source: Finance Canada Major Federal Transfers

Notes: Totals may not add due to rounding and are subject to regular revision. CST cash includes transition protection payments for 2007-08 and 2008-09. TFF includes a one-time adjustment of $2 million in 2006-07 and data revisions of $22 million in 2005-06 and $18 million in 2006-07.

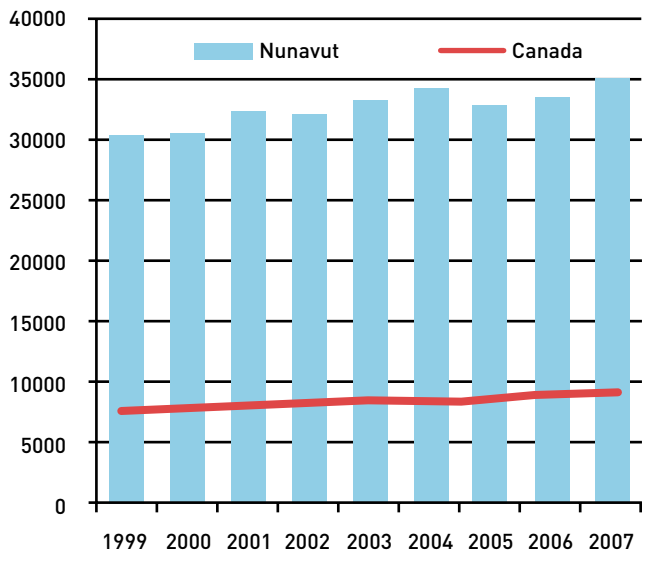
*2008-09 includes a forecast of population growth in addition to the projected transfers

The escalation in transfer payments has prompted increased spending by the territorial government in past years. However, in its most recent budget, the Government of Nunavut announced a $15 million cut in expenditures. This fiscal restraint was largely an effort to limit the operating deficit which is expected to equal $3.3 million after having overspent to the tune of $65.8 million in the last fiscal year.[9] Nunavut's public sector still outspends any other jurisdiction in Canada on a real per capita basis by a wide margin (see Figure 5-7).

These fiscal measures may not be enough to prevent a larger-than-predicted deficit given the uncertainty in fuel prices. More will be known later in the year after the Government of Nunavut has a better estimate of this year's average prices. Needless to say, the added expenditure will not improve the economic position of the Territory nor will it improve delivery of the government's existing programs.

Figure 5-7

Real public sector spending, Canada and Nunavut ($ per capita, chained (2002) prices)



Source: Statistics Canada *2007 Provincial and Territorial Economic Accounts.*

Public programming has already endured three consecutive years of little to no growth in real terms (see Figure 5-8) and under the existing circumstances it is reasonable to expect more of the same in the coming years.

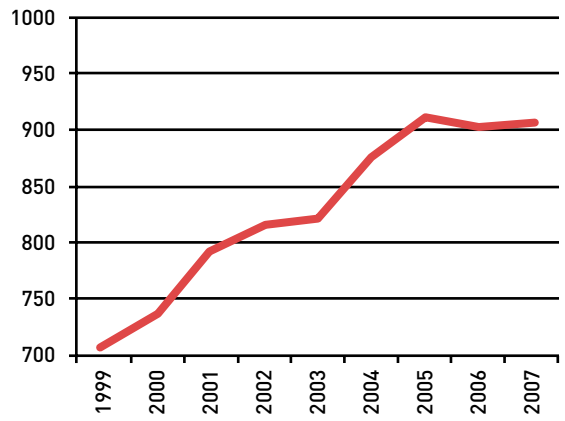
5.2.4 Capital Spending

Last year's 13 per cent real growth in GDP was largely the result of a 63 per cent jump in real capital spending. Increased spending started in 2003, but in 2007, on the strength of mining sector activities and to a lesser extent on public housing starts, spending has skyrocketed (see Figure 5-9).

The projects that contributed to the $800 million in real capital spending are too numerous to list. Many of the public-sector projects, including the construction of schools, health-care facilities, and public housing were discussed in Chapter 4.[10] But most of the recent investment spending has come from the private sector.

Figure 5-8

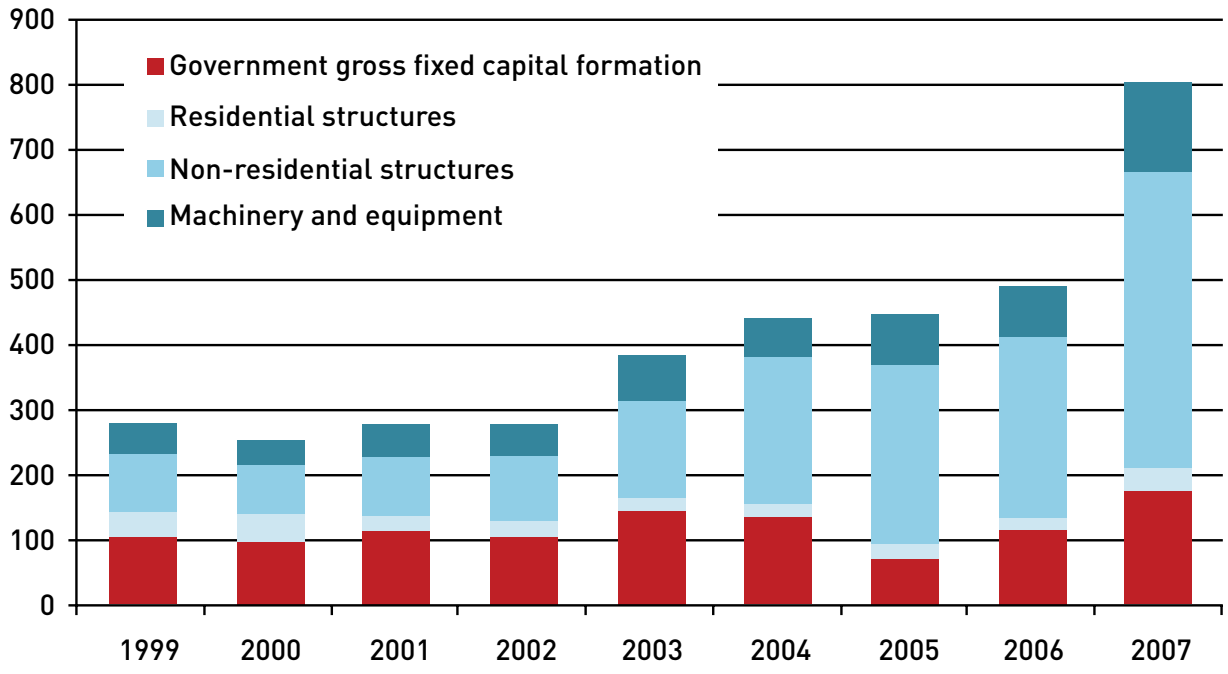
Real government spending on goods and services ($ per capita, chained (2002) prices)



Source: Statistics Canada *2007 Provincial and Territorial Economic Accounts.*

Figure 5-9

Real gross fixed capital formation, 1999-2007 ($ millions, chained (2002) prices)



Source: Statistics Canada *2007 PEA.*

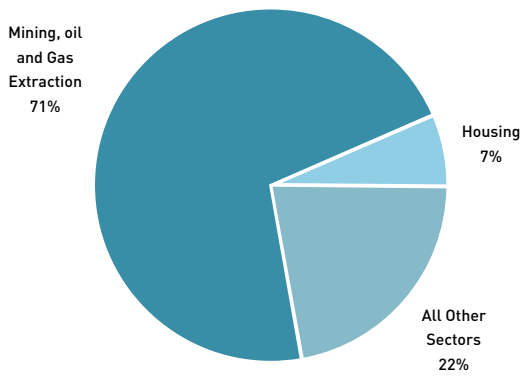
The Meadowbank Gold Project is likely the single largest contributor to the 2007 capital spending increase. With the construction of the 110 kilometre road into the mine site completed at a cost of $40 million to $50 million, mine construction is now in full swing and will be completed in 2009 at a cost in excess of $300 million.[11] This project's contribution to the domestic economy in 2008 will surpass its mark set last year.

Spending has also grown at Baffinland Iron Mines Corporation's Mary River Property. According to the company's financial documents, $87.5 million was spent in 2007 advancing the project, up from $27.5 million a year earlier—of course, only a portion of this would have been spent in Nunavut.[12] All told, mining and exploration companies spent $322 million in 2007 on exploration and deposit appraisals.[13] Figure 5-10 indicates that the mining and exploration sector will continue to dominate Nunavut's capital spending landscape in 2008 as well.

Private-sector spending on residential properties grew by over 60 per cent in real terms in 2007. A portion of this spending went into the construction of Phase III of the Inuksugait Plaza in Iqaluit that combines three floors of residential apartments with commercial space on the ground floor. New private homes are also being built in the new *Plateau* subdivision in Iqaluit.

Figure 5-10

Public and private investment intentions 2008*i* (percentage of $945.2 million in investments)



Notes: *i* = intentions.

Source: Statistics Canada *Private and Public Investments in Canada*, 2008 (Catalogue no. 61-205).

Endnotes

[1]The Conference Board of Canada, *Nunavut Economic Outlook*. (May 2001).

[2]See Jim Lambden et al., Traditional and market food access in Arctic Canada is affected by Economic Factors. International Journal of Circumpolar Health. Vol. 65:4, 2006; Hing Man Chan et al., Food security in Nunavut, Canada: Barriers and Recommendations. *International Journal of Circumpolar Health*. Vol. 65:5, 2006.

[3]Nunavut Wildlife Management Board, *The Nunavut Wildlife Harvest Study* prepared by Heather Priest of the NWMB and Peter J. Usher (August 2004).

[4]Statistics Canada. *Harvesting and community well-being among Inuit in the Canadian Arctic: Preliminary findings from the 2001 Aboriginal Peoples Survey – Survey of Living Conditions in the Arctic*. Ottawa: Ministry of Industry, 2006.

[5]The Globe and Mail. *Proposal for trade ban on 'inhumane' seal products faces EU vote.* July 4, 2008. http://www.theglobeandmail.com/servlet/story/LAC.20080704.SEAL04/TPStory/National

[6]*Canadian Broadcast Corporation, EU moves to ban seal products derived from 'cruel hunting'*, http://www.cbc.ca/canada/north/story/2008/07/23/eu-sealing-ban.html accessed July 23, 2008.

[7]The more important adaptations include measuring labour force activity in only the 10 largest communities and reporting the monthly data as three-month moving averages. In both cases, these adaptations were needed because of the small size of Nunavut's labour force. Because these data are measuring labour force activity in the 10 larger communities, the statistics should not be considered on their own a proxy for the entire Territory.

[8]Northern Affairs Organization, Contaminated Sites Program, *Performance Report 2006-07*. website http://www.ainc-inac.gc.ca/ps/nap/consit/csrep0607/csrep0607_e.pdf accessed June 23, 2008.

[9]Government of Nunavut, Department of Finance, *2008-2009 Budget*, Main Estimates.

[10]Note that some of the health-care construction activity will have been recorded under private-sector investment. As reported in the *2005 Nunavut Economic Outlook*, arrangements were made for some facilities to be built by the private sector and then sold to the Government of Nunavut. This arrangement complicates how the activities are recorded from a statistical standpoint.

[11]The Meadowbank Gold Project Environmental Impact Statement (EIS), developed by the deposits previous owner, Cumberland Resources, includes a construction cost estimate of $303 million. However, that estimate was made in 2004. Since then the price of materials such as steel and fuel have risen dramatically as has the price of labour. Therefore, the final construction cost of this project will certainly be higher than that contained in the EIS. The current owner of this property is Agnico-Eagle Mines Ltd.

[12]Baffinland Iron Mine Corporation, *Preliminary Short Form Prospectus*, March 11, 2008.

[13]Natural Resources Canada, *Information Bulletin: Exploration*, March 2008.

6 RENEWED ECONOMIC OUTLOOK

Key Highlights

- With six mines over the next 10 to 15 years being included in this year's forecast, the impacts of the mining industry dominate the overall forecast results. No other industry, including government, will impact Nunavut's social and economic performance to the same degree.
- While the mining outlook represents the largest source of future jobs, personal income, and business opportunities, it also represents a significant risk to this year's forecast. The recent downturn in commodity prices, potential regulatory hurdles, labour shortages, and financial constraints could combine to make some of the projects uneconomic.
- The public sector will continue its sluggish performance for at least two more years, while industries such as fishing, tourism and the arts are not expected to grow substantially over the medium term, however, they will continue to offer Nunavut's labour force with alternative sources of employment to that offered by the public sector and the mining industry
- The short-term forecast for Nunavut's economy is for relatively flat growth over the next two years. Over the medium to long term, the economy will expand rapidly as a result of the construction and operations of mining projects and will be double its current size within ten years.
- It will be important that Nunavummiut invest in wealth-generating capital that supports and improves their ability to participate in the growing economy, but also in areas that support important social and environmental performance, especially in the event that some of the anticipated mining projects fail to materialise.

The process of establishing a new forecast for Nunavut's economy is made easier after completing an assessment of the current stock of wealth-generating capital and establishing a clear understanding of the recent trends in economic activities. The capital investments that were discussed in Chapters 4 and 5 have resulted in 68 per cent real growth in Nunavut's construction industry (see Table 6-1; see Annex 5 for the full history). Construction activities contributed $237 million to the economy in 2007, making it the second largest sector in Nunavut's economy after public administration. Also noteworthy is the contribution of the mining and exploration sector. A major portion of the growth throughout 2006 and 2007 is a result of activities at the Jericho Diamond Mine. The combined growth in mining and construction activities lifted wholesale trade from a $10 million per year contributor to real GDP to $25 million last year. Growth in the remaining industries was more modest.

