

# 5 SOCIO-ECONOMIC IMPACT ASSESSMENT

## 5.1 SCOPE OF ASSESSMENT

### 5.1.1 Terms of Reference

***Socio-economic impact requirements are set out in the Mackenzie Valley Resource Management Act***

Development projects in the Northwest Territories (NWT) are subject to the regulatory requirements of the *Mackenzie Valley Resource Management Act*. The requirements for the socio-economic impact assessment (SEIA) are laid out in this Act. Specifically, clause 115 stipulates that:

*The process established by this part shall be carried out in a timely and expeditious manner and shall have regard to:*

- (a) the protection of the environment from the significant adverse impacts of proposed developments; and,*
- (b) the protection of the social, cultural and economic well-being of residents and communities in the Mackenzie Valley.*

***The socio-economic impact assessment meet the Terms of Reference***

The SEIA section specifically addresses the Terms of Reference stipulated by the Mackenzie Valley Environmental Impact Review Board (MVEIRB) (Table 5.1-1).

***The Terms of Reference relevant to this section are listed in Table 5.1-1***

The Terms of Reference identify the social, economic, and cultural components to be addressed in the De Beers Canada Mining Inc. (De Beers) Snap Lake Diamond Project. Most of these components are dealt with in the SEIA chapter; however, some are addressed in other chapters of the report. Specifically, employee work schedules and living conditions, heritage resources, environmental effects on human health, the winter road, and cumulative effects are addressed in Sections 3, 6, 11, 6 and 12, respectively. As shown in Table 5.1-1, the Terms of Reference do not address socio-economic impacts in one distinct section; rather, they are referred to in several sections of the Terms of Reference. The entire Terms of Reference may be found in Appendix I.2.

**Table 5.1-1 Terms of Reference for Social, Economic, and Cultural Components**

TOR Section	Environmental Assessment Topic
2.5.1	<b>Alternatives to Carrying Out the Development</b> <i>(Addressed in the Project Description)</i> VII. Employee work schedules; IX. Employee/worker living conditions e.g., living quarters, leisure facilities, food, visitors, access to outdoors, etc.
2.5.2	<b>Description of the Existing Environment</b> De Beers will be expected to clearly and succinctly describe the following environmental components, as they relate to the proposed development: IX. economy; X. employment, education and training; XI. infrastructure; XII. government revenues, cost; and XIII. social and cultural resources.
2.5.3	<b>Spatial and Temporal Boundaries</b> De Beers shall explain the rationale for its selection of 'spatial boundaries' (i.e., project related, local and regional scope) and 'temporal boundaries.' The scope of the assessment for socio-economic variables should include communities that could reasonably expect to experience impacts because of the development, including but not limited to, increased traffic volumes or employment and business opportunities.
2.5.4	<b>Impact Description and Predicted Outcomes After Mitigation</b> Describe the direct and indirect impacts resulting from the proposed development, after mitigation. Describe the impacts so that people reading the report can easily understand how De Beers figured out what the impacts would be, how sure De Beers is of its conclusions, and what those impacts mean for future generations in the Mackenzie Valley. Do not provide any conclusions regarding the significance of the impacts. Information gaps should be identified along with reasonable suggestions to remedy them. De Beers shall describe each impact identified and the proposed mitigation measure(s) for all phases of the proposed development The residual impacts should be described at least in terms of the following parameters. I. magnitude; II. geographic extent; III. timing; IV. duration; V. frequency; VI. irreversibility of impacts; VII. ecological resilience; and VIII. probability of occurrence and confidence level. Distinguish between ecological parameters and social/cultural parameters.
2.6	<b>Environmental Impacts</b> The environmental assessment report should report impacts resulting from the proposed development on the physical, biological and social, economic and cultural components of the environment.

**Table 5.1-1 Terms of Reference for Social, Economic, and Cultural Components (continued)**

TOR Section	Environmental Assessment Topic
2.7 2.7.1	<p><b>Social, Economic and Cultural Components</b></p> <p><b>Cultural and Heritage Resources</b> (<i>Heritage resources addressed in Resource Uses section</i>)</p> <p>Describe potential impacts of the proposed development on cultural and heritage resources. Potential impacts on the cultural well being of the impacted communities should include, for example, anticipated or possible changes on social cohesiveness or language use.</p>
2.7.3	<p><b>Economy</b></p> <p>The impact of the proposed development on the economy, having regard to direct, indirect and induced impacts on income and employment. Consideration shall be given to:</p> <ul style="list-style-type: none"> <li>VI. wage and salary employment by skills category over the life of the proposed development, including estimates of northern participation; 460</li> <li>VII. availability and use of skilled workers in the NWT to meet job requirements;</li> <li>VIII. opportunities for local, regional and territorial businesses to supply goods and services both directly to the proposed development and to meet the demand created by the expenditure of contractors and new employees;</li> <li>IX. barriers to employment, advancement, and retention of northern workers, including the training or retraining necessary for sections of the northern workforce to meet De Beers employment standards (<i>i.e.</i> former Con or Giant employees);</li> <li>X. opportunities to diversify the northern economic base to produce and to supply new goods and services;</li> <li>XI. barriers to employment;</li> <li>XII. impacts on the subsistence economy;</li> <li>XIII. federal and territorial revenues and costs;</li> <li>XIV. economic diversification and sustainable economic development;</li> <li>XV. impacts on the national and territorial Gross Domestic Product (GDP);</li> <li>XVI. probability and any effects of employee migration into or out of NWT communities;</li> <li>XVII. local government finances;</li> <li>XVIII. inflation and the cost of living impacts; and</li> <li>XIX. economic diversification.</li> </ul> <p>De Beers shall, for the diamond resource included within the scope of the environmental assessment, report the following:</p> <ul style="list-style-type: none"> <li>I. the estimated total resource value in carats and present day Canadian dollars;</li> <li>II. planned annual resource extraction rates, reported in carats, and present day Canadian dollars; and,</li> <li>III. the impact of planned extraction rates and total resource extraction over the life of the proposed diamond mine on items II, III, V, VII, VIII, IX, X, and, XIV above.</li> </ul> <p>De Beers shall provide a detailed summary of its employment commitments, and minimum skill requirements for its predicted labour force, including contract and subcontracted employees. De Beers shall assess the impact of its employment commitments and minimum skill requirements on the labour force in the Northwest Territories.</p> <p>De Beers shall also report how federal and territorial governments intend to, or have committed to assisting De Beers achieve its employment commitments and the impact not securing the intended or committed assistance from governments.</p>