Table 6-1

Nunavut's Real GDP at basic prices, factor cost, 2003–2007 ($, millions chained (2002) prices)

	1999	2003	2004	2005	2006	2007
Fishing, Hunting and Trapping	0.3	0.6	0.6	0.9	1.2	1.7
Mining and Exploration	89.6	12.1	11.2	3.6	13.6	17.9
Utilities	24.3	18.7	19.6	20.3	20.7	21.5
Total Construction	62.8	124.6	141.4	138.9	141.4	237
Manufacturing	1.2	1.3	1	1.5	2.5	2.6
Goods-producing Industries	**178.2**	**157.3**	**173.8**	**165.2**	**179.4**	**280.7**
Wholesale Trade	7.3	10.8	11	11.2	10.5	25.7
Retail Trade	35.6	42	43.1	44.7	46.3	50.3
Transportation and Warehousing	28.1	22	26.4	26.6	28.5	30.6
Information and Cultural Industries	x	40	37.3	x	x	x
Finance, Insurance, and Real Estate	104.3	149.6	151.3	153.3	156.6	166.1
Professional Services	8.1	8.3	9.2	9.2	9.3	9.3
Administrative and Support Services	7.6	11.4	12.8	12.7	13.6	14
Education Services	x	103.2	104.3	105.5	108.7	110.2
Health Care and Social Assistance	69.3	71	75.1	75.2	75.4	75.6
Arts, Entertainment and recreation	x	1.7	1.7	x	x	x
Accomodation and Food Services	16.6	20.6	22.2	23.3	24.2	24.9
Other Services (except public administration)	10.1	21.8	16	16.7	16.6	17.3
Public Administration	179.7	251.9	261.2	267.8	268.5	272
Service Producing Industries*	**573.1**	**742.9**	**758.8**	**777.9**	**794.6**	**823.8**
Gross Domestic Product at Basic Prices	**751.3**	**907.6**	**940.9**	**943.1**	**974**	**1104.5**
Economic Growth		*-0.9%*	*3.7%*	*0.2%*	*3.3%*	*13.4%*

Source: Statistics Canada's *2007 Provincial and Territorial Economic Activities.*

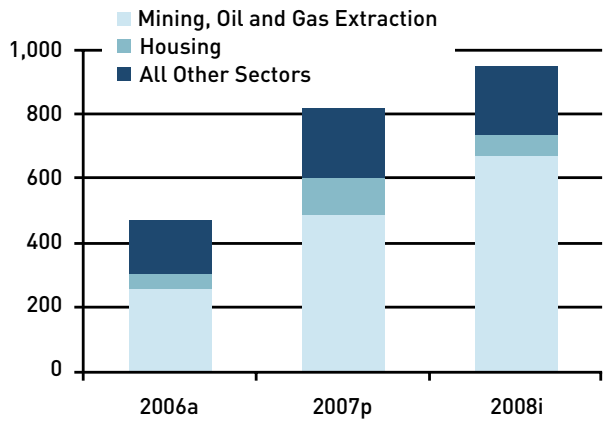
'x' indicates data has been suppressed by Statistics Canada for reasons of confidentiality.

*For years when data has been suppressed, the total for Service Producing Industries is an approximation.

Expectations over the next three to five years are positive in terms of real GDP growth. Construction activities at the Meadowbank Gold Project will surpass the amount posted in 2007. The *Nunavut Housing Trust Initiative* will be entering its second full year of activities. Many of the remaining public capital projects initiated in 2007 will be continued through 2008. Preliminary intentions suggest overall construction spending will rise to $945 million in 2008, which represents a 16 per cent rise from the record high set last year (see Figure 6-1). This growth should be enough to offset the loss that will result from the Tahera Diamond Corporation ceasing operations at its Jericho Diamond Mine.

Figure 6-1

Public and private investment intentions, 2006–2008 ($ millions)



Notes: a = actual; p = preliminary; and i = intentions.

Source: Statistics Canada Private and Public Investments in Canada, 2008 (Catalogue no. 61-205)

Beyond the short to medium term, Nunavut's economic future becomes increasingly dependent on the potential that rests within the mining sector. At this juncture, the only mine that seems certain is the Meadowbank Gold Project. There is a very good chance that Newmont Mines' gold deposits at Hope Bay will be developed, though the timeline is now less known. After that, the mineral deposits at Izok Lake, High Lake, Kiggavik and Mary River have great potential, but all face their own set of challenges. Success for Nunavummiut will require substantial direct participation in the mining and its associated activities.

But it will be perhaps more important that Nunavut society as a whole benefits through shared wealth creation and distribution. In this chapter, the potential that exists within the mining sector is analysed, along with other key components of the Nunavut economy.

To help understand the Outlook for Nunavut's economy, the chapter starts with a description of important Canadian and global economic issues that are having an impact of Nunavut's economic performance and potential. This is followed by a discussion of the forecast of Nunavut's population and key economic sectors, including mining, construction, government, fishing, arts, and tourism. It is important to understand that these projections of economic activities represent a realistic growth path for the Territory based on prudent assumptions, but nevertheless, remains one of many possible scenarios. This is especially important in the case of this Outlook since so much depends on the mining sector's future. Delayed mining developments, even if for only one or two years, will alter the growth path of the economy dramatically in comparison to what is predicted here. The purpose of this exercise is to help decision makers within Nunavut understand what could occur in the future under a reasonable set of assumptions so that planning can be effective and focused.

6.1 CANADIAN AND GLOBAL CONTEXT FOR NUNAVUT'S ECONOMY

Nunavut is often described as an isolated or remote region within Canada. This should be understood as a geographic reference exclusively. Nunavut's economy is intertwined with that of the world as much as any other. Even its land-based economy which provides a degree of self-reliance for Nunavummiut requires inputs that are actively traded on the world market such as fuel, equipment and machinery.

Recent economic, political and climatic events have resulted in dramatic increases in the price of a variety of commodities. Some of these commodities are raw materials that are found in Nunavut and are the source of great opportunity for its economic development. However, for consumers of goods and services, the rising prices of food, fuel and raw materials will be the source of financial hardship, at least over the short to medium term.

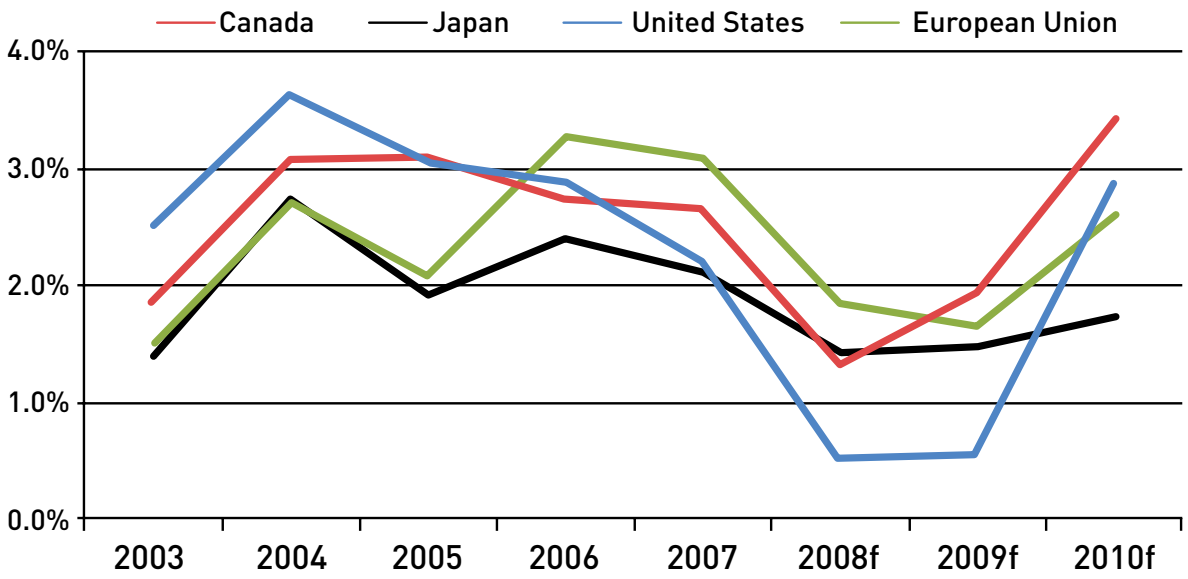
In this section, some of the important trends in the Canadian and global economies that have implications for Nunavut are discussed.

6.1.1 World Economic Trends

The American economy has been flirting with recession throughout the first half of 2008. This was brought on by a culmination of rising prices for food and fuel, a drop in housing prices which resulted in a dramatic spike in foreclosures and turmoil within the housing credit market, falling consumer confidence, weak consumer demand, and a low dollar. As of April 2008, the International Monetary Fund was predicting the United States economy would eke out a 0.5 per cent rise in its real output in 2008 and would perform only marginally better in 2009 when a 0.6 per cent growth is predicted.[1] This makes the U.S. economy the weakest amongst the world's large industrial countries (see Figure 6-2). A rebound is not expected until 2010.

Figure 6-2

Trends in world economic growth (percentage change)



Source: International Monetary Fund *World Economic Outlook*.

The United States is critical to the global economy because of the size of its consumer and industrial base. For Canada, some 80 per cent of this country's exports are sold to American buyers. The drop in demand for Canadian-made goods such as cars and trucks along with other manufactured goods will keep growth in this country in check. Recent forecasts suggest Canada's real GDP will grow by 1.3 per cent and 1.9 per cent in 2008 and 2009 respectively.[2] By 2009, Canada's economy is expected to be a leader amongst G8 countries.

6.1.2 World Markets

The economies in China and India continue to expand at an unprecedented pace which is putting constant pressure on the existing world supply of raw materials. This affects the price of these commodities. Canada is a net exporter of many of the most highly-sought after commodities such as oil, potash, gold, and uranium. Many of the minerals found in Nunavut have seen their values escalate as a result of this increased world demand, making some resources in Nunavut economically viable.

The Canadian Dollar

Balancing the gains made in Canada through higher commodity prices is a higher valued dollar. World currency traders have taken a favourable view of Canada's economy and its dollar because of the country's mineral wealth. This has resulted in the Canadian dollar growing in value against the American dollar (see Figure 6-3).

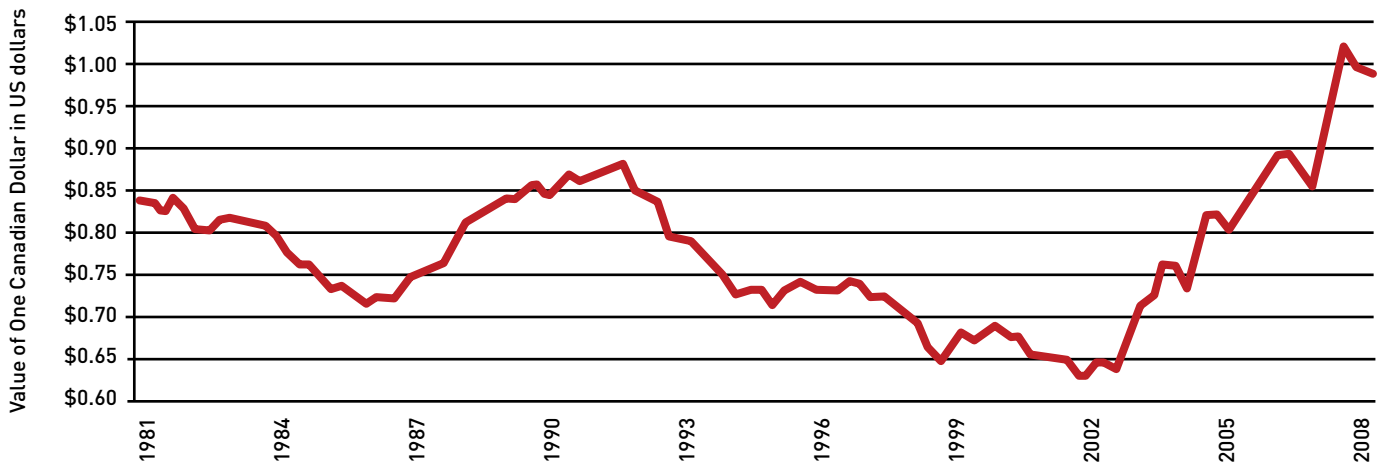
The higher dollar value will impact a number of economic activities in Nunavut. A more expensive dollar coupled with the rising cost of air travel and the weak consumer demand in the US will result in a drop in international tourism, though this could be offset somewhat by an increase in domestic travellers. Particularly hard hit will be outfitters, who for the most part cater to Americans and as such set their prices in US dollars, but purchase supplies in Canadian dollars. In the early 2000s, outfitters' profits were largely the result of the exchange rate when every American dollar earned was converted into CN$1.50 worth of revenues.

A similar concern exists for mining companies in Nunavut. Predictions on the exchange rate can be crucial to the profitability of a mine. The Mary River Iron Project (herein referred to as "Mary River") is being designed based on a Canada/US exchange rate at par during construction and US$0.85 during operations.[3] If the rate were to climb above these predicted levels, the mine's profitability would fall.[4]

At the local level, the higher valued dollar also means imports from the United States are cheaper. This could increase the amount of consumer spending on direct imports. Travel to the United States is also cheaper, though this is fully mitigated by the rise in the cost of air travel.

Figure 6-3

Canada-US Dollar Exchange Rate, 1991–2008 ($CAN/$US, quarterly average)



Source: Statistics Canada *CANSIM Data Base*

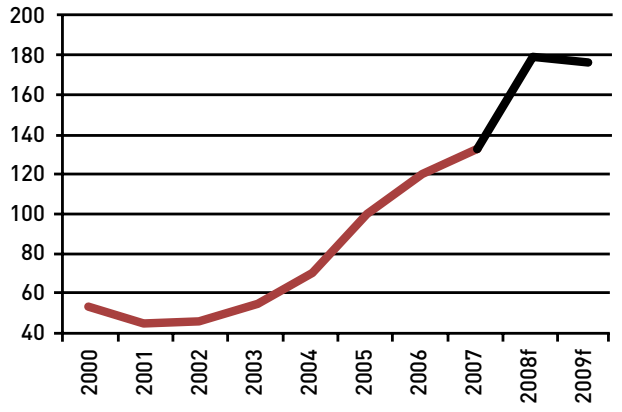
World Oil

The dramatic rise in the price of crude oil needs little introduction. Since 2001, its price has been on a steady climb and by the end of 2007 had tripled in value (see Figure 6-4). By late June 2008, the world price of a barrel of West Texas Intermediate crude oil was US$140, while the average price for a litre of fuel in Canada had reached $1.395 per litre.[5] The price of oil is expected to peak in 2008 at a price 80 per cent above the 2005 average value.[6] There is some discussion among economic forecasters whether oil and gasoline could reach US$200 per barrel and $2.00 per litre respectively, though evidence of this occurring in the short term does not currently exist.

As it stands, the full extent of fuel price increases across Nunavut are not known. What is known is that higher fuel prices will affect the bottom line of every consumer and producer in Nunavut. The Government of Nunavut raised the price of all consumer fuels by 22 cents a litre and aviation fuel by 30 cents a litre on July 1st. Another price increase is expected in September. And as stated earlier, the territorial government is bracing for what will likely be an $85 million increase in its fuel bill from the last fiscal year.

Figure 6-4

World crude oil price (index 2005=100) ($ per barrel, average of 3 spot prices*)



Notes: *price of Dated Brent, WTI, and Dubai Fateh; *f* is a forecasted price.

Source: IMF Commodities Report.

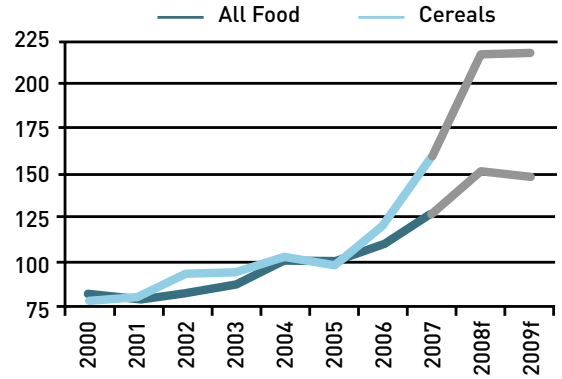
Tourism operators, discussed earlier, will have greater difficulty attracting customers who must pay for charters to get into remote locations. Mining and exploration companies will be hurt by the cost of fuel since it is one of their most expensive inputs into their operations. Baffinland has stated that its estimation of operating costs for Mary River is sensitive to changes in the price of oil. Current operation cost estimates by the company include crude oil at US$60 per barrel.[7] Exactly how sensitive is not public information (that is, how much the cost of operations would increase for every dollar rise in the price of oil).