**Table 5.1-1 Terms of Reference for Social, Economic, and Cultural Components (continued)**

TOR Section	Environmental Assessment Topic
2.7.5	<p><b>Government</b></p> <p>Assess the impacts of the proposed development on revenues, costs and net income accruing to federal and territorial governments. Report the net incremental benefits or costs to these governments arising from the proposed development. De Beers should also report other fee structures/costs it will incur such as quarry royalties, security deposits, abandonment, and restoration costs resulting from the proposed development.</p> <p>For clarity, provide a balance sheet or other appropriate accounting presentation of the total present day Canadian dollar value of federal and total territorial finances resulting from the proposed development.</p>
2.7.4	<p><b>Human Health</b> (<i>Physical health addressed in the Environmental Health section</i>)</p> <p>The environmental assessment report shall analyze the potential development impacts upon the physical, mental, spiritual and cultural health of employees, their families and communities.</p>
2.7.6	<p><b>Infrastructure</b> (<i>Tibbitt-Contwoyto winter road addressed in Resource Uses section</i>)</p> <p>Assess the impacts of the proposed development on existing social, institutional and community services, transportation facilities, services, infrastructure (e.g., transportation safety), and permanent changes to the infrastructure and services arising from the proposed development.</p>
2.9	<p><b>Cumulative Impact</b> (<i>Addressed in the Cumulative Effects section</i>)</p> <p>Existing tourism operations in the region, the BHP EKATI™ Diamond Mine (including the expansion), Diavik Diamond project™, and the Echo Bay Mines™ Ltd. winter road, Lupin mine and the proposed Tahara diamond mine.</p> <ul style="list-style-type: none"> <li>I. the bio-physical environment;</li> <li>II. social environment;</li> <li>III. economic environment;</li> <li>IV. cultural environment;</li> </ul> <p>including plans for mitigating the social and economic impacts of mine closure.</p>

Source: Terms of Reference and Work Plan for the Environmental Assessment of the De Beers Canada Mining Inc. Snap Lake Diamond Project, September 20, 2001 Issued by: MVEIRB.

## 5.1.2 Component Description and Organization

*The socio-economic impact assessment identifies and evaluates social, economic, and cultural impacts of the project*

The Snap Lake Diamond Project will provide wage employment opportunities to the communities most closely located to the project site, as well as to residents of the NWT and Canada at large. The SEIA of the proposed Snap Lake Diamond Project identifies and evaluates the social, economic, and cultural impacts of the project on individuals, families, and communities in proximity of the project site and in the NWT as a whole. The SEIA was conducted to determine the changes that will likely result from the proposed development and the effects of these changes upon individuals, their culture, their day-to-day activities, and their quality of life, as well as to the operation of community services.

***Socio-economic impact assessment is a systematic process involving substantial data gathering and analysis***

This SEIA is the result of systematic data gathering and analysis that began in July 2000. A substantial amount of qualitative information was gathered through face-to-face interviews with potentially affected community members and other stakeholders. Demographic quantitative data were also gathered for the analysis of baseline socio-economic conditions. The prediction and analysis of impacts is based on the analysis of case studies of comparable development projects, and the identification and analysis of current issues in the potentially affected communities. The SEIA section is structured as shown in the following paragraphs.

***Section 5.1 describes the approach and methods***

Section 5.1 explains the practice of socio-economic assessment and the approach used to carry out the SEIA for the Snap Lake Diamond Project. Methods of assessment are presented, as well as an explanation of linkages between direct, indirect, and induced socio-economic impacts.

***Section 5.2 describes the socio-economic baseline***

The socio-economic baseline is described in Section 5.2. Specifically, Section 5.2.1 sets the context within which the Snap Lake Diamond Project is assessed. This section presents regional baseline information and documents the many social, economic, and political forces occurring within the NWT. Additionally, this section discusses social and economic trends in the NWT during the 1980s through to 1999, as well as the NWT's current vision for the future. Section 5.2.2 discusses the historical Aboriginal interests in the Snap Lake area, current and ongoing land claim negotiation, traditional land use, and spirituality. Sections 5.2.3 and 5.2.4 describe the current context and circumstances within the Snap Lake socio-economic study areas. Community profiles of the primary communities are presented in the first of these sections, Section 5.2.3.

***Section 5.3.1 describes recent community experiences***

Section 5.3.1 describes the recent experiences that the Snap Lake primary communities have had with the diamond mining industry. This section also discusses the key socio-economic concerns that have been identified by both Aboriginal peoples and non-aboriginal northerners in the Snap Lake study area. Social and economic concerns with the Snap Lake Diamond Project as identified by the Dogrib Dene<sup>1</sup>, Yellowknives Dene, Lutsel K'e Dene, and Métis people in the Snap Lake study area are discussed. This section also presents concerns with the Snap Lake Diamond Project expressed by other key stakeholders, specifically representatives from private and public sectors and from women's non-governmental organizations.

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<sup>1</sup> The word Dene means "the people".

***Sections 5.3.2 to 5.3.6 assess the impacts and describe impact management and monitoring***

Section 5.3.2 provides information on the economic impacts of the Snap Lake Diamond Project at the national and NWT level. Section 5.3.3 presents an overview of the predicted socio-economic impacts from the Snap Lake Diamond Project. It then provides a detailed analysis of the predicted impacts and the possible effects of these upon individuals, families, and communities in the Snap Lake study area. Section 5.3.4 sets out the impact management measures that will be taken to optimize potential positive effects, and minimize potential negative effects of the Snap Lake Diamond Project. Section 5.3.5 evaluates the residual impacts, upon implementation of the impact management measures. Section 5.3.6 discusses the monitoring of socio-economic impacts of the project.

***Section 5.4 concludes the socio-economic impact analysis***

Section 5.4 provides a summary and conclusion of the SEIA. Section 5.5 contains references and Section 5.6 contains units, acronyms, and the glossary.

## **5.1.3 Assessment Approach**

### **5.1.3.1 Key Issues and Key Questions**

***SEIA identifies and assesses individuals' and group responses to changes in socio-economic conditions over time***

The SEIA identifies and assesses a broad range of issues related to social, economic, and cultural change. In contrast to the biophysical sections of the environmental assessment (EA), which assess changes as measured by quantifiable variables, many of the questions that the SEIA addresses are qualitative and open-ended. They concern the individual and collective responses of people to changes in socio-economic conditions over time.

***Four key questions were developed from various sources***

The four broad questions identified in Table 5.1-2 guided the SEIA work. These questions were developed during the initial phases of the assessment work, and were formed by a number of sources:

- EA Terms of Reference;
- community visits and conversations with community leaders, members, and residents;
- interviews with community members and their families with current and/or recent experience with mining employment in the NWT;
- literature review;
- discussions with relevant territorial and federal government staff;
- comparable case study reviews (BHP, Diavik, Cameco/Cogema);

- experience of De Beers staff and their consultants with similar projects; and,
- professional experience of Institute of Environmental Research (IER) and Terriplan staff.

**Table 5.1-2 Key Questions Addressed in the Socio-economic Impact Assessment Section**

Question Number	Key Question	Section(s) Addressing Question
SE-1	What are community members' and stakeholder groups' socio-economic and cultural issues and concerns with the proposed Snap Lake Diamond Project?	5.3.1
SE-2	What are the potential impacts of the Snap Lake Diamond Project on the economic conditions of individuals, families, communities, the NWT, and Canada as a whole?	5.3.2
SE-3	What are the potential impacts of the Snap Lake Diamond Project on the social and cultural sustainability and well being of individuals, families, and communities in the NWT?	5.3.3
SE-4	What measures must be taken to optimize the potential positive socio-economic impacts and minimize the potential negative socio-economic impacts of the Snap Lake Diamond Project on the individuals and communities of the NWT?	5.3.4

### 5.1.3.2 Temporal Considerations

*Socio-economic impacts are considered for the construction and operation phases of the Snap Lake Diamond Project*

The different components of the SEIA have been carried out with specific temporal boundaries. For example, the impacts associated with increased participation in the wage economy are rooted in the experience of the past several decades. The effects on individuals, families, and communities from the introduction of the diamond mine industry in the NWT has been examined from 1995 to the present. However, the temporal boundary covers from 1990 to 2028 when discussing the cumulative effects on individuals, family, and communities; the expansion of the wage economy; and the concentration of development in one area. The temporal boundary of the impact projections is the anticipated three-year duration of the project construction and 22-year duration of the project operation. The closure and post-closure phases are addressed in the SEIA section of the Cumulative Effects Assessment (Section 12.2).

## 5.1.4 Study Communities

*Two categories of communities are considered*

For the SEIA, two categories of communities have been considered: the primary study communities and the employment catchment communities (Figure 5.1-1). Because the socio-economic study focuses on people, the primary study area consists of primary communities and not a defined area of land. Instead of using the local and regional study areas as defined in other sections of the EA, the SEIA consists of primary study communities and employment catchment communities.

*The primary study communities include the communities of Lutsel K'e, Dettah, N'Dilo, Gameti, Wha Ti, Rae/Edzo, Wekweti, and Yellowknife*

The primary study communities include the communities of Lutsel K'e, N'Dilo, Dettah, Gameti, Wha Ti, Rae/Edzo, Wekweti, and Yellowknife (including the North Slave Métis Alliance population). These are the communities that De Beers has determined are likely to experience the greatest impacts, due to their proximity to the project site and expected contribution to the project workforce.

*Additional workforce may be drawn from the employment catchment communities*

The employment catchment communities are Fort Resolution, Hay River, Hay River Reserve (located in Hay River), Fort Smith, Fort Providence, and Enterprise, which are located further away from the project site (Figure 5.1-1). The northern workforce may be drawn in part from any or all of these communities.