Food Supply

Poor growing conditions throughout many of the world's important food-producing countries and the rising cost of fuel that is used in production and transportation has led to a spike in international food prices, especially the price of cereals such as wheat, corn and rice (see Figure 6-5). In fact, the world price of cereals has grown faster than that of crude oil, more than doubling since 2005. The cost of groceries for Canadian families is now approximately 50 per cent higher than what those same groceries cost three years ago. Nunavummiut have been insulated from some of these price increases over the past year because items such as flour, rice, pasta and cereals are purchased in bulk for the entire year and transported by sealift. A one-time price increase can be expected with the arrival of this year's sealift shipment.

Figure 6-5

World food prices, 2000–2009 (index 2005=100)



Note: *f* represents a forecasted price.

Source: IMF Commodities Report.

6.1.3 Canada's Fiscal Position

As suggested by Figure 6-2 presented earlier, Canada remains a top performer economically when compared to other G8 countries. The Canadian economy has been hurt by the faltering US economy, but a portion of those losses are being made up for by increased mineral production, especially among oil and gas producers.

Most important from the perspective of Nunavut is the performance of the federal government. Nunavut relies on federal transfers to sustain its own government operations and capital expenditures. Anything that results in an improved fiscal position for the Government of Canada has the potential of benefiting Nunavut through increased transfers and new programming.

To this end, the federal government has balanced its budget for ten consecutive years. Canada now boasts the lowest net debt-to-GDP ratio among all G8 countries (see Figure 6-6). This puts the Government of Canada in a very strong fiscal position, but it will not result in increased spending or transfers. The latest round of reforms made to the Health and Social Transfer, Equalisation and Territorial Formula Financing programs are largely complete. In all likelihood, economic concerns south of the Canadian border will mean a cautious approach to any out-of-budget and new program spending by the federal government.

Most if not all important programming from the perspective of Nunavut will continue in one form or another. Examples of this include the Strategic Investments in Northern Economic Development program which is in the midst of renewal planning, the Contaminated Sites Program (DEW Line Clean-Up), the Gas Tax Fund, Building Canada and others. New money to support proposals such as the Nunavut Small-Craft Harbour Program will be more difficult to come by over the short term.[6]

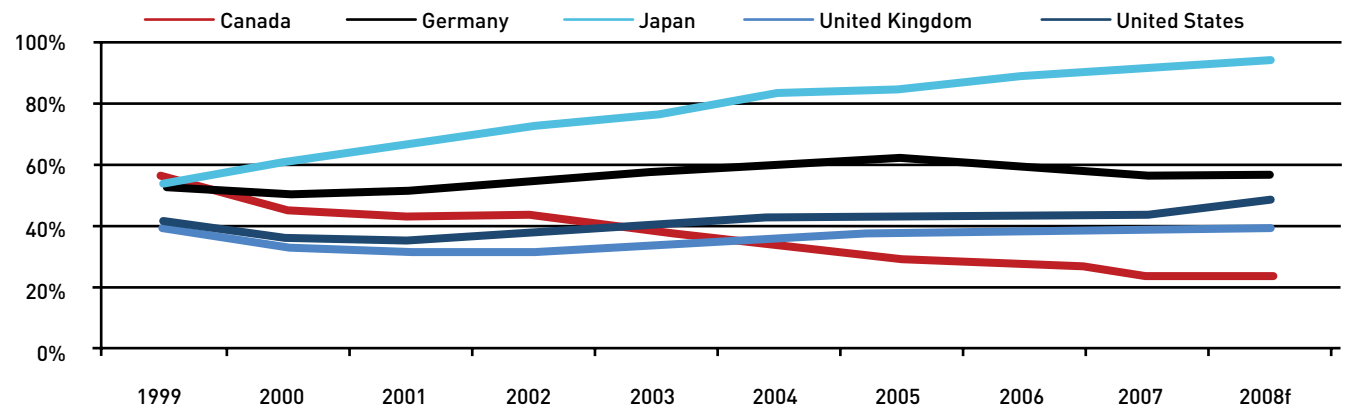
One program that Nunavut will be eager to see renewed is the *Nunavut Housing Trust Initiative* discussed earlier. This program ends in 2009-10. Another three- to five-year program in the $300 million range that would add 750 homes to the existing stock will go a long way in alleviating Nunavut's housing pressures. Timing could favour such a renewal. By 2010, it is expected that the US and Canadian economies will be on more solid ground increasing the likelihood of federal renewal of this program.

6.2 POPULATION OUTLOOK

The population outlook is a critical component of the overall economic forecast. It is the basis for determining the baseline forecast for consumer demand for goods and services, jobs, government services and infrastructure. The demographic profile within a population provides

Figure 6-6

Comparison of the fiscal position of national governments, selected countries, 1999–2008 (Net debt-to-GDP ratio)



Note: f represents a forecast.

Source: International Monetary Fund *World Economic Outlook.*

information on the specifics of these demands, such as the need for education services, health care, and housing. In Nunavut, the size and rate of growth of the population is also important for government revenues since this is a determining factor in the Territorial Formula Financing agreement.

The original Outlook published in 2001 contained a forecast of Nunavut's population based on work carried out by the Nunavut Bureau of Statistics.[9] Expectations at that time were for the population to grow to more than 32,000 by 2006 and to 43,000 by 2020 from the estimated population in 1999 of 27,000.

These earlier predictions appear to be high. A more recent population forecast generated by Statistics Canada suggests population was closer to 30,400 in 2006. This is quite similar to the results from the *2006 Census* that recorded a population of 29,474 in 2005.[10,11] Birth rates have remained well above the national average in Nunavut, but it is believed that fertility rates are declining, which is the case with other Aboriginal populations across Canada. Historical data on migration statistics (see Figure 4-2 presented earlier) shows that Nunavut loses more people through migration than it receives in a typical year. The net in-migration experienced in the first few years after the creation of Nunavut seems to be an aberration. With the exception of those three years and 2007, when the economy grew by 13 per cent on the year, there has been a net outflow of people from Nunavut to other locations in Canada every year dating back to 1992.

The apparent linkage between economic growth and migration does suggest that in the coming years, with the economy expected to grow considerably, that Nunavut will become a net recipient of migrants. This conclusion needs to be tempered with some other considerations. As already reported, Nunavut's already high cost of living is about to get more expensive as a result of the rising costs of fuel, food and transportation. And while there should be no shortage of jobs in Nunavut so long as the mineral exploration projects that are in advanced stages become producing mines, this will not necessarily give rise to an influx of people since relocation will not be a requirement for employment of southern labourers. The general lack of new housing and the high cost of the existing stock further reduce any financial incentive to relocate. Instead, what these mining projects will do is slow the exodus of skilled Inuit who might otherwise be attracted by work opportunities in southern Canada or the NWT.

With the multitude of factors influencing migration, predicting the overall population change is a challenging exercise. As with the overall economic forecast, much depends on the future of the mining industry. It is not clear how much the pace of improvements in Nunavut's wealth-generating capital will impact migration. For example, how much influence does the quantity and quality of housing have on migration? And, if housing does influence migration, what impact will investments such as the Nunavut Housing Trust Initiative have in mitigating that threat? Issues such as these require their own dedicated research.

Three scenarios for Nunavut's population outlook have been developed. These are all trended forecasts, meaning each year of data represents an average growth rate—there has been no attempt to forecast each year independently based on a discrete set of circumstances. In all three cases, birth and death rates are the same and are based on the *medium* assumptions established by Statistics Canada's Demography Division that produced an extensive and detailed set of demographic forecasts for Nunavut in December, 2005.[12] In this scenario, fertility rates will fall from their mark as of 2002[13] to equal 2.73 by 2016 and remain at that level for the remainder of the forecast. This is much higher than the national average, which is expected to remain at 1.5 for the entire forecast period. By contrast, Statistics Canada's low scenario assumes Nunavut's fertility rates falls to 2.43 while the high scenario has the fertility rate remaining at its 2002 level of 3.03.

Statistics Canada also developed several scenarios for Nunavut's mortality rate. This assumption has little consequence for the Nunavut population forecast due to the low number of senior citizens living in the Territory. The medium assumption was used in all three scenarios presented in this Outlook. Under this assumption, life expectancy for Nunavummiut males will grow from 67.2 in 2002 to 71.2 in 2031. The life expectancy for Nunavummiut females will grow from 69.6 in 2002 to 74.8 by 2031.[14]

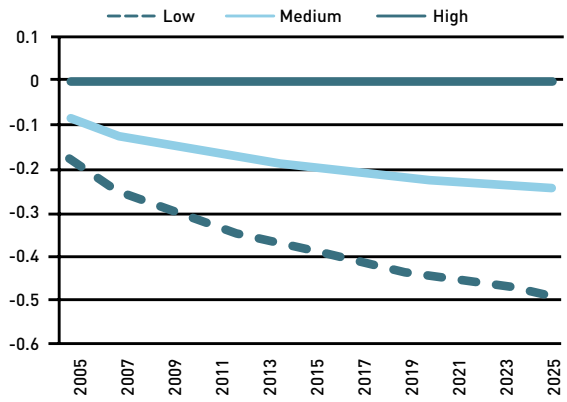
For migration, three scenarios were developed. The "low" scenario adopts the forecast generated by Statistics Canada's *Recent Trends Assumption*, which uses the most recent data, 2000 to 2003, as the predictor of future trends. Under this assumption, net migration is negative throughout the entire forecast period, falling from a net loss of 200 people in 2005 to a net loss closer to 500 people by 2025 (see Figure 6-7). It is interesting to note that this assumption produced the highest number of net migrants

to Nunavut of the six scenarios that Statistics Canada published; that is, all other scenarios showed net migration *more* negative. For the "high" scenario, we assumed that, on average, net migration would be zero over the forecast period. The "medium" scenario takes an average of the low and high scenarios.

The net result of these assumptions is the trend forecast shown in Figure 6-8. The growth rates represented in the high scenario are very close to those used in the original Nunavut Economic Outlook, with population growing to 44,600 by 2025. If the mining sector were to reach its full potential over the next ten years, the high population scenario would become the most likely demographic outcome. The low scenario takes Nunavut's population just beyond 35,000 by 2025, growing by only the slightest of margins in the final few years. This scenario can be expected if the mining sector's expansion stalls after the opening of the Meadowbank gold mine. For the *Nunavut Economic Outlook*, a prudent assumption for population growth is that of the medium scenario. It has population growing from its 2007 level of just over 31,000 to 39,850 by 2025.

Figure 6-7

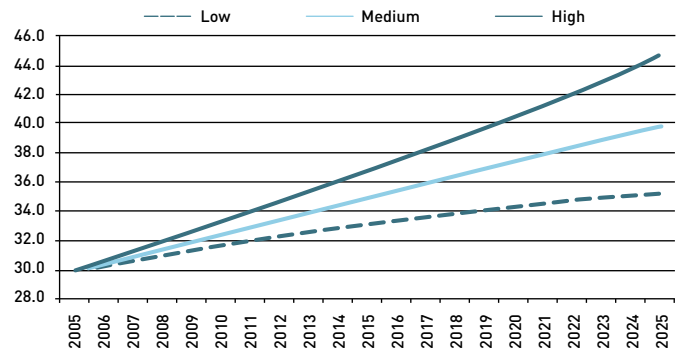
Nunavut migration scenarios (thousands)



Source: Statistics Canada Demography Division *Population Projections for Canada, Provinces and Territories: Catalogue 91-520-EIX*, and Impact Economics.

Figure 6-8

Nunavut's population forecast scenarios (thousands)



Source: Statistics Canada Demography Division *Population Projections for Canada, Provinces and Territories: Catalogue 91-520-EIX*, and Impact Economics.

Notes: All three scenarios (high, medium, low) assume fertility rates follows Statistics Canada's "medium" scenario, where the rate falls from its rate in 2005 to a rate of 2.73 in 2016 and holds steady at that rate. The "low" estimate assumes net migration follows Statistics Canada's *Recent* Scenario which trends migration over time from net of -100 in 2005 to a net of -500 by 2031. The "high" estimate assumes the average net migration is zero over the entire forecast period. The "medium" estimates an average to the "high" and "low" net migration assumptions. All three estimates are recalibrated after the migration assumptions are applied to account for the associated change in births.

6.3 MINING OUTLOOK

6.3.1 Risks to This Year's Mining Outlook

The mining outlook for this year's Nunavut Economic Outlook represents the greatest economic opportunity for the Territory, but also comes with the most complex set of risks. The Meadowbank Gold Project (Meadowbank) is all but certain to become an operating mine barring any unforeseen changes in the price of gold or in the property's ownership. It also highly probable that a gold mine will be developed near Hope Bay, though not one based on the plans and schedule developed by the property's previous owner. Other projects are less certain. A mine at High Lake did look to be going ahead with the Draft Environmental Impact Statement completed and under review by the Nunavut Impact Review Board however the new owners have delayed that project in order to concentrate their efforts on advancing the Izok Lake property. Mineral deposits at Izok Lake (lead, zinc, copper and silver), Kiggavik (uranium) and Mary River (iron ore) appear to be economically feasible though they face unique challenges that must be overcome if they are to become operating mines (discussed in this chapter).

All six mining projects have been included in this year's Outlook. It should be reiterated that apart from Meadowbank, none are guaranteed to open. Nevertheless, it is important for Nunavummiut to understand what their economy will look like if they are all developed, even if the pace of development is somewhat different than that envisioned by the property owners themselves. There is a tremendous up-side potential from the growth in mining in terms of employment, training and business development, not to mention the remarkable impact on gross domestic product. At the same time, the risk that only one or two of these projects will be developed into operating mines in the next seven to ten years is enough to warrant caution among decision makers and should prompt some alternative planning.

Beyond these six properties, there are several more that are advancing through various stages of exploration; all or none of which could result in operating mines over the forecast period. Again, determining which deposits will become operating mines and when they will open are risk factors in this year's Outlook.

Another kind of risk relates to the ability of Nunavummiut to participate in the mining industry. This concern has been voiced in all previous Outlooks and remains a critical factor to consider when assessing Nunavut's socio-economic future.

Yet another risk is how Nunavummiut will deal with the increased wealth that mining activities will generate. This might seem an odd statement on the surface. However, the *2005 Nunavut Economic Outlook* introduced evidence that showed economic progress was outpacing social progress and that as a result Nunavut society would face a number of social and organisational challenges if and when this economic potential was realised. It is a simple truth that some Nunavummiut will be better suited to take advantage of the opportunities in the mining sector. These individuals possess the right education, skills (including life skills) and aptitudes to gain immediate employment or to attain the proper education and training to ensure their future participation. Others will not have these assets and may not possess the ability to obtain them. Others will simply have no interest in participating. Regardless of how these "haves" and "have-nots" are chosen from within society, a divergence in personal income and material well-being will be a result. And despite the reasons for not participating, the experience of the Northwest Territories shows that this disparity comes with a new set of challenges for individuals, communities and governments such as addressing issues of self-esteem, jealousy, distrust, and social exclusion.[15] This is a risk to Nunavummiut in pursuit of a high and sustainable quality of life since it will likely cause some disruption of families and community cohesion.

The following discussion on the mining sector is organised to deal with each of the issues introduced separately. The first discussion is on the short-, medium- and long-term prospects for operating mines which includes some discussion of the economics of each project and some of the challenges they face. This is followed by a discussion of the risks that are associated with the participation of Nunavummiut in the mining sector and other cumulative impact issues.

6.3.2 Mine Prospects

6.3.2.1 Immediate Prospects

The Meadowbank Gold Project is the only near-term mining prospect in this year's Outlook as a result of the delays at Hope Bay. Once operational, Meadowbank activities should add $40 million to $50 million (approximately 3 per cent of the 2010 economy) to Nunavut's real GDP annually on average over its lifespan.

The general economics of the Meadowbank are as follows:[16]

- The total capital outlay required to develop the mine site was estimated at $303 million in 2004. The final price will approach $400 million given the rise in input costs.[17]
- Probable reserves equal 3.5 million ounces of gold contained within 29.3 million tonnes of ore.[18]
- Mine start up is now anticipated for January 2010.
- Mine life is expected to equal nine years, however, a longer mine life could result if ongoing exploration activities reveal further resources.
- Peak labour force requirements for construction were estimated at 350 while operations will require a workforce of 250. Requirements for unskilled labour will peak at 90 and 60 respectively.

6.3.2.2 Medium-Term Prospects

Hope Bay Property

There was good reason to believe the Doris North deposit within the Hope Bay properties would reach a development phase this year with the submission of the Environmental Impact Statement in October 2005.[19] However, the property was sold to Newmont Mining Corporation (Newmont). The new owners are re-evaluating the proposed project and are conducting exploratory work at the Madrid and Boston sites in addition to new sites in order to assess the proven and probable reserves such that mining operations could be sustained beyond the two years planned by the previous owners. These delays are a prudent choice for Nunavut's mining sector and improve the chances of a long-term mining operation at Hope Bay.

The specific economics of the project remain unknown given the ongoing exploration activities. Based on earlier results, one could expect an operation larger than that proposed for Meadowbank, with total gold reserves exceeding 4 million ounces and a mine life of at least ten years. It appears the Hope Bay properties have a greater upside potential, as well. Should it go ahead, a realistic assumption on the timing of this project would be a construction schedule of two to three years beginning sometime after 2012 with operations starting around 2015 and continuing beyond 2025. Labour requirements would be quite similar to what is required at Meadowbank assuming the mine is designed as an open pit operation.

Kiggavik

Nunavut Tunngavik Incorporated's decision to reverse its position on uranium mining on Inuit-owned land in the fall of 2007[20] was met by an almost immediate response by AREVA Resources, a uranium exploration and mining company that is leading a joint venture uranium play in the Kivalliq region. The joint venture opened an office in Baker Lake in the fall of last year and in December the owners announced their intentions to initiate a two-year feasibility study and to begin the regulatory process required to develop the property that would include a mill complex.[21]

AREVA officials have suggested that the Kiggavik property could produce 100 million pounds of uranium over ten years and require a staff of 300 or more during operations. A best case scenario would see the mine begin operations by 2015. A more prudent assumption would include a slower regulatory process and a potentially a slower pace of development resulting in operations beginning by 2017 or 2018.

Because this would be the first uranium mine to open in Nunavut, there is a degree of uncertainty related to the acceptance and interest of Nunavummiut in this type of economic proposal. The reversal of Nunavut Tunngavik Incorporated's Uranium Policy opens the possibility of a uranium mine from a legal standpoint however the public consultation process that will be required as a part of the environmental assessment (EA) will be critical in assessing the appetite of Nunavummiut for uranium mining. A successful EA would most certainly bring about a jump in interest in Nunavut from other uranium mining companies. There are also issues around foreign ownership of Canadian uranium mines that the French mining company must deal with.

Izok Lake

Izok Lake is considered one of the high-grade, undeveloped copper-zinc deposits left in the world.[22] Its newest owner, OZ Minerals, is in the process of advancing the project through the early stages of the regulatory process. It has now determined a route for its all-weather road that will go north to Gray's Bay and link up with other OZ Minerals properties, including High Lake. Environmental baseline studies have also started. An Environmental Impact Statement is scheduled for completion in 2010. The current best-case scenario would see mineral production begin by 2014.

Current resources are estimated at 14.8 million tonnes. Annual production should equal 140,000 tonnes of zinc and 30,000 tonnes of copper. The mine is expected to operate for a minimum of ten years. Construction costs will be higher than Meadowbank or Hope Bay because of the need for the lengthy, all-weather road and port facilities.

The greatest challenges faced by this project are associated with the regulatory requirements, and in particular, as they relate to trans-boundary issues. The deposit is located in Nunavut 70 kilometres west of the Lupin Mine site, but is within the *Mowhi Gagha De Niitlee* boundary which is a part of the Tlicho Agreement.[23] This is the traditional area of the Tlicho with assigned hunting and fishing rights. The shipping of concentrate east and west out of the Arctic also brings into question the fishing rights of the Inuvialuit in addition to those hunting and fishing concerns that will be raised by the Inuit of Nunavut. Issues regarding the management of caribou can also be expected from Aboriginal groups in Nunavut and the NWT.

These trans-boundary issues could cause the EA process to go to a "Part 6" which implies the involvement of the federal government and is considered a lengthier regulatory regime. However, the Bathurst Inlet Port and Road project was recently referred to a "Part 5" process. There is an argument to be made that this established a precedent for the Izok Lake project, but this remains a risk to the project's start date.

High Lake

High Lake is a copper, zinc, gold and silver deposit that was purchased from Wolfden Resources by Zinifex Ltd. (now OZ Minerals) at the same time as Izok Lake. High Lake is the most advanced mining project in Nunavut after Meadowbank since a Draft Environmental Impact Statement was submitted in November, 2006. In 2007, it was accepted for a "Part 5" review.

Despite the progress in regulations, OZ Minerals has delayed the start up of this mine until its Izok Lake property is up and running. This is the project's major impediment at the moment. Therefore, construction of the High Lake mine site will not start until 2014 at the earliest. Based on submissions to the Nunavut Impact Review Board, construction costs for High Lake will equal $258 million (based on 2005 prices). It will require two years to complete and employ as many as 500 people a year.[24] Once operational, High Lake is expected to remain in production for 17 years, with a combined capital and operational outlay of $119 million annually or $1.6 billion over the life of the mine. This project's annual average contribution to real GDP was estimated at just over $100 million, which would represent a 9 per cent jump in economic growth based on the size of the 2007 Nunavut economy.[25]

Mary River

Mary River Iron Project is by far the largest of any mining or non-mining projects being proposed for Nunavut. Its owner, Baffinland Iron Mines Corporation, has estimated the project's capital cost at $4.1 billion which includes the mine site development, a 145 kilometre rail line to Steensby Inlet and a port facility.[26] Construction activities would span four years, with a best-case scenario start date set for 2010. This would see the mine operating by 2014 and continue for a minimum of 20 years.

A "Definitive Feasibility Study on Deposit No. 1" (there are four deposits in total) was released in February, 2008.[27] It contains a detailed study of the technical and economic feasibility of the deposit and was based on proven reserves of 160 million tonnes and probable reserves of 205 million tonnes. Assuming a production rate of 18 million tonnes of ore per year and a cost estimate of $14.62 per tonne, annual operating expenditures will average $263 million. Exploratory work on Deposits 2, 3, and 3a have the potential of doubling the reserves and mine life.

Some labour force details regarding the project's plans were released this spring.[28]

- The on-site construction workforce will peak at approximately 1,760, with the overall workforce peaking at 2,680.
- Construction camps will be erected at site and at several spots along the rail route, as well as barge accommodations at Steensby Inlet.
- The operations phase will require a total workforce of 450, with 275 at the mine site and 175 at Steensby Inlet.

From the prospective of real GDP, the Mary River Iron Project is almost immeasurable for the Nunavut economy; at the very least, it is so large that including it in the forecast limits the ability to see changes in other economic activities. This is because the real impact on GDP during construction will exceed $1.5 billion, and in fact, could approach $2 billion over the four year period depending on the amount of indirect and induced economic activity the Territory can capture. This implies an average contribution to the annual growth rate of 30 to 40 per cent throughout the construction phase. Once operating, the mine will be exporting 18 million tonnes of iron ore to Europe annually generating revenues in the neighbourhood of $900 million. Without the detailed economic estimates from the project, we can estimate the impact on real GDP will be close to $350 million annually rising to as much as $450 million in some years.

With the progress made in exploration and regulatory processes, this project seems more and more certain. However, at $4.1 billion, the construction costs exceed Baffinland's financial capacities and therefore the company will need at least one substantial partner. The number of companies worldwide with the financial capacity to step into a project of this size is limited, and any escalation in costs would further reduce the number of likely candidates. As of yet, Baffinland has not secured any multinational investors. A further risk, discussed earlier, is the escalating costs associated with construction and operations; particularly, the cost of fuel.

6.3.2.3 Long Term Prospects

There are numerous mineral deposits across the Territory being aggressively investigated. It is impossible to determine with any kind of accuracy which if any of these properties will ever become operating mines. The results of exploration activities over the next few seasons will help in this determination. For the most part, these resources are inland and will require transportation infrastructure to the coast. In the case of base metals, these infrastructure requirements include all-weather roads. A list of some of the more prominent exploration activities is provided in Exhibit 6-1. For the time being, none of these projects have been explicitly included in the forecast.

Exhibit 6-1

Selected additional mining opportunities

	Mineral(s)
George Lake/Goose Lake	gold
Hackett River	silver, zinc, gold, copper, lead
Churchill	diamonds
Ferguson Lake	platinum, palladium, nickel, cobalt, copper
Meliadine	gold

6.3.3 Cumulative Impacts and Benefits

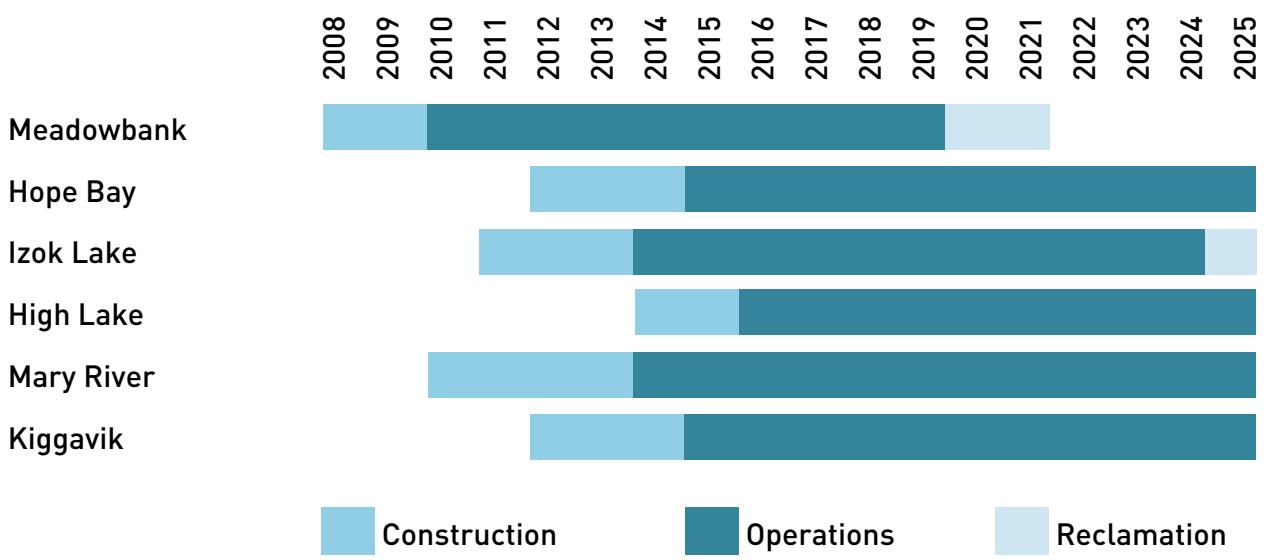
Expectations for the mining sector are high. Over the course of the next seven to ten years, there is a possibility that six mines could open. And whether or not Nunavummiut are prepared to cope with the changes that this economic growth will bring will not stop the impact on real GDP, employment and personal incomes. In the meantime, it is useful to look at all of the projects together to determine exactly what Nunavut will be dealing with from an economic and cumulative effects perspectives.

Exhibit 6-2 shows the profile of the six mines discussed earlier as part of the immediate and medium-term mining prospects. The timelines are based on what each property owner has stated as their best-case scenario. Viewing them together is a good illustration of how the Nunavut economy could soon enter a phenomenal economic expansionary period, but also an almost impossible scenario from several perspectives.

First, each of these projects requires regulatory approval and all proponents favour a "Part 5" Review Process, meaning the Nunavut Impact Review Board will soon be inundated with proposals, if they are not already. Of course, Meadowbank has already completed its regulatory approval processes while the High Lake proposal is already under review though it might require updating by the time OZ Minerals chooses to move forward with the project. The four remaining mining projects will require extensive Environmental Impact Statements. The proposals for Izok Lake and Kiggavik are particularly complex suggesting an even more comprehensive review process.

Exhibit 6-2

Projected mine life profiles (best-case scenarios based on statements by mine owners)



Note: These are best-case scenarios based on documents and statements made by the mine proponents. It would be prudent to assume delays will occur. Also, as noted, with the exception of Meadowbank, none of these projects are guaranteed to reach a development phase.

Assuming the regulators are able to manage the increased workload and work through the proposals in a timely fashion, the next challenge will be in construction. Finding labour in Nunavut will be challenging enough, but with the tight markets in southern Canada, finding enough skilled tradespeople will be difficult. As stated, the Mary River Iron Project will require a workforce of close to 2,700 at its peak. This coincides with construction schedules at Izok Lake, Hope Bay, and Kiggavik; all of which will require 400 to 500 workers at times, meaning a construction workforce in excess of 4,000 people for these projects alone. This overlaps with other important construction activities across the Territory such as that for new housing and municipal infrastructure.

The operating phase of these projects will encounter similar labour force impediments. Mine operations require a great diversity of professional, skilled and semi-skilled labour, all of whom must be willing to work a two-week in, two-week out schedule. Evidence from the Northwest Territories suggests that this lifestyle appeals to a specific cross-section of society; specifically, people between the

ages of 18 and 30 and without children, and people who are somewhat older whose children are 18 years of age or older. And while the diamond mines have been successful in attracting women into a variety of mining jobs, women who are of a child-rearing age are especially uninterested in rotational work.

The labour demands from the construction and operations of these projects will place an even greater strain on the Government of Nunavut that is already finding it difficult to attract qualified tradespeople. However, it should be noted that because the government offers jobs in the communities with a more standard work schedule, there will be a cross-section of people who prefer jobs within their communities but who obtain their credentials at one of the mines. To a certain extent, this could improve the government's ability to find and attract qualified labour, and in particular, qualified Inuit labour. The increased demand is certain to force pay raises for these positions.