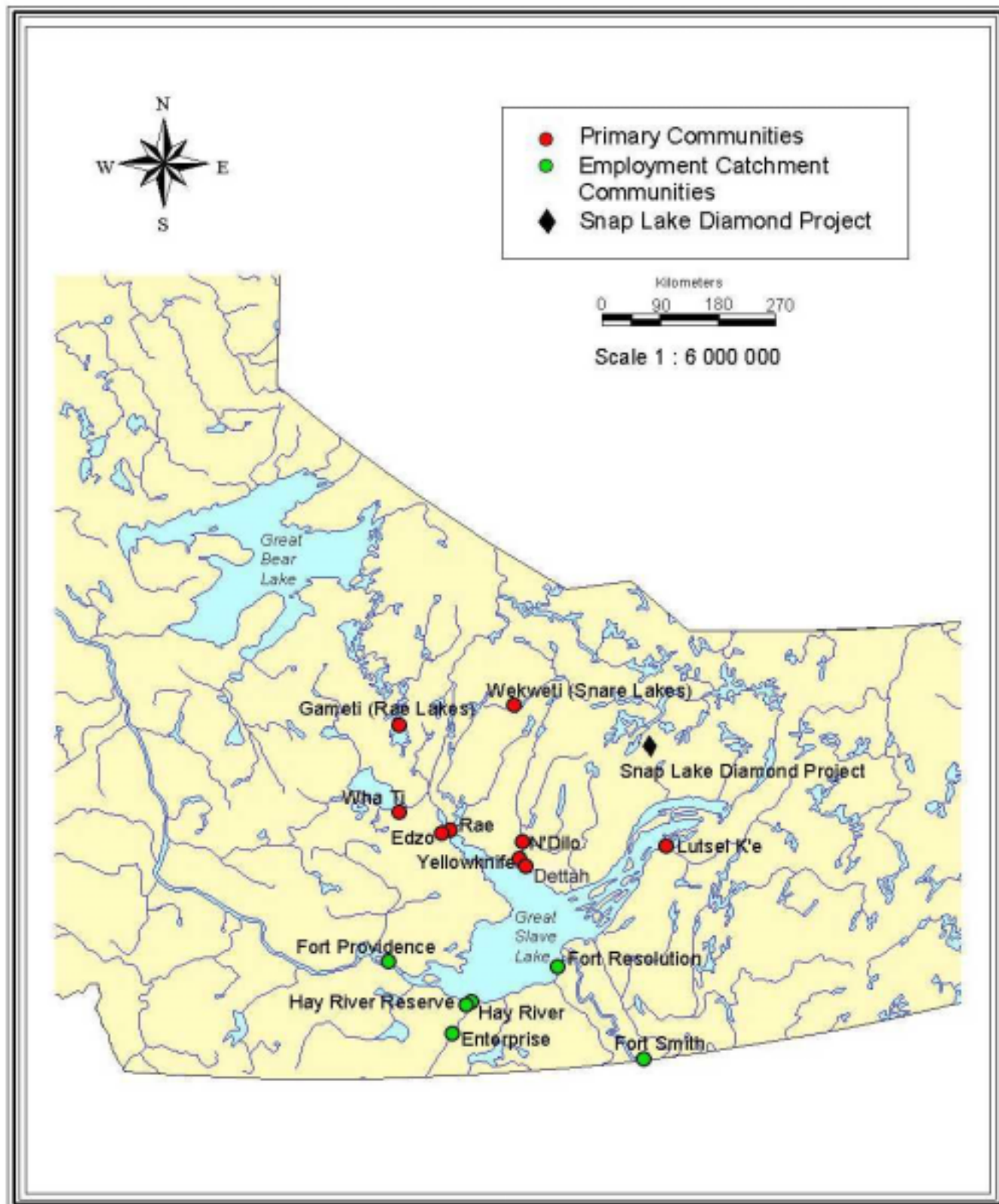
## 5.1.5 Assessment Methods

*Approach and specific methods and techniques used for the Snap Lake Diamond Project SEIA are described*

This section presents the general purpose of, and methodological approach to, the SEIA, as well as a detailed description of the specific methods and techniques used in developing the Snap Lake Diamond Project SEIA. This section has the following objectives:

- to clarify the role of SEIA within the broader field of environmental assessment;
- to clarify the general methodological approach to SEIA;
- to describe the process and techniques specifically applied in developing the Snap Lake Diamond Project SEIA;
- to identify sources of data drawn upon for the analysis; and,
- to identify limitations of the analysis.



**Figure 5.1-1 Primary Communities and Employment Catchment Communities**

### 5.1.5.1 SEIA Practice and Methods<sup>2</sup>

*The purpose of SEIA is to predict and monitor impacts on individuals' and communities' quality of life*

The purpose of SEIA is to examine whether a proposed initiative will lead to a measurable difference in the quality of life of impacted individuals and communities. It can be applied to a wide range of projects, programs, and policy initiatives.

*SEIA plays an important role in ongoing monitoring and management of impacts*

Over the past decades, SEIA has evolved as an area of professional analysis that goes beyond anticipating possible impacts from a project to suggesting alternatives to avoid, reduce, or mitigate problems and maximize benefits of a proposed project. As such, SEIA increasingly plays an important role in shaping the ongoing monitoring, evaluation, and management of impacts. It may further be used as a tool to ensure public involvement in decision-making and to improve the accountability of planners and administrators.

*It is difficult to make precise and quantifiable forecasts for changes in the quality of life*

The issues that SEIA seeks to address are highly complex. Possible impact scenarios may be affected by constantly changing external factors, such as the ever-changing nature of social issues, and the unpredictability of human responses to particular stressors, including individuals' changes in attitudes, adaptability, and abilities. While it is the goal of SEIA to predict and monitor changes in the quality of life, it is difficult to make precise and quantifiable forecasts on such complex scenarios.

*The methodological approach to SEIA is both objective and subjective, continuous and adaptive*

The methodological approach to SEIA must draw upon a combination of objective and subjective assessment, both quantitative and qualitative measures, and the professional judgement of researchers and analysts. Since SEIA predicts what is likely to occur in the future, the approach must be anticipatory and proactive. The emphasis on monitoring impacts, within the context of constant change, further requires SEIA to be ongoing, continuous and adaptive to emerging developments of impact scenarios.

*Social and economic impact analyses must be grounded in evidence*

While SEIA prediction and monitoring relies on both objective and subjective assessment, SEIA analysis must be systematic and grounded in evidence. To the extent possible, evidence is based on quantitative and qualitative information generated from other similar development experiences, as well as from baseline data gathered from potentially affected communities. Qualitative research is used for gaining an understanding of variables that are not easily quantifiable, such as individuals' values, perceptions, and life experiences. Where qualitative data are gathered, appropriate research and analysis methods should be applied, including

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<sup>2</sup> A range of literature is available on approaches to social impact assessment. See, for example, Barrow (2000). "Social Impact Assessment – An Introduction". New York: Oxford University Press, 2000.

constant comparison and triangulation methods, so as to verify the validity of the findings.