In addition to miners, equipment operators, technicians and engineers, mines also employ administrators, health care providers, educators and instructors and a range of other support personnel. This is an opportunity for Nunavummiut, but will place further strain on the Government of Nunavut's goals of increasing the number of Inuit nurses and teachers and on its attempts to meet the employment targets established in Article 23 of the Nunavut Land Claims Agreement. The mining sector also provides an opportunity for expansion of Nunavut's small business sector, but in doing so will jeopardise the Government of Nunavut's ability to meet the goals established in Article 24. Such goals may prove unrealistic in an economy operating beyond its labour capacities and driven by an increase in private-sector activity.

Another cautionary note relates to the potential involvement of Inuit in mining projects. Many of the mining and exploration companies operating in Nunavut seem eager to discuss the possibility of Inuit involvement in their activities. The six mining projects hold the potential of employing all the able-bodied Inuit in Nunavut, but the reality is there are not enough people available to fill all the jobs in the best-case scenario described in Exhibit 6 2, even if there were no capacity issues within the Inuit labour force. The realities of this labour force described in Chapter 4 confirm that a more modest expectation of direct employment will be warranted.

This should not be viewed as a limitation to economic growth. There is a wide range of benefits that flow from mining-driven economic growth if managed well. Jobs are the most obvious benefit and the easiest to negotiate, but are one of many positive benefits. The proceeds that are generated through mine construction and operations can support a host of needs that can be defined as broadly or narrowly as circumstances dictate. But as impact and benefit agreements move away from such things as employment quotas, apprenticeship programs and scholarships and into community-based or public program-like arrangements, the experience in the NWT shows that community-based and government organisations will have to become involved as active participants if the Agreements are to deliver real and long-lasting benefits to all Nunavummiut.

Nunavummiut will have to accept their capacity constraints and the fact that depending on how benefits are measured non-Nunavummiut will benefit from these mine operations as much if not more than locals. But in accepting a win-win scenario, Nunavummiut also accept that their progress and the growth in the percentage of benefits that remain in Nunavut over time depend entirely on their own ability to manage the wealth that these operations generate.

Exhibit 6-3 on the following page describes how mining sector activities can and will be measured through changes in gross domestic product and what portion of this is useful in determining Nunavut-specific benefits. There are other benefits and thus other measures to consider. The Government of Nunavut will collect income tax from Nunavut-based employees and corporate taxes from the firms involved, including the mining company itself, though approximately 80 per cent will be clawed back according to the Territorial Formula Financing Agreement. There will be indirect and induced impacts, albeit small ones as a result of the limited manufacturing activities and retail markets within Nunavut. The intrinsic value of an economy that is expanding rapidly is not easily measured, but in the NWT, the rise of the diamond mines coincided with some marked improvement in graduation rates and post-secondary enrolments.[29]

Exhibit 6-3

Mining sector's contribution to GDP: what ends up in the hands of Nunavummiut?

The contribution of the mining sector to Nunavut's gross domestic product over the next twenty years will dwarf the present day economic figures. Under a best-case scenario where all six mines discussed earlier are operating, real mining output could reach $500 million and at times approach $750 million. This represents as much as a 70 per cent increase in the size of the economy. During their construction phase, real GDP would more than double. But what does this mean? Will Nunavummiut well-being improve twofold? Will personal incomes double? How about government revenues?

If we look at the proposed Mary River Iron Project, annual shipments of iron ore will be worth somewhere in the neighbourhood of $900 million. To determine the precise impact in terms of GDP requires a mathematical model such as Statistics Canada's Interprovincial Input-Output model. An estimate can be formed through knowledge of the components of GDP (see formula below), an understanding of Nunavut's economy (its labour markets, goods and service providers and its economic policies), and some general rules of thumb associated with the mining sector and its contribution to GDP in Canada. Reasonable estimates would range from $350 million to $450 million.

$$\text{GDP} = \sum \text{(wages and salaries, profits, CCA, indirect taxes les subsidies)}$$

For Nunavut, the most important component within the GDP calculation is wages and salaries that could total $36 million annually if we assume 450 employees earning an average income of $80,000. It should be noted that the cost to the company is much higher because of the cost of transportation, accommodations, and payroll taxes. How many of those positions can Nunavummiut fill? And for all the work that is contracted out, how much can be taken up by Nunavut-based firms or Nunavut-controlled joint ventures?

Nunavut Inuit will also be interested in the contribution of indirect taxes since this is primarily taken up by royalties. Article 25 of the NLCA stipulates that 50 per cent of the first $2 million and 5 per cent of all additional royalties generated on Crown Land are to be transferred to Nunavut Trust. Additionally, the Mary River iron deposits, as with the deposits of all six mining prospects discussed earlier, are on land where Inuit own subsurface rights. In these cases, NTI receives royalty payments directly under a separate and far more lucrative schedule that amounts to 12 per cent of net profits from operations.[30] The Government of Nunavut, even under a complete devolution arrangement, holds no title to these lands and therefore will receive none of the royalty revenues generated from them.

The other components of GDP, profits and capital consumption allowance, have no impact on Nunavummiut well-being other than in calculating taxes. These two components make up as much as 70 per cent of the total GDP figure, if not more. For all of these reasons, Nunavummiut should use additional measures to understand the contribution of mining projects to their well-being. GDP measures value-added output, but unless Nunavummiut own all of the value-adding components (labour, royalties, profits, and depreciation), then it is measuring benefits that extend far beyond the reach of most Nunavummiut.

6.4 CONSTRUCTION OUTLOOK

Following the outlook for Nunavut's mining sector, it is clear that success in mining will spell success for the construction industry. Real construction activities grew by 68 per cent in 2007 through a combination of increased public housing starts and the activity within the mining sector. Housing construction will remain at its current level in 2008 and 2009 but will not add significantly to economic growth. Mining, on the other hand, will continue to add value through its construction expenditures. Figure 6-1 presented earlier shows that public and private investment intentions for 2008 indicate spending could grow by a further 20 per cent largely as a result of the ramping up of activities at the Meadowbank mine site.

The construction cost of Meadowbank will be close to $400 million. Hope Bay, Izok Lake, High Lake, and Kiggavik will cost a combined $1.5 billion at a minimum, while Mary River's capital cost was estimated at $4.1 billion. A large portion of these costs are associated with the installation of transportation infrastructure.

The Government of Nunavut released its 2008-09 Budget this spring indicating its capital budget would fall back below $100 million after a few years of spending almost double that amount. The final figure might ultimately be larger than the one budgeted depending on how the Nunavut Housing Trust expenditures are recorded. But with the rising cost of fuel, a trend toward lower public expenditures for capital projects can be expected until new revenues can be found to cover the higher cost of fuel. Without new revenues, some projects within the five-year capital plan could be jeopardised. Highlights from this plan are presented in Table 6-2.

Funding for community infrastructure is becoming more and more dependent on funding from targeted programs offered by the federal government. In addition to the capital expenditures highlighted above, the federal Gas Tax Fund, Municipal Rural Infrastructure Fund, Strategic

Table 6-2

Five-Year Capital Plan, 2008-09 to 2012-13 ($ millions)

Cultural Infrastructure	
Folk School (Clyde River)	$11.1
Education Infrastructure	
Inuksuk High School (Iqaluit)	$15.9
NAC Student Accomodations (Iqaluit)	$7.3
NAC CLC Replacement (Pond Inlet)	$6.3
Peter Pitseolak School Addition (Cape Dorset)	$10.1
Inuksuit School Addition (Qikiqtarjuaq)	$9.7
New School (Sanikiluaq)	$14.2
New School (Coral Harbour)	$19.3
Elementary School Renos (Gjoa Haven)	$19.7
NAC Student Accomodations (Rankin Inlet)	$4.5
Trade School (Rankin Inlet)	$6.4
Health Infrastructure	
Continuing Care Facility (Igloolik)	$4.1
Qikiqtani General Hospital (Iqaluit)	$4.9
Health Centre (Repulse Bay)	$12.7
Health Centre (Taloyoak)	$12.7
Continuing Care Facility (Gjoa Haven)	$4.6
Community Infrastructure	
Community Hall Expansion (Hall Beach)	$1.0
Community Hall (Arctic Bay)	$2.4
Community Hall (Igloolik)	$2.6
Community Hall (Repulse Bay)	$1.9
Community Hall (Gjoa Haven)	$1.4
Tank Farm (Resolute Bay)	$4.5
Arena (Resolute Bay)	$2.5
Tank Farm (Rankin Inlet)	$12.0
Sewage Treatment Plant (Rankin Inlet)	$5.7
Parking Garage (Repulse Bay)	$1.5
Sewage Lagoon and Solid Waste (Kugluktuk)	$2.5
Hamlet Office (Kugluktuk)	$2.7
Economic Development and Transportation	
Airport Redevelopment (Arctic Bay)	$6.5
Gas Tax Projects	
Qikiqtaaluq Region	$15.0
Kivalliq Region	$6.6
Kitikmeot Region	$3.3

Note: Projects exceeding $4 million over the 5-year period were reported, except for community infrastructure, where the cut-off was $1 million.

Source: Government of Nunavut 2008-09 Capital Estimates.

Infrastructure Fund and the Airports Capital Assistance Program will infuse $96 million into public capital projects over the next three years (see Table 6-3). One can anticipate a continuation of these types of programs over the medium and long term, all of which will help Nunavut narrow the gap between its infrastructure supply and demand. At the same time, these programs are typically short lived meaning administrators must dedicate large portions of their time and effort to ensuring the programs are renewed or that new ones replace those that are ending. Without renewals or new programming, the Outlook for public capital expenditures would drop below $100 million a year.

There are other construction projects in the works; most of which are supported either directly or indirectly by the federal government. As discussed earlier, the most recent federal budget announced Pangnirtung will receive a marine facility with funding announced over two years. The Northern Contaminated Sites program recently completed its work at Resolution Island, which had been receiving most of the program's budget over the past four years. This program will now move to other sites throughout Nunavut. The federal government will soon begin renovations at the old Nanisivik mine site in preparation for a naval facility there in addition to the Armed Forces training facility to be built in Resolute Bay.

Table 6-3

Federal Program-based Capital Plan, 2008-09 to 2010-11 ($ millions)

Gas Tax Projects	
Qikiqtaaluq Region	$15.0
Kivalliq Region	$6.6
Kitikmeot Region	$3.3
Municipal Rural Infrastructure Fund Projects	
Qikiqtaaluq Region	$18.3
Kivalliq Region	$9.8
Kitikmeot Region	$3.1
Strategic Infrastructure Fund Projects	
Qikiqtaaluq Region	$1.2
Kivalliq Region	$15.5
Kitikmeot Region	$12.9
Airports Capital Assistance Program	
Rankin Inlet Runway Rehabilitation	$7.1
Taloyoak Runway Upgrade	$3.0

Notes: Funds were allocated based on recommendations by the Nunavut Community Infrastructure Advisory Committee.

Gas Tax Fund supports water, sewage and waste infrastructure replacements and upgrades.

Municipal Rural Infrastructure Fund supports the construction of community halls and arenas.

Strategic Infrastructure Fund supports water and sewage infrastructure replacements and upgrades.

Source: Government of Nunavut 2008-09 Capital Estimates

6.5 GOVERNMENT OUTLOOK

A lot has already been said about the fiscal situation the Government of Nunavut finds itself in. Its revenues have continued to climb in per capita terms since 1999 though at a decreasing rate. This trend is likely to continue over the medium term. The government has also managed to secure funding from numerous federal programs that are separate from Territorial Formula Financing and Health and Social Transfer. The Government of Nunavut now presides over a $1.1 billion annual budget that is just $100 million shy of that administered by the Government of the Northwest Territories.

Despite the growth in revenues and spending, the government's contribution to real GDP growth has diminished over the past five years to average 2 per cent, compounded annually, while managing only 1 per cent real growth in each of the last two years. This is important since government remains the single greatest contributor to value-added output in the Territory. In combining public administration, health care and social services and education services, government spending accounts for 41 per cent of Nunavut's economy. This is down from a peak of 48 per cent in 2005.

This Outlook predicts more of the same from Nunavut's public sector. Any increases in spending over the next few years will cover off the higher cost of goods and services with little left over for additional capital projects or enhanced programming.

Moving further into the forecast period, if the pace of development set by the mining sector is close to the best-case scenario discussed in this Outlook, pressures on labour will begin to affect the government's ability to attract and retain staff. Because the mining companies are all looking to build their own transportation infrastructure, the stresses on public infrastructure will be kept to a minimum with the brunt of these stresses being placed on Nunavut's air transportation infrastructure.

The predicted growth in population is somewhat lower than previous estimates however it is still enough to place excess pressure on government services and community infrastructure. This fact reinforces the importance of a continuation of the targeted infrastructure spending programs being offered by the federal government. Simply put, the Government of Nunavut will be unable to keep up with the growing demand without these programs.

6.6 FISHING OUTLOOK

Nunavut's fishery remains a small sector with some potential for growth within the Territory's overall economy, but it also faces several challenges. The industry is based primarily on three species: turbot, shrimp and Arctic char. The turbot fishery consists of two Divisions—0A and 0B—which are located on the eastern shore of Baffin Island. Within these divisions there are quotas established for inshore and offshore fishing with Nunavummiut engaged in both. In 2007, the quota for turbot in these two divisions equalled 12,000 metric tonnes, of which Nunavut-based operations were allocated 8,000 metric tonnes.[31] The 2007 harvest was worth an estimated $42 million, which represent a $7 million increase over 2006.[32]

The rising value of the harvest is tempered by continued disappointments in efforts by the Baffin Fisheries Coalition Nunavut Tunngavik Incorporated and the Government of Nunavut to secure a greater share of the turbot fishery currently owned by southern-based firms. The most recent opportunity to raise Nunavut's allocation came earlier in 2008 when the southern-based Seabreez Foods Inc. asked that its 1,900 tonne allocation of the turbot fishery in Division 0A be transferred. The Baffin Fisheries Coalition and Nunavut Tunngavik Incorporated argued that Nunavut should have been awarded this quota, however, to date, this has not happened.

The northern shrimp fishery consists of several divisions with the total annual quota equalling approximately 34,000 metric tonnes. The total value of the northern shrimp fishery is approximately $80 million, with Nunavut-based operations owning 31 per cent of this overall quota.[33] However, the Department of Fisheries and Oceans reports that only a portion of the annual allocation is harvested. The Baffin Fisheries Coalition reports this is due in part to the higher operating costs in the North compared to similar operations in southern Canada which limits the number of vessels interested in harvesting this quota. For the 2007-2008 shrimp season, less than half of Nunavut's northern shrimp quota had been harvested.[34]

The newest concern within Nunavut's commercial fishery is the rising cost of fuel. The Baffin Fisheries Coalition has estimated that fuel represents approximately 25 per cent of its vessels' operating costs, and this cost is rising sharply. Over the long-term, it is hoped the market price for turbot and shrimp will adjust to reflect the rising costs that are impacting all producers, however, this has not happened to date.

The Arctic char fishery is a much different operation than turbot or shrimp. It is relatively small with many fishers working for short periods of time. The annual quota for Arctic char is never harvested in its entirety due to the inaccessibility of most of the stock. Also, Arctic char is a primary food source for Inuit, and therefore a significant portion of harvesting is for subsistence purposes and goes unrecorded as economic activity. The Nunavut Land Claims Agreement stipulates that country food stocks will be protected against commercial operations in the event they are depleted, which places some limits of the growth potential for this industry.

With that said, a new market in the United States for Arctic char was recently secured. This could prove a positive addition to Nunavut's fish market, but it is not without challenges. Consistency of product supply and quality are hurdles that must be overcome, as well as the logistical challenges of moving fresh fish from the Arctic to markets in the US. Already, the supply of Arctic char to local markets such as that in Iqaluit has been inconsistent and has not met demand.

From the perspective of tourism, the Arctic char fishery offers opportunities. A report completed several years ago showed that the economic contribution of sport fishing at that time was $20 per pound, while commercial operations produce a value of $1.50 per pound.[35] At the same time, there are advantages to selling Arctic char exclusively to high-end southern markets so that additional value can be added to the fish before it is exported.

The fish processing plant located in Pangnirtung, which processes turbot and Arctic char, announced a profit from last year's operations. This facility is a member of the

Baffin Fisheries Coalition that provides a portion of its catch to the plant at no cost. This arrangement ensures a portion of the value-added benefits of Nunavut's fishery remains in Nunavut. The new marine infrastructure in Pangnirtung that will be in place in the coming years should improve efficiency of the fishers and the processing plant.

In 2005, the Government of Nunavut and Nunavut Tunngavik Incorporated released the *Nunavut Fisheries Strategy*. It laid out plans to grow the industry over the long term by investing in all four forms of capital. To date, investments have gone into training local Nunavummiut to work in industry, studying the size and extent of the existing fish stocks, acquiring the appropriate machinery and equipment and organising a consistent and persistent communications approach to deal with issues of funding and resource allocation. Efforts continue on all of these fronts.

The *Nunavut Fisheries Training Consortium* that was established in 2005 through the joint efforts of the Baffin Fisheries Coalition, Nunavut Tunngavik Incorporated, the Government of Nunavut and Kakivak Association has successfully trained approximately 200 Nunavummiut in several fishing-related trades. As with all sectors of Nunavut's economy, the training and retention of skilled local employees will be a challenge over the foreseeable future. In particular, the fishing industry will have to compete with employers in the rapidly-expanding mining sector.

Efforts to improve marine infrastructure have been noted earlier in the Outlook, as has the efforts of the key stakeholders to acquire an increased share of Nunavut's adjacent fish resources. In addition to these investments, Nunavut continues to direct funding toward fish science. From fiscal year 2003-2004 to 2008-2009, the federal government through its Strategic Investments in Northern Economic Development program and the Government of Nunavut have invested in excess of $1.2 million toward assessments of fishing stocks across the Territory.[36]

The outlook for Nunavut's fishery is for a continuation of the steady progress toward a more mature industry. The past five years of investments in all four forms of capital have been important, but these must continue and in some areas enhanced. Funding for marine infrastructure in other communities besides Pangnirtung is necessary to grow the inshore fishery. Continued efforts on the political front in securing additional quota will be important for real sustained growth in fishing and fish processing. Furthermore, investments into fish sciences are critical to understanding the existing stock of fish and to ensure the fishery remains sustainable.

6.7 ARTS SECTOR AND CULTURAL INDUSTRIES OUTLOOK

Nunavut's arts sector and cultural industries cannot be overlooked when assessing the economic outlook for the Territory. It is true that its contribution to the real value-added GDP is barely noticeable beside the billions of dollars spent in mining, construction and government operations however its contribution is very important from the standpoint of culture and economic diversification. As a cottage industry, the arts sector and cultural industries offer productive outlets for people uninterested in the public service, construction work, machinery operation, mining or camp work. In fact, as opportunities in these other sectors grow, the importance of alternative outlets for productive people will likely grow.

Some might view this as ironic, but the arts sector and cultural industries could be one of the greatest benefactors of the economic growth anticipated over the next 10 to 15 years. The two sides of Nunavut's economy do not compete for the same labour pool. Increased disposable income among Nunavut's growing middle class and a corporate presence in the some smaller communities will expand the marketplace for artist and cultural products and services. For example, if the Mary River Iron Project proceeds to its construction phase where 2,600 workers will be needed, how many of those travelling from southern Canada will want to purchase at least one piece of art? How many will purchase multiple pieces over the four years of construction? Once operational, mining camps may offer its employees a rather extension social program that could include local art displays and performances.

With these potential opportunities on the horizon, the Government of Nunavut's Community Economic Development Division with the Department of Economic Development and Transportation has produced a strategy for its arts and crafts sector. *Sanaugait* meaning "things made by hand" is a strategy for growth in Nunavut's arts and crafts sector.[37] Its vision is to "increase the value of Nunavut's arts sector through investments that improve quality, stimulate innovation, and support sustainability, in partnership with Nunavut's artists, their organizations and their communities."[38]

The Strategy has established seven goals:

1. Increase the quality of Nunavut art.
2. Maximize artists' profits through participation in the value-added chain.
3. Secure market share through protection of intellectual property rights.
4. Secure market share through international brand recognition.
5. Expand international market share.
6. Provide current and accurate information about the arts sector.
7. Promote and celebrate the contribution of Nunavut arts to global society.

The government hopes this strategy will help grow the arts sector into a $50 million industry by 2013 as described in the Nunavut Economic Development Strategy, though it is unclear how the sector's economic value will be calculated. And because an undetermined portion of the activities within this sector go unrecorded, it is difficult to translate this projection of $50 million into the Outlook's economic forecast.

An interesting highlight for the arts sector is related to the 2010 Winter Olympics in Vancouver. Nunavut Development Corporation has agreed to supply the Games with 40,000 inuksuit carvings made by artists from across the territory.[39] This is expected to generate $1 million in revenues for Nunavut artists.

6.8 TOURISM OUTLOOK

Nunavut's tourism industry remains largely undeveloped. Increases are being seen in the cruise ship business with more schedule stops registered for the 2008 season than ever before. But by-in-large, the industry continues to struggle in the development of marketable tourism products and suffers from inadequate infrastructure at the community level. Nunavut's annual budget for marketing and tourism remains the lowest of all jurisdictions in Canada at less than $4 million, which is less than half that spent in Northwest Territories and a quarter of that spent in Yukon.

Nunavut Tourism has recently accessed over $1 million in funding from the federal government's Strategic Investments in Northern Development (SINED) program, with the Government of Nunavut adding an addition $280,000. These funds have allowed for some investment in market development and expansion.[40] Nunavut Tourism has outlined a larger four-year investment plan that includes investments in industry development, marketing, visitor centres, community involvement, and some infrastructure in the event it can secure additional long-term funding through SINED and other government sources.

The higher valued Canadian dollar coupled with the rising cost of fuel is having an immediate impact on Nunavut's tourism trade. The federal government will provide Nunavut with a one-time $4 million grant to offset the recent downturn. Because 75 per cent of Nunavut's tourists are business travellers, it remains to be seen how much of that tourism business will be affected.

There are also the environmental issues raised earlier that can and will impact Nunavut's tourism. As mentioned, the Hunters and Trappers Organisation in Igloolik recently banned any tourism activities that came into contact with walrus in the area. Polar bears are now regarded as a threatened species by the United States Fish and Wildlife Service, while some questions have arisen with regard to the environmental record of cruise ships that are dumping contaminants into Nunavut's arctic waters.

When combined, these issues present a real challenge for Nunavut's tourism industry. The forecast assumes it will not grow over the medium term, and could in fact decline over the near term. Opportunities for longer-term growth still exist, but remain dependent on the collective efforts of the government and Nunavut Tourism and entrepreneurs to invest in the necessary community and tourism infrastructure, products and services, while creating effective marketing tools.

6.9 REVISED FORECAST

6.9.1 Introduction

The new forecast for Nunavut's wage economy includes all six mines described earlier, including Meadowbank, Mary River, Izok Lake, Hope Bay, High Lake, and Kiggavik. Of these mines, only Meadowbank is certain to open, though the prospects for Hope Bay are very good. The uncertainty surrounding the four remaining mines is far greater. This uncertainty demands that leaders take a cautious approach to the economic future of Nunavut and have plans for other scenarios. Nevertheless, there are good reasons for including these projects in this year's forecast.

First, as stated earlier, it is important that Nunavut's decision makers and other key stakeholders have an understanding of what the Territory's economy will look like under a scenario where its performance actually matches its potential. Already, many of Nunavut's leaders are coming to acknowledge that the Territory faces critical labour shortages, despite the number of people unemployed, and that the economic growth driven by activities in the private sector will bring a number of challenges along with its many benefits. Of particular concern for the Government of Nunavut is what this growth will do to the cost of labour, its ability to attract and retain staff, and its ability to meet its employment commitments under the Nunavut Land Claims Agreement.

And second, the economic outlook without Mary River, Izok Lake, High Lake and Kiggavik, if presented as an alternative forecast, would be rather easy to describe since there are few other prospects in the Territory that will create a large number of jobs or dramatically alter the socio-economic outlook, especially given the slow pace of growth expected within the public sector. Under this least-optimistic scenario of two new mines in the next ten years, population growth would more than likely resemble the "low" scenario described earlier. Outside those years when activities associated with Meadowbank or Hope Bay change dramatically such as construction start-up, the first full year of operations and closure, economic growth would likely average no more than 1.3 per cent to 1.7 per cent in a typical year.

6.9.2 Near-term Outlook

The storyline for this year's forecast is not one based entirely on the mining sector. In fact, over the short-term, other events are just as important in shaping Nunavut's economic growth. Of particular interest in the next two years will be the contribution of government to the real economy. The Government of Nunavut has released a budget for 2008-09 that shows a decrease in nominal expenditures. At the same time, government leaders have acknowledged that the increased cost of fuel was not fully accounted for in the budget. If the funds to cover these costs are borrowed this year, then more severe cuts can be expected in 2009-10. Either way, in the next two years, Nunavut's economy could very well decline as a result of a drop in government's real contribution.

While the public sector struggles with the rising costs of providing goods and services, activity in the construction industry will show a little more growth in 2008 before levelling off. At that point, public housing starts will have reached their peak as will construction activities at Meadowbank. Furthermore, the final year of this project's construction will be characterised by a more skill-oriented workforce that is necessary to complete the finishing work and to install the specialised machinery and equipment. This will lower the percentage of local employees.

Finally, despite all its production challenges, the Jericho Diamond Mine did contribute positively to Nunavut's overall economy in 2007. Its closure will have a negative impact on the rate of economic growth in 2008.

The current forecast includes a modest increase in real GDP of 1.2 per cent for 2008 with a slightly larger decline in 2009 (see Figure 6-9).

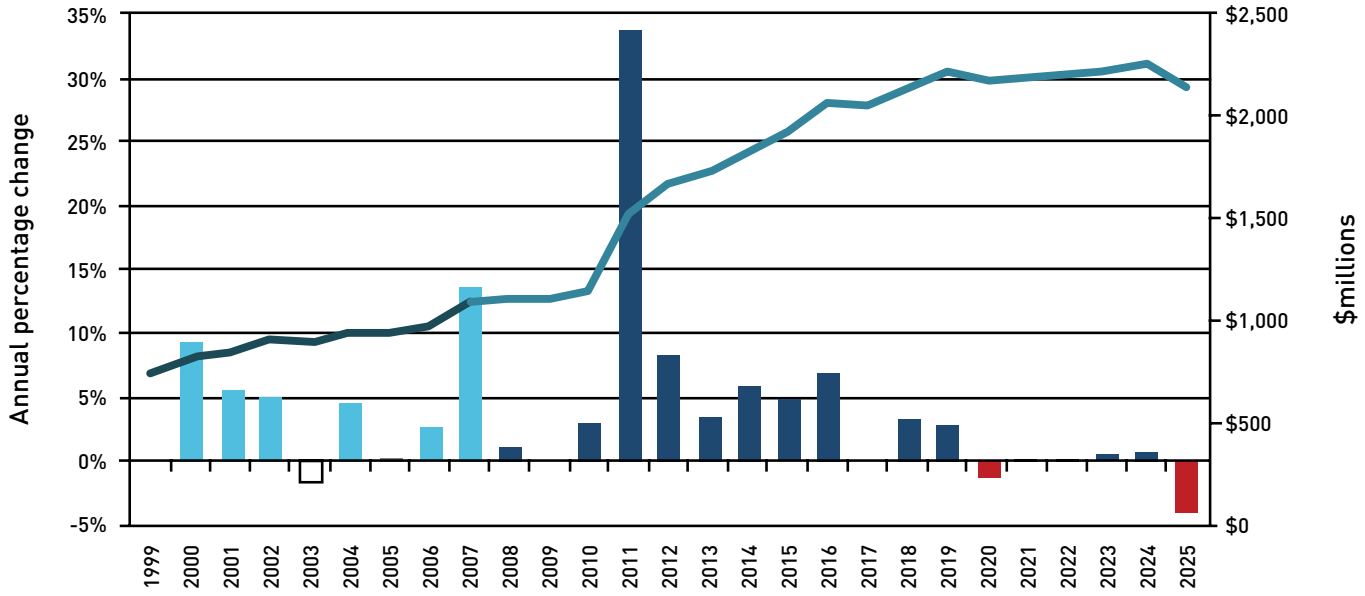
6.9.3 Medium-term Outlook

The year 2010 will mark a substantive change in Nunavut's economic profile. Meadowbank will begin its operations; bringing noticeable increases to Nunavut's employment, income and business activity.

The Outlook contains the assumption that Mary River will begin preparations for construction in 2010. This represents a short delay when compared to the owner's best-case scenario. A similar six to twelve month delay was worked into the Izok Lake project as well. These longer

Figure 6-9

Revised forecast for Nunavut's real wage-based economy (percentage change, $ millions (2002) prices)



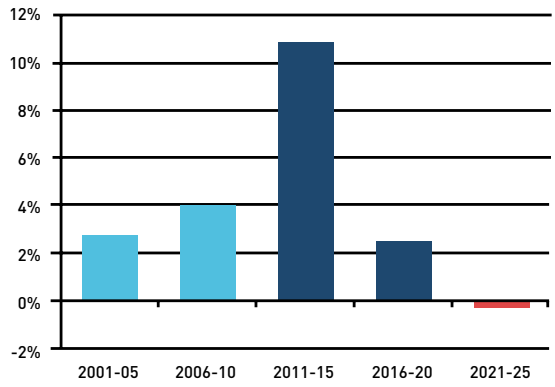
Note: 1999 to 2007 is historical data. Source: Statistics Canada, Impact Economics.

timelines were included as a prudent assessment of the time required by regulators to thoroughly review these project proposals. Any information requests that flow from these processes will delay the projects' approvals. Thus, it is assumed that Mary River's first full year of construction activities will be 2011, while Izok Lake's first full year of construction will be 2012. This creates a growth profile that is a little more evenly distributed over these three years, but Nunavummiut can still expect GDP to jump by 30 per cent to 40 per cent in 2011 and by another 8 per cent to 10 per cent in 2012 (see Figure 6-10).

The construction activities will spur growth in local businesses, especially in the areas of transportation, warehousing, retail and wholesale trade, finance and insurance and energy production. Employment will clearly be affected. By the end of this three-year period starting in 2010, the wealth being generated by these three projects will become noticeable at the community level. And because there will be a mining project in each region of Nunavut, a rise in standard of living should be seen across the entire Territory.