***“Constant comparison” is one qualitative method***

Data are commonly analyzed by grouping recurring themes into categories. As additional data are gathered, these categories may be continually changed and refined, until a point of “saturation” is reached. At this point, new data do not change the established categories, or add value to the contents of each category. This method of analyzing qualitative data is known as “constant comparison”.

***“Triangulation” is another qualitative method***

Categories and themes that emerge from the qualitative data are also compared against other case studies, professionals’ judgment, and brought back to the original first-hand sources (*e.g.*, interview participants) to verify the validity of the findings. This process for ensuring reliable qualitative analysis is known as “triangulation”.

***Verification by other researchers increases level of confidence***

It is also important that the analysis references and data sources can be verified by other researchers. This methodological approach ensures a high degree of confidence in the SEIA analysis among potentially impacted individuals, communities, community leaders, agency reviewers, and project proponents.

### **5.1.5.2 Snap Lake SEIA Methods and Techniques**

***Rapidly changing social, economic, and cultural conditions must be considered in the SEIA***

The Snap Lake Diamond Project SEIA must consider a number of factors unique to this area of Canada. First, the project is situated in a context of rapidly changing social and economic conditions. Secondly, the project will increase the pace at which the wage economy is expanding into the primary communities and will, therefore, need to address issues of rapidly changing social and cultural conditions. The complexity of these factors requires the Snap Lake Diamond Project SEIA to identify and manage a range of uncertainties in the prediction, analysis, and evaluation of impacts.

***The SEIA approach addresses ongoing societal and cultural changes***

The approach to the Snap Lake Diamond Project SEIA recognizes that the analysis must address not only the specific project impacts, but also the ongoing changes in societal organization and culture. These latter changes are rooted in the expanding wage economy in the NWT and are intertwined with the effects of specific projects. Individual and community responses to both the broad changes and the project are variable and can be described in qualitative and general terms. These must be monitored and evaluated over time.

***The Snap Lake  
SEIA follows a  
five-step  
systematic  
process***

Consistent with current SEIA practice, the prediction and analysis of socio-economic impacts of the Snap Lake Diamond Project were conducted following a five-step systematic process:

- Step 1: issue identification;
- Step 2: profiling;
- Step 3: impact prediction;
- Step 4: identification of impact management measures; and,
- Step 5: evaluation.

The purpose and methodology of each of these steps is described below. A summary table lists the specific data gathering and analysis techniques used in each step, sources of information, and outcomes of each of the steps.

#### **5.1.5.2.1      *Issue Identification***

***Issue  
Identification  
determined broad  
categories of  
concerns in the  
communities***

At the outset of the assessment process, an initial understanding of the socio-economic and cultural conditions of the primary and employment catchment communities was developed. The communities that will be most impacted were defined (the primary communities). Community members' general concerns with the proposed Snap Lake Diamond Project were identified through open-ended interviews with community leaders and members. Literature reviews and case studies provided guidance as to the categories of socio-economic impacts to be expected by the Snap Lake Diamond Project. This first step determined broad categories of community concerns and expected impacts to address and analyze in the subsequent steps.

#### **5.1.5.2.2      *Profiling***

***Profiling was  
comprised of  
research and data  
gathering***

This second step of the SEIA method comprised the main research and data gathering activities. The purpose was to develop quantitative and qualitative baseline socio-economic data for the impacted communities and the NWT, including in-depth information about communities' and stakeholder groups' concerns related to the project development. First-hand community information was obtained through semi-structured interviews with individuals and groups of individuals. All the interviews were conducted in the communities. These data were qualitatively analyzed, using the techniques of coding, categorizing, constant comparison, and triangulation. Statistical economic data were gathered for the communities, the NWT, and Canada; then the data were analyzed by the input-output modelling method. A review of policy documents and available literature was conducted to

identify broader societal changes in the NWT with potential bearing on the socio-economic impacts on individuals and families in the primary communities. The data gathered in this phase of the methodological process served to inform the predictions, analysis, and evaluation of the direct, indirect, and induced socio-economic impacts, as well as to develop the impact management measures, during the following steps of the process.

#### **5.1.5.2.3      *Impact Prediction and Analysis***

*Baseline data were systematically analyzed to make impact predictions in this step*

In this step, the qualitative and quantitative baseline data gathered were systematically analyzed to make predictions about the potential direct, indirect, and induced socio-economic impacts upon the primary communities. Limits to the analysis related to unavailable data and to the complexity associated with assessing and predicting social and human change, values, and development. A set of assumptions was then developed for the socio-economic impact prediction and analysis (limitations and assumptions are discussed in Section 5.1.5.3 below). Assumptions for the economic impacts analysis were developed. Potential impacts were identified as direct, indirect, or induced impacts (as defined in Section 5.1.5.4 below). Initial scenarios of potential indirect and induced impacts were considered for a range of possible individual and community responses to the direct socio-economic impacts. Linkages between impacts, possible responses to impacts, and the effects of the responses, were developed and tested against the study of comparable cases, confirmation by community representatives, and professional judgment. The analysis of these linkages comprised the bulk of the socio-economic analysis (the SEIA is presented in Section 5.3.3).

#### **5.1.5.2.4      *Identification of Impact Management Measures***

*Impact management measures were identified*

During this step of the process, impact management measures were identified to minimize the potential negative socio-economic impacts and optimize the potential positive socio-economic impacts associated with the Snap Lake Diamond Project. Community members were consulted in refining the impact management measures and to confirm the accuracy of the impact assessment. Information from the professional literature and case studies, professional judgment, and consultation with communities and De Beers were drawn upon to refine the impact management measures.

#### **5.1.5.2.5      *Evaluation***

*Impacts that could be predicted were evaluated*

During the last phase of the SEIA process, impacts that could be predicted with a greater degree of certainty were considered in terms of their direction and magnitude. The need for monitoring of the predicted impacts and the

effectiveness of the impact management measures were considered (Section 5.3.6).