Figure 6-10

Long-term growth outlook (percentage change in real GDP, 5-year compound growth rate)



Note: 1999 to 2007 is historical data.

Source: Statistics Canada, Impact Economics.

These activities will overshadow a small rebound in public sector growth that is predicted over this three-year time period. This will be in part a response to the activities generated by the mining developments, but also from renewed housing and other infrastructure programs. Included in the medium-term outlook are other government activities such as the defence spending at Nanisivik. Also, the Trades School will open during this time which will increase Nunavut's education operations budget.

6.9.4 Medium- to Long-Term Outlook

The next wave of development will follow right behind the first. Assuming that Nunavut manages the developments at Izok Lake and Mary River well, and that operations at Meadowbank are running without any major impediments, the period 2013 to 2018 will be highlighted by construction activities at Hope Bay, followed by Kiggavik a few years later and finally High Lake. At the same time, production at Izok Lake and Mary River will start. Real GDP will grow by an average of 4.3 per cent (compounded annually) over this period and by the end, real output will be approximately twice what it was in 2007; that is, the size of Nunavut's economy will double in just over 10 years.

It will be during this timeframe that employment will reach its peak. The four mines under construction could require as many as 4,000 people depending on how the schedules ultimately line up. By 2018, all six mines are expected to be in their operations phase and will employ a collective 1,800 people directly. Assuming the average mine employee earns $80,000 per year this employment picture represents a wage bill of $144 million annually. The challenge for Nunavummiut is to capture as much of this wealth as possible and to invest any additional proceeds into future participation and Nunavut's wealth-generating capital.

Also noteworthy for this period will be an almost unnoticeable but important change in government spending. It is in this period of time that emphasis will shift from education to health care. This shift will be prompted by the growing number of people over the age of 60 relative to the number of children. It will take over ten years for health care spending to catch up with that of education.

6.9.5 Long-Range Outlook

In the final stages of this year's forecast period, 2019 to 2025, it is prudent to assume another mining project will come on stream. It is too far into the future to predict exactly which deposit this will be. However, if the uranium mine at Kiggavik receives regulatory approval and its construction phase can proceed without complications, there is a strong possibility that more uranium deposits will be developed in the same general area of the Kivalliq region.

Also noteworthy during this time period will be the expected closure of Meadowbank that will occur sometime around 2019 and then Izok Lake in 2024. The year following each of these closures (2020 and 2025 respectively) will see declines in real GDP and therefore the average growth over this seven-year period will be essentially zero, however, the level of value-added production will still be approximately double what it is today.

Endnotes

[1]International Monetary Fund, *World Economic Outlook*, April 2008, website www.imf.org accessed June 28, 2008.

[2]Ibid.

[3]Baffinland Iron Mines Corporation, *Preliminary Short Form Prospectus*, March 11, 2008.

[4]This statement is theoretical. The two assumptions are sufficiently prudent.

[5]MJ Ervin & Associates, *Weekly Pump Price Survey*, based on the average price across a sample of 60 Canadian cities (July 1, 2008).

[6]International Monetary Fund, *World Economic Outlook*.

[7]Baffinland Iron Mines Corporation, *Preliminary Short Form Prospectus*, March 11, 2008.

[8]While this report was being finalised, the Standing Senate Committee on Fisheries and Oceans released a report on the role of the Canadian Coast Guard in the Arctic (viewable at http://www.parl.gc.ca/39/2/parlbus/commbus/senate/com-e/fish-e/press-e/23jun08-e.htm) The Committee recommends in its report that Canada's sovereignty claims to the Arctic would be well served by investing in, among other things, marine infrastructure as laid out by the DFO-Nunavut Harbours Working Committee that produced the Nunavut Small-Craft Harbours Report in 2005. It is not known how the federal government will respond to this report.

[9]Conference Board of Canada, The Nunavut Economic Outlook: An Examination of the Nunavut Economy, authors Stephen Vail and Graeme Clinton (May 2001).

[10]Statistics Canada, Demography Division, CANSIM database, Table 051-0001 http://cansim2.statcan.ca/ (accessed May 8, 2008)

[11]Statistics Canada, 2006 Census (note that the Census data has not yet undergone a postcensual study to confirm the size of undercount in the Census survey).

[12]Statistics Canada, Demography Division, Population Projections for Canada, Provinces and Territories: 2006 to 2031. Catalogue No. 91-520-XIE (December 2005).

[13]The year was used as the base year for fertility rates since it was the latest data available at the time the forecast was being first assembled.

[14]Note that the forecast period for this Nunavut Economic Outlook ends in 2025, while the population projections from Statistics Canada extend to 2031.

[15]The latest mine proposal in the NWT is the Gahcho Kué Project. The Terms of Reference written for this project by the Mackenzie Valley Impact Review Board focused almost entirely on cumulative effects of past mines and the issue of disparity within communities. While some might argue that outcomes of the activities of existing producers should not be the responsibility of a new mining proponent, the contents of the Terms of Reference highlight the emergence of these issues. See *Terms of Reference for the Gahcho Kué Project Environmental Impact Statement* on the MVEIRB website at www.mveirb.ca.

[16]Information in this section comes from Cumberland Resources, *Meadowbank Gold Project Environmental Impact Statement* submitted to the Nunavut Impact Review Board unless otherwise noted.

[17]Agnico-Eagle Mines Ltd., *First Quarter 2008 Results and AGM Presentation*, available on the website www.agnico-eagle.com/Theme/Agnico/files/Presentations/Q1_2008_AGM_8May08.pdf accessed July 2, 2008.

[18]Agnico-Eagle Mines Ltd., *Meadowbank Operations Summary*, available on the website http://www.agnico-eagle.com/files/MeadowbankOperationsSummary.pdf accessed May 10, 2008.

[19]Miramar Mining Ltd., *Environmental Impact Statement, Doris North Project*, October 2005, submitted to the Nunavut Impact Review Board.

[20]Nunavut Tunngavik Incorporated, *Policy Concerning Uranium Mining in Nunavut*, approved by the NTI Board of Directors on September 11, 2007, available on the website www.tunngavik.com/publications accessed June 26, 2008.

[21]*Nunavut Overview 2007: Mineral Exploration, Mining and Geoscience*, produced in cooperation between Indian and Northern Affairs Canada, Government of Nunavut, Nunavut Tunngavik Incorporated, and the Canada-Nunavut Geoscience Office.

[22]Ibid.

[23]*Tlicho Agreement*, Tlicho Land Claim and Self Government Agreement among Tlicho and the Government of the Northwest Territories and the Government of Canada, August 25, 2003.

[24]Wolfden Resources, *Draft Environmental Impact Statement for the High Lake Project*, "Economic Impact Report" prepared by Ellis Consulting Ltd., submitted to the Nunavut Impact Review Board, November 2006.

[25]Ibid.

[26]Baffinland Iron Mines Corporation, Mary River Iron Project, see website www.baffinland.com/MaryRiverProject accessed May 25, 2008.

[27]*Technical Report of the Definitive Feasibility Study, Mary River Iron Ore Project, Northern Baffin Island*, Aker Kvaerner, www.baffinland.com/Theme/Baffinland/files/ docs_investors/ February 2008, presented in Baffinland Iron Mines Corporation, Preliminary Short Form Prospectus, March 11, 2008.

[28]Baffinland Iron Mines Corporation, *Development Proposal for the Mary River Iron Project, Executive Summary*, March 2008. //ftp.knightpiesold.com/MaryRiverDevPropExecSum/

[29]One must exercise some caution here, since this period also coincides with some communities receiving upgrades to their local schools, including the addition of Grades 11 and 12, meaning students could receive all their education at home.

[30]Schedule "D" to *Inuit Owned Lands Mineral Production Lease Determination and Payment of Royalty*, provided for by Article 3 of the Production Lease. Nunavut Tunngavik Incorporated.

[31]Department of Fisheries and Oceans, Statistical Services, *Commercial Quota Reports*, August 4, 2008. www.dfo-mpo.gc.ca/communic/statistics/commercial/index_e.htm accessed August 6, 2008.

[32]Guy Quenneville, Opportunities North, "Value of turbot harvest climbs by $42 million, shrimp quota valued at $22 million," June 2008.

[33]Ibid.

[34]Department of Fisheries and Oceans, Statistical Services, Commercial Quota Reports, August 4, 2008.

[35]RT & Associates, Baffin Fisheries Workshop (Iqaluit, 1997).

[36]Indian and Northern Affairs Canada (Nunavut Region), Strategic Investments in Northern Economic Development, Targeted Investment Program.

[37]Government of Nunavut, Department of Economic Development and Transportation, *Sanaugait*, as presented to the Nunavut Economic Forum *Annual General Meeting*, June 11, 2008.

[38]Ibid.

[39]Windeyer, Chris, "Carvers cash in on Winter Olympics" Nunatsiaq News, July 18, 2008, www.nunatsiaq.com/archives/2008/807/80718/news/nunavut/80718_1381.html accessed July 21, 2008

[40]See www.looknorth.ca for an example of this investment.

7 CONCLUDING REMARKS

Key Highlights

- The next ten to fifteen years will very likely determine whether Nunavut can turn the corner on its economic, social and environmental performance and create an opportunity for Nunavummiut to reach their goals.
- Unlike previous years, Nunavut now has an opportunity for significant economic expansion outside the public sector; the key will be for its leaders to choose a path that allows Nunavummiut to capitalise on these opportunities while supporting strong social and environmental development.
- While many Nunavummiut will benefit from new economic opportunities, there will also be some who do not have all the skills, aptitudes, and experiences necessary for successful integration into Nunavut's mixed economy—they will require assistance to prevent major societal instability.

The original Nunavut Economic Outlook concluded with a chapter entitled *Our Future to Choose*.[1] It described how societal values will play an influential role in setting policy related to socio-economic development, the need to establish achievable objectives, the requirement that young people receive the necessary education and skills, and the necessity for collaboration among the key economic stakeholders.

All of these highlights remain critical to Nunavut's future. But it is reasonable to suggest that until just recently choices for the average Nunavummiut were somewhat limited and most of the economic growth registered by the Territory has been somehow tied to government spending. This is not to diminish the progress made in the private sector, but by-in-large, successes there have not been of the same significance in terms of wage-based employment or GDP growth. This is about to change and the idea of Nunavummiut having a choice in what their future will look like has never been so meaningful.

What is most interesting about these upcoming choices is that they will test Nunavut's performance from the past nine years in setting policies, establishing objectives, providing youth with quality education, and establishing strong and effective organisations. This *2008 Nunavut Economic Outlook* described in detail Nunavut's progress in its wealth-generating capital, including those issues highlighted in the original Outlook. Challenges remain in all four forms of wealth-generating capital.

Nunavut's *human capital* remains best characterised by issues of poor educational attainment and low graduation rates, poor health results highlighted by a life expectancy that is falling, and some divergence in personal income whereby a new Inuit middle-class who have been successful in finding work in the wage economy are separating themselves in terms of standard of living from those that have not been successful regardless of the reason. The key stakeholders in this area have invested several years into the organisation of the education system and its programs; the Adult Learning Strategy and a new curriculum are the best examples of this. However, the next ten years will be critical in producing much improved results if Nunavummiut are to truly participate and benefit from their growing economy and increased choices.

Nunavut's *physical capital* received a much needed boost of investment spending from the public and private sector in the past few years. Expenditures on new hospitals and schools, public and private housing, and municipal infrastructure highlight the most recent changes. One could imagine that several more years of investment spending of this size would narrow the Territory's infrastructure gap dramatically. However, all indications are that this level of investment is not sustainable under the current economic conditions. The high cost of fuel and other inputs coupled with the pressures on government services from the growing population will result a pull-back on capital spending by the Government of Nunavut.

Nunavut's *natural capital* offers a more complex story for this year's Nunavut Economic Outlook. The pending success in the mining sector is the outcome of years of investments into exploration and geoscience. At the same time, this past year marked the 4th International Polar Year with thousands of studies being conducted in Nunavut and around the world on every aspect of the Arctic environment. Not surprisingly, much of the focus has been on climate change and the melting of sea ice and its impacts on everything from polar bears to whales to fish stocks and of course on people. Studies into Nunavut's caribou populations are showing some herds are declining, though the most severe cases appear to be in the western Arctic. Climate change is the most often cited reason for the drop, but some have suggested others factors, including industry, hunting and even wolves. Without any serious studies into Nunavut's food security or the value of its traditional harvesting activities, it is difficult for planners and policy makers to make informed decisions with respect to harvesting activities whether for commercial or subsistence purposes.

Nunavut's *organisational capital* continues to improve at many levels. Nunavut's collaborative efforts in raising awareness of its financial needs have produced several positive results over the past few years. New money has helped sustain government's capital spending and has provided some valuable start-up money for the Government of Nunavut's sector strategies. On the downside, a lawsuit launched by Nunavut Tunngavik Incorporated against the federal government over issues related to the implementation of the Nunavut Land Claims Agreement does threaten to disrupt the recent improved working relationships that have been formed. This 2008 Nunavut Economic Outlook also presented some evidence of the need for far greater support for community-based non-profit organisations that often work at maintaining and furthering important community and societal values. These organisations will be tested in the coming years given the economic growth from the mining sector that is sure to cause family and community disruptions. Many of the quality of life goals of Nunavummiut, as they relate to social performance, hinge on the success of these organisations.

These results in Nunavut's wealth-generating capital suggest the Territory will be challenged by the anticipated economic growth. The evidence points to progress toward a high and sustainable quality of life that will be measured in decades and perhaps generations. The size and extent of benefits flowing to Nunavummiut through participation in the wage economy will therefore be best measured over the long term. At the same time, one must be mindful that social performance will not improve sufficiently in the absence of economic growth. Investments in wealth-generating capital, even in those areas that have little influence and no interaction with the economy, require money; of which the economy is the sole producer.[2] How Nunavummiut invest this money and their ability to continue to work toward increased participation will be crucial in achieving their socio-economic goals. This new reality is exacerbated by the recent trends in the public sector, having now recorded three consecutive years of no real growth and with little change in this trend expected over the short term.

The revised forecast describes an economy on the verge of a tremendous breakthrough in terms of employment, income generation, private-sector business growth, Nunavut-based tax revenues and its productive contribution to Canada's gross domestic product. Some of the highlights include a five-year period from 2011 to 2015 where the average annual growth will equal 11 percent. At its peak, the construction industry will require in excess of 4,000 employees for the mining projects alone, while the mine's will employ a collective 1,800 people or more once all six mines are up and running. Just as important, the economic growth and labour demands from within the mining sector does not alter the need for investments and labour in other important sectors of the economy, including public administration, health, education, fishing, tourism and others.

So, the question remains, *how will Nunavut benefit from this economic activity?* This is a question that has been asked in every Nunavut Economic Outlook. Clearly, there is a segment of Nunavut's population that will do exceedingly well as a result of this growth. Business owners and entrepreneurs, skilled labour, and those in good health,

with adequate education, a willingness to work in camps for one to four week periods, and who have a strong family network for support—these cohorts will perform well and become representatives and perhaps even champions of the new economy and a new standard of living in Nunavut.