Table 5.1-3 summarizes the approach used for the Snap Lake Diamond Project SEIA. It specifies the techniques used at each step of the process, the sources of information drawn upon, as well as the outcome of each step.

### 5.1.5.3 Methodology Limitations

*Complexity of predicting and analyzing socio-economic impacts must be considered*

The complexity associated with predicting and analyzing socio-economic impacts depends on the nature of information upon which the analysis must be based. In carrying out the SEIA for the Snap Lake Diamond Project, the following range of factors were considered:

- the local and regional changes (social, cultural, economic, political) that are occurring in the absence of the proposed project;
- the capacity of the primary communities to adapt to the changes in socio-economic conditions associated with the proposed project;
- the range of current socio-economic circumstances of individuals and families in the potentially affected area;
- the effects and recent experiences of other similar developments in the region (in particular, the BHP and Diavik mining projects); and,
- the reasonably expected effects as a result of the proposed development.

*Predicting individuals' and communities' responses to changes in socio-economic conditions is problematic*

Statistical demographic data (*i.e.*, age, gender, employment levels) and literature reviews were used to develop a broad understanding of these factors. However, obtaining information that predicts how individuals and communities will respond to particular changes in their socio-economic conditions, or what decisions will be made by the Government of the Northwest Territories (GNWT) regarding the provision of social services in the primary communities, is problematic. There are several reasons for this:

- There are no social or cultural “thresholds” against which impacts can be measured. Social, cultural, economic, and political changes are not static, but dynamic in nature. Because social and cultural conditions are always emerging, the effects of changes cannot be compared to a baseline or “natural state” of socio-economic conditions.

**Table 5.1-3 Techniques, Sources of Information, and Outcomes of the Snap Lake Diamond Project SEIA Methodology Steps**

Methodology Step	Techniques	Sources of Information	Outcomes
Issue identification	<ul style="list-style-type: none"> <li>• literature and document review of comparable case studies</li> <li>• literature and document review of studies pertaining to the study area</li> <li>• initial visits to the primary communities and open-ended interviews with community leaders, First Nation administrative staff, and community members</li> </ul>	<ul style="list-style-type: none"> <li>• qualitative first-hand data from key community representatives</li> <li>• documents produced by the BHP, Diavik (NWT), and Cogema/Cameco (Saskatchewan) mining projects</li> <li>• community studies on traditional knowledge, housing, youth, community monitoring, and community health</li> <li>• territorial and federal government documents</li> </ul>	<ul style="list-style-type: none"> <li>• identified communities and stakeholder groups</li> <li>• broad categories of community concerns and probable categories of socio-economic impacts</li> </ul>
Profiling	<ul style="list-style-type: none"> <li>• semi-structured interviews (72 in total) were conducted in the primary communities with a cross-section of people, including official community leaders, First Nation staff, mine workers, spouses and family members of mine workers, youth, Elders, and other professionals in the communities</li> <li>• semi-structured interviews were conducted with government officials</li> <li>• all qualitative data gathered were analyzed using techniques of coding, categorization, constant comparison, and triangulation; an electronic database was developed for this process</li> <li>• desk-study, involving the collection of socio-economic statistical base-line data for primary and employment catchment communities, and for the NWT</li> <li>• gathering of economic statistical data</li> <li>• review of policies and strategic plans with relevance to the socio-economic and political development in the NWT</li> <li>• review of literature pertaining to community impacts of wage employment, socio-economic, and socio-political aspects of natural resource development, First Nations issues in the NWT, and documents and socio-economic studies pertaining to the BHP EKATI™ and Diavik mines</li> </ul>	<ul style="list-style-type: none"> <li>• qualitative first-hand data from key community representatives and government officials</li> <li>• statistical data by the NWT Bureau of Statistics 1999, Statistics Canada, and the NWT Labour Force Study (GNWT Bureau of Statistics 1999a)</li> <li>• pre-feasibility data for the construction, operation and post-closure phases of the Snap Lake Diamond Project</li> <li>• GNWT strategic development and business plans</li> <li>• literature and case studies with relevance to the Snap Lake Diamond Project</li> </ul>	<ul style="list-style-type: none"> <li>• community profiles, based on quantitative and statistical data, presented in Sections 5.2.3 - 5.2.4</li> <li>• identified external factors of influence upon the socio-economic conditions in the primary communities</li> <li>• identified and verified key socio-economic issues and concerns by communities and stakeholder groups; presented in Sections 5.3.1</li> <li>• initial understanding of potential socio-economic impacts of the Snap Lake Diamond Project</li> </ul>

**Table 5.1-3 Techniques, Sources of Information, and Outcomes of the Snap Lake Diamond Project SEIA Methodology Steps (continued)**

Methodology Step	Techniques	Sources of Information	Outcomes
Impact prediction	<ul style="list-style-type: none"> <li>possible scenarios of causes and effects between direct, indirect and induced impacts were considered through systematic reasoning and professional judgment</li> <li>gaps in information were identified to determine uncertainties associated with the analysis of linkages between direct, indirect, and induced impacts</li> <li>assumptions upon which linkages between impacts are based were identified and stated throughout the SEIA</li> <li>economic impact predictions were made using the input-output model</li> <li>community members were consulted and comparative case studies reviewed to verify potential scenarios of impacts considered</li> <li>NWT and federal government officials were consulted</li> </ul>	<ul style="list-style-type: none"> <li>baseline quantitative and qualitative data generated in the previous steps (including the key issues and concerns identified by communities and stakeholder groups)</li> <li>results of the economic input-output modelling</li> <li>input from community representatives</li> <li>input from government officials</li> <li>professional judgement</li> </ul>	<ul style="list-style-type: none"> <li>predicted direct, indirect, and induced socio-economic impacts summarized in Table 5.3-7</li> <li>identified uncertainties and assumptions of the SEIA, summarized in Section 5.1.5.3, and referred to in Section 5.3.3. Analysis of potential causes and effects between the Snap Lake Diamond Project and socio-economic impacts on the primary communities, presented in Sections 5.3.2 and 5.3.3</li> </ul>
Identification of impact management measures	<ul style="list-style-type: none"> <li>the SEIA was reviewed to identify factors required for positive socio-economic impacts to occur</li> <li>communities were consulted on the development impact management measures</li> <li>De Beers, in consultation with their consultants, refined the impact management measures</li> <li>NWT and federal government officials were consulted for input</li> </ul>	<ul style="list-style-type: none"> <li>SEIA (including the key issues and concerns identified by communities and stakeholder groups)</li> <li>input from community representatives</li> <li>consultation with De Beers staff and consultants</li> </ul>	<ul style="list-style-type: none"> <li>13 socio-economic impact management measures, aimed at minimizing the negative socio-economic impacts and maximizing the positive socio-economic impacts of Snap Lake Diamond Project, described in Section 5.3.4</li> </ul>
Evaluation	<ul style="list-style-type: none"> <li>evaluated direct impacts according to direction and magnitude, and evaluated the applicability of the Terms of Reference residual impact criteria</li> <li>considerations for a monitoring plan were identified</li> </ul>	<ul style="list-style-type: none"> <li>Terms of Reference for the Snap Lake Diamond Project</li> <li>literature and case studies (including BHP and Diavik documents with relevance to socio-economic impact monitoring)</li> </ul>	<ul style="list-style-type: none"> <li>evaluation of some direct impacts, in terms of magnitude and direction, and rationale for limited applicability of the residual impact criteria, described in Section 5.3.5</li> <li>identified considerations for a monitoring plan, set out in Section 5.3.6</li> </ul>



- Individuals' responses to change will be determined by individual values and individual abilities to engage in mine-related wage employment, to cope with changes, or to benefit from mitigation programs. Individual values and abilities will change over time. They will depend on such factors as the strength of family and community relations, effectiveness of substance abuse or employment training programs, or future provision of social support services.
- The ability of communities to adapt to change will vary, depending on the availability of services, organizational capacity, the skills of community leaders in accessing opportunities, and a myriad of other influences to which a community will react.
- Communities in the NWT are small in size, so the overall benefits or impacts experienced by a community may be the result of actions of relatively few individuals.

*Impact prediction and analysis has been carried out for the primary communities as a whole*

The impact prediction and analysis has been carried out for the primary communities as a whole because it is not possible to identify with any precision the magnitude and duration of impacts on individual communities. For example, it is not known on an individual community basis how many people will be employed by the mine, nor the level of mining job training, nor the level of increased income. In addition, it is not known how individuals from each community may respond or adapt to changes due to wage economy employment and shift rotation requirements.

#### **5.1.5.3.1      Uncertainties**

*Areas of uncertainty must be made explicit*

In order to acknowledge the limitations to the analysis, areas of uncertainty must be made explicit. The assumptions developed to deal with these uncertainties in the analysis are stated in the following section. Implications of these uncertainties in evaluating impacts in accordance to the Terms of Reference set out for the Snap Lake Diamond Project are also discussed.

*Five categories of uncertainties*

The kinds of uncertainties associated with the socio-economic impacts of the Snap Lake Diamond Project have been grouped into five categories. Specific examples of information gaps that give rise to the uncertainties are identified, and listed in Table 5.1-4<sup>3</sup>.

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<sup>3</sup> The first three categories of uncertainty are discussed in Friend and Hickling (1987), "Planning Under Pressure: The Strategic Choice Approach". The last two categories of uncertainty have been identified by IER and are derived from analysis of the availability of information to predict and assess socio-economic impacts specifically for the Snap Lake Diamond Project.

**Table 5.1-4 Categories of Uncertainties and Examples of Information Gaps**

<b>Category of Uncertainty</b>	<b>Examples of Information Gaps</b>
Environmental uncertainty, referring to both the natural environment and the working environment in which management decisions will be made	<ul style="list-style-type: none"> <li>• nature of cumulative environmental impacts related to current and potential future non-renewable resource development</li> </ul>
Uncertainty about related decisions, referring to the various strategic, political, and socio-economic developments that will shape the impacts of the particular project, and which may be both local and global in scope	<ul style="list-style-type: none"> <li>• government decisions about employment programs, social service programs, or educational programs in the NWT and the primary communities</li> </ul>
Uncertainty about values, referring to individuals' and organizations' values that will shape both management decisions as well as the perception of particular impacts	<ul style="list-style-type: none"> <li>• individual choices to seek employment at the Snap Lake Diamond Project</li> <li>• policy positions by Aboriginal organizations, non-governmental organizations (NGOs), or government organizations</li> </ul>
Uncertainty regarding impact magnitude and distribution, referring to the differences in magnitude of impact that will be felt by different individuals and communities, depending on existing and evolving socio-economic conditions	<ul style="list-style-type: none"> <li>• degree to which employment opportunities with the Snap Lake Diamond Project will be distributed among the primary communities</li> </ul>
Uncertainty regarding mitigation effectiveness, referring to the degree that impacts may or may not be effectively mitigated, depending on factors such as level of commitment, funding, and adequacy of implementation	<ul style="list-style-type: none"> <li>• extent and nature of possible partnerships between the federal and territorial governments, De Beers, and communities, for the provision of various social services and programs</li> <li>• effectiveness (in terms of degree of provision, availability, appropriateness, and attendance) of education programs, training programs, substance abuse programs, and other mitigation measures</li> </ul>

### **5.1.5.3.2 Assumptions**

*The socio-economic analysis is based on a set of general assumptions as well as specific conditions*

In order to carry out the socio-economic impact prediction and analysis, a number of assumptions about uncertainties must be made. Depending on the assumptions made about a particular uncertainty, the outcome of the impact prediction and analysis will vary. A set of general assumptions have been defined for the Snap Lake Diamond Project SEIA. These are as follows:

- potential socio-economic impacts can be positive or negative, and can be influenced by a number of factors external to the proponent's control;
- effects may be direct, indirect, or induced (as explained in Section 5.1.5.4); the level of certainty decreases with each intervening link in the causal chain;

- the ability of individuals, families, and communities to cope with and respond to change differs, and is influenced by a range of considerations; and,
- effects may be monitored with a range of indicators.