But most if not all of the people who fall within this description are likely to have a relatively high and sustainable quality of life already. Most of these people are likely already fully employed in the wage or non-wage economy. And, the probability that their children will succeed is also very high. Thus, the challenge is not with this segment of the population, but rather with those that may not have all the skills, aptitudes, and experiences necessary for successful integration into Nunavut's mixed economy. The most common approach to affect the participation of these people is to provide education and training programs. Evidence from the Northwest Territories, where similar challenges associated with economic growth already exists, shows mixed results for many of these programs. This does not suggest abandoning education and training programs, but Nunavummiut should make an effort to learn from the experiences in other jurisdictions and be certain they target each individual with programming that will be effective.

For example, an alternative approach is to develop mechanisms for appropriate income redistribution such that individuals at the community-level who are unable to participate in the wage economy have an opportunity for productive pursuits at home. This essentially recognises these individuals as candidates for social-oriented programming rather economic-based programming. The difference is important as it changes the dynamics and approach of the program and allows for a completely different set of indicators and measures. More detailed analysis is needed here, but this will be an important policy topic for Nunavummiut in the coming years and is certainly a meaningful interpretation of the theme of *Our Future to Choose*.

Every Nunavut Economic Outlook has recommended a wise and diversified investment strategy into the Territory's wealth-generating capital. This Outlook is no different on that front. Nunavut faces opportunities and challenges that will require an immediate response from the Territory's leaders if Nunavummiut are to keep pace with the rapidly changing economy, both at home and abroad. It will be imperative that all stakeholders recognise the breadth of potential benefits that can flow from economic growth and to not get fixated solely on jobs and other economic objectives. There are social and environmental objectives that are well served by a strong economy and are equally important in Nunavut's quest for a high and sustainable quality of life.

The next ten to fifteen years will very likely determine whether Nunavut can turn the corner on its economic, social and environmental performance and create an opportunity for Nunavummiut to reach their goals. The time to choose this future is now.

Endnotes

[1]The Conference Board of Canada, *2001 Nunavut Economic Outlook*.

[2]Remembering that government transfers to Nunavut are essentially a redistribution of wealth from Canadian taxpayers to the people of Nunavut.

ANNEXES

Annex 1

Population by community, 1981–2006 (ranked largest to smallest in 2006)

	2006	2001	1996	1991	1986	1981	Level Change (1996–2006)	Percent Change (1996–2006)	Level Change (1981–2006)	Percent Change (1981–2006)
Nunavut	**29,474**	**26,745**	**24,730**	**21,244**	**18,408**	**15,572**	**4,744**	**19.2%**	**13,902**	**89.3%**
Iqaluit	6,184	5,236	4,220	3,552	2,947	2,333	1,964	46.5%	3,851	165.1%
Rankin Inlet	2,358	2,177	2,058	1,706	1,374	1,109	300	14.6%	1,249	112.6%
Arviat	2,060	1,899	1,559	1,323	1,189	1,022	501	32.1%	1,038	101.6%
Baker Lake	1,728	1,507	1,385	1,186	1,009	954	343	24.8%	774	81.1%
Igloolik	1,538	1,286	1,174	936	857	746	364	31.0%	792	106.2%
Cambridge Bay	1,477	1,309	1,351	1,116	1,002	815	126	9.3%	662	81.2%
Pangnirtung	1,325	1,276	1,243	1,135	1,004	839	82	6.6%	486	57.9%
Pond Inlet	1,315	1,220	1,154	974	796	705	161	14.0%	610	86.5%
Kugluktuk	1,302	1,212	1,201	1,059	888	809	101	8.4%	493	60.9%
Cape Dorset	1,236	1,148	1,118	961	872	784	118	10.6%	452	57.7%
Gjoa Haven	1,064	960	879	783	650	523	185	21.0%	541	103.4%
Clyde River	820	785	708	565	471	443	112	15.8%	377	85.1%
Taloyoak	809	720	648	580	488	431	161	24.8%	378	87.7%
Coral Harbour	769	712	669	578	477	429	100	14.9%	340	79.3%
Repulse Bay	748	612	559	488	420	352	189	33.8%	396	112.5%
Sanikiluaq	744	684	631	526	422	383	113	17.9%	361	94.3%
Arctic Bay	690	646	639	543	477	375	51	8.0%	315	84.0%
Kugaaruk	688	605	496	409	297	257	192	38.7%	431	167.7%
Hall Beach	654	609	543	526	451	349	111	20.4%	305	87.4%
Qikiqtarjuaq	473	519	488	461	439	378	-15	-3.1%	95	25.1%
Kimmirut	411	433	397	365	326	252	14	3.5%	159	63.1%
Whale Cove	353	305	301	235	210	188	52	17.3%	165	87.8%
Chesterfield Inlet	332	345	337	316	294	249	-5	-1.5%	83	33.3%
Resolute	229	215	198	171	184	168	31	15.7%	61	36.3%
Grise Fiord	141	163	148	130	114	106	-7	-4.7%	35	33.0%

Source: Statistics Canada, Census' 1981 to 2006 inclusive.

Annex 2

Community housing count and occupancy rates, 2001 and 2006 (ranked by occupancy rate)

	Population 2006	Change from 2001	Dwellings 2006	Change from 2001	Occupancy Rate 2006	Occupancy Rate 2001
Kugaaruk	688	83	137	17	5.0	5.0
Repulse Bay	748	136	153	23	4.9	4.7
Clyde River	820	35	183	23	4.5	4.9
Sanikiluaq	744	60	169	13	4.4	4.4
Gjoa Haven	1,064	104	246	-3	4.3	3.9
Hall Beach	654	45	154	20	4.3	4.5
Igloolik	1,538	252	370	46	4.2	4.0
Arviat	2,060	161	497	41	4.1	4.2
Taloyoak	809	89	205	13	4.0	3.8
Pond Inlet	1,315	95	335	27	3.9	4.0
Whale Cove	353	48	93	2	3.8	3.4
Arctic Bay	690	44	190	20	3.6	3.8
Baker Lake	1,728	221	478	14	3.6	3.3
Kimmirut	411	-22	116	8	3.5	4.0
Cape Dorset	1,236	88	356	23	3.5	3.5
Nunavut	**29,474**	**2,729**	**9,041**	**864**	**3.3**	**3.3**
Kugluktuk	1,302	90	407	15	3.2	3.1
Coral Harbour	769	57	242	48	3.2	3.7
Pangnirtung	1,325	49	433	30	3.1	3.2
Rankin Inlet	2,358	181	776	32	3.0	2.9
Qikiqtarjuaq	473	-46	156	6	3.0	3.5
Cambridge Bay	1,477	168	524	67	2.8	2.9
Chesterfield Inlet	332	-13	120	17	2.8	3.4
Resolute	229	14	83	-2	2.8	2.5
Grise Fiord	141	-22	55	6	2.6	3.3
Iqaluit	6,184	948	2,460	355	2.5	2.5

Source: Statistics Canada, *2006 Census of Population, Catalogue #94-579-XCB2006001*

Annex 3

Nunavut's Real GDP at basic prices ($ millions, chained (2002) prices)

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Fishing, Hunting and Trapping	0.3	0.5	0.5	0.8	0.6	0.6	0.9	1.2	1.7
Mining and Exploration	89.6	113.3	102.7	65.3	12.1	11.2	3.6	13.6	17.9
Metal Mining	x	109.4	x	60	x	x	x	0	0
Non-metallic Mining	x	0	0	0	0	0	0	16.4	21.3
Support Activities for Mining	x	2.9	3.2	5.2	x	x	x	3.2	4.6
Utilities	24.3	25.6	28.3	25.5	18.7	19.6	20.3	20.7	21.5
Total Construction	62.8	58.6	62.1	97	124.6	141.4	138.9	141.4	237
Residential Construction	11.7	12.3	7.7	13.4	10.9	11.9	7.8	10.1	18.4
Non-residential Construction	17.2	11.6	21.9	17.5	28.4	23.4	11.3	10.9	17.6
Repairs	11.7	10.9	9.4	23.3	23.5	23.3	22.1	22.4	24.9
Other	22.2	23.8	23.1	42.8	61.8	82.8	97.7	98	176.1
Manufacturing	1.2	2	2.1	1.9	1.3	1	1.5	2.5	2.6
Goods-producing Industries	**178.2**	**200**	**195.7**	**190.5**	**157.3**	**173.8**	**165.2**	**179.4**	**280.7**
Wholesale Trade	7.3	8	8.5	9.2	10.8	11	11.2	10.5	25.7
Retail Trade	35.6	38.2	38.1	40.4	42	43.1	44.7	46.3	50.3
Transportation and Warehousing	28.1	29.7	28.2	24.8	22	26.4	26.6	28.5	30.6
Information and Cultural Industries	x	22	x	32.4	40	37.3	x	x	x
Finance, Insurance, and Real Estate	104.3	110	124.6	144.8	149.6	151.3	153.3	156.6	166.1
Professional Services	8.1	7.7	10.5	10.8	8.3	9.2	9.2	9.3	9.3
Administrative and Support Services	7.6	7.8	8.8	10.1	11.4	12.8	12.7	13.6	14
Education Services	x	88.7	x	99.1	103.2	104.3	105.5	108.7	110.2
Health Care and Social Assistance	69.3	58.6	67.7	69.1	71	75.1	75.2	75.4	75.6
Hospitals	x	49.6	57.1	57.1	56.9	62	62.2	62.1	62.1
Health and Social Services except Hospitals	x	9	10.6	12	14.1	13.1	13	13.3	13.5
Arts, Entertainment and Recreation	x	1.9	x	1.8	1.7	1.7	x	x	x
Accomodation and Food Services	16.6	16.8	16.7	17.4	20.6	22.2	23.3	24.2	24.9
Other Services (except public administration)	10.1	8.5	16.6	20.1	21.8	16	16.7	16.6	17.3
Public Administration	179.7	219.7	230.6	245.3	251.9	261.2	267.8	268.5	272
Federal	28.7	35	42.2	45.3	48.3	49	49.8	50.6	50.8
Territorial	88.3	120.8	125.3	139.6	141.3	149.9	152.8	151.8	153.8
Local, municipal and regional	57.3	59.4	59.2	56.6	58.5	58.4	61.1	62	63.6
Service-Producing Industries*	**573.1**	**609.8**	**675**	**715.2**	**742.9**	**758.8**	**777.9**	**794.6**	**823.8**
Gross Domestic Product at Basic Prices	**751.3**	**823.7**	**870.7**	**916**	**907.6**	**940.9**	**943.1**	**974**	**1104.5**
Economic Growth		*9.6%*	*5.7%*	*5.2%*	*-0.9%*	*3.7%*	*0.2%*	*3.3%*	*13.4%*

Source: Statistics Canada *2007 Provincial and Territorial Economic Accounts*

'x' Indicates data has been suppressed by Statistics Canada for reasons of confidentiality.

Annex 4

Labour market by community, 2005 (ranked largest to smallest employment market)

	Population 15 years and over	In the labour force	Employed	Unemployed	Not in the labour force	Participation rate (%)	Employment rate (%)	Unemployment rate (%)
Nunavut	19,340	12,635	10,670	1,965	6,705	65	55	15.6
Iqaluit	4,530	3,540	3,260	280	995	78	72	7.9
Rankin Inlet	1,570	1,125	1,010	115	445	72	64	10.2
Cambridge Bay	1,020	720	650	70	300	71	64	9.7
Arviat	1,235	615	535	85	620	50	43	13.8
Baker Lake	1,115	660	530	125	455	59	48	18.9
Pangnirtung	855	555	460	100	295	65	54	18.0
Kugluktuk	895	545	425	120	350	61	48	22.0
Igloolik	905	465	395	75	440	51	44	16.1
Cape Dorset	810	495	390	105	315	61	48	21.2
Pond Inlet	835	500	390	115	335	60	47	23.0
Gjoa Haven	660	410	290	120	255	62	44	29.3
Clyde River	510	330	255	80	175	65	50	24.2
Coral Harbour	460	310	245	60	155	67	53	19.4
Arctic Bay	455	265	210	60	185	58	46	22.6
Sanikiluaq	455	255	205	45	195	56	45	17.6
Taloyoak	495	285	200	80	215	58	40	28.1
Kugaaruk	400	230	185	50	170	58	46	21.7
Repulse Bay	450	270	180	95	180	60	40	35.2
Hall Beach	395	185	155	30	205	47	39	16.2
Kimmirut	275	175	140	35	95	64	51	20.0
Qikiqtarjuaq	330	210	140	70	120	64	42	33.3
Chesterfield Inlet	210	160	135	25	55	76	64	15.6
Resolute	150	130	110	15	25	87	73	11.5
Whale Cove	210	100	90	10	105	48	43	10.0
Grise Fiord	90	70	70	0	20	78	78	0.0

Source: Statistics Canada, *2006 Census of Population, Catalogue #94-579-XCB2006001*

Annex 5

Gross Domestic Product at market prices, expenditure based ($, millions chained (2002) prices)

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Personal expenditure on consumer goods and services	**354**	**372**	**396**	**418**	**443**	**460**	**476**	**499**	**527**
Durable goods	17	19	22	26	27	29	31	34	37
Semi-durable goods	39	42	46	49	52	54	56	60	65
Non-durable goods	105	108	112	116	123	124	126	131	136
Services	192	202	216	227	241	255	263	274	291
Net government current expenditure on goods and services	**710**	**738**	**795**	**817**	**824**	**876**	**911**	**903**	**905**
Government gross fixed capital formation	**104**	**100**	**115**	**104**	**146**	**136**	**75**	**114**	**177**
Structures	92	81	96	95	127	114	55	91	148
Machinery and equipment	14	19	19	9	20	23	23	25	28
Business gross fixed capital formation	**172**	**152**	**163**	**173**	**236**	**304**	**368**	**373**	**619**
Residential structures	38	40	23	26	19	19	19	21	34
Non-residential structures	92	78	92	101	147	226	274	277	456
Machinery and equipment	45	36	49	46	72	61	79	78	136
Domestic Demand	**1,340**	**1,362**	**1,469**	**1,512**	**1,649**	**1,776**	**1,830**	**1,889**	**2,228**
Exports of goods and services	239	294	288	283	167	165	152	184	195
Exports to other countries	168	220	215	200	57	54	30	54	63
Exports to other provinces	72	73	72	83	110	112	124	130	132
Deduct: Imports of goods and services	**794**	**825**	**875**	**817**	**887**	**967**	**990**	**1,045**	**1,242**
Imports from other countries	241	242	277	249	264	276	283	314	407
Imports from other provinces	553	583	599	568	623	689	706	733	845
Net Exports	**-555**	**-531**	**-587**	**-534**	**-720**	**-802**	**-838**	**-861**	**-1,047**
Gross Domestic Product	**783**	**848**	**898**	**951**	**950**	**988**	**986**	**1,020**	**1,153**
Economic Growth		*8.3%*	*5.9%*	*5.9%*	*-0.1%*	*4.0%*	*-0.2%*	*3.4%*	*13.0%*

Source: Statistics Canada's 2007 Provincial and Territorial Economic Accounts

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