*Specific assumptions are also made in the impact analysis*

In addition, specific assumptions are made throughout the SEIA presented in Section 5.3.3. As such, linkages between causes and effects are based on assumptions and conditions explicitly stated throughout the discussion.

#### **5.1.5.3.3 Limitations to the Application of Residual Impact Criteria**

*The classification of residual impacts is specified in the Terms of Reference*

The Snap Lake Diamond Project Terms of Reference, Section 5.1.1, mandates De Beers to evaluate residual impacts (*i.e.*, the impacts predicted to occur with the implementation of impact management measures) according to a set of specified criteria. These criteria are:

- magnitude;
- geographic extent;
- timing;
- duration;
- frequency;
- irreversibility of impacts;
- ecological resilience; and,
- probability of occurrence and confidence level.

*Not all impact classification criteria of the Terms of Reference are appropriate*

Not all of the criteria in the Terms of Reference are appropriate for evaluating residual socio-economic impacts. This is due to the nature of complexity and uncertainty associated with the Snap Lake Diamond Project SEIA (as discussed in sections above), and the assumption that all impact management measures need to be fully implemented in order to minimize negative and optimize positive socio-economic impacts of the project. The applicability of each of the residual impact criteria is discussed in detail in Section 5.3.5.

#### **5.1.5.4 Direct, Indirect, and Induced Impacts**

*Socio-economic impacts can be direct, indirect, or induced*

The relationships between potential socio-economic impacts and a proposed development project are frequently non-linear and highly complex. In order to systematically analyze the linkages between causes

and effects of socio-economic impacts, impacts were identified as direct, indirect, or induced.

***To a great extent, the impacts that result are shaped by the particular socio-economic context***

The impacts that result are shaped by the particular socio-economic context in which the project is developed. Baseline data serve to define this context, so that an assessment of direct socio-economic impacts can be made with a fairly high degree of certainty. Direct socio-economic impacts of a large-scale project are often manifested as changes in the socio-economic structure (e.g., increased employment opportunities and increased levels of income for project employees).

***Direct impacts will trigger responses by people and communities resulting in indirect impacts***

Direct impacts will trigger a range of responses by the people and communities affected by the project. These responses may be referred to as secondary, or indirect impacts (e.g., altered consumption patterns or new needs for particular services). Indirect impacts cannot be determined with as high a level of certainty as direct impacts. They depend largely on individuals' and groups' predispositions to managing change and personal preferences, few of which can be easily measured.

***Induced impacts are the result of the response to the indirect impacts***

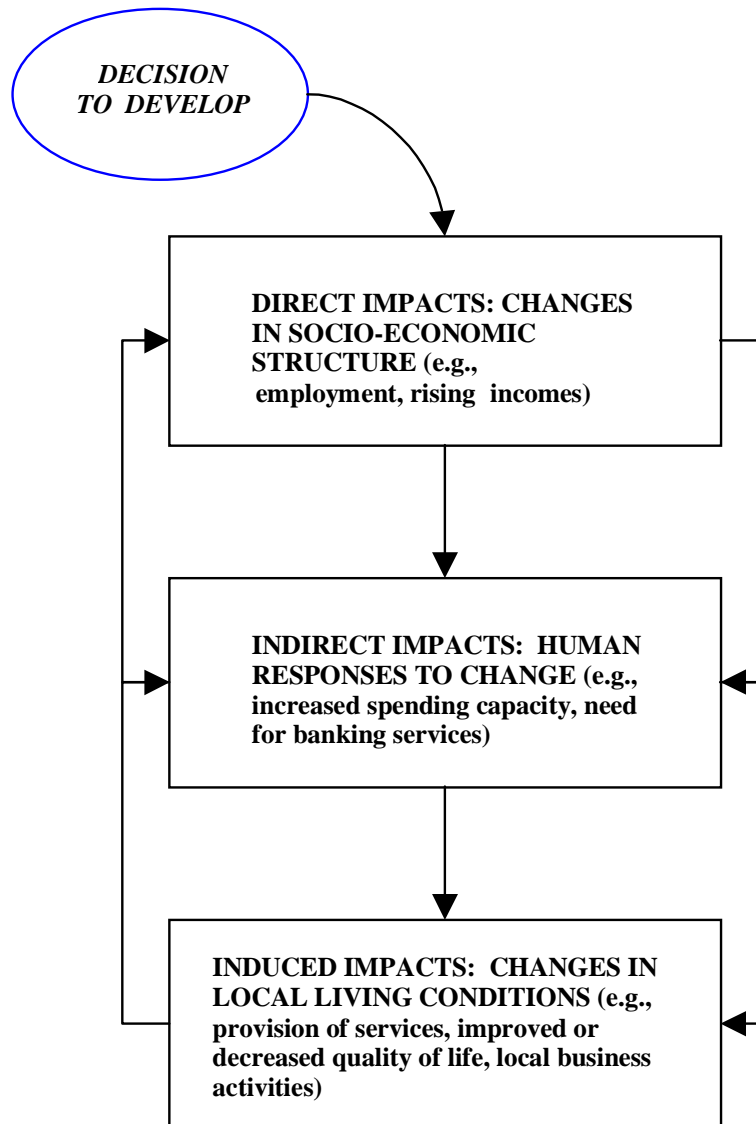
Indirect impacts may give rise to a third level of effects, referred to as induced impacts. Induced impacts, in turn, are the result of the response to the indirect impacts (which may include the result of not responding at all). For example, the need for transportation to and from a work site far from an employee's home community (indirect impact) may result in the provision of a range of commuting arrangements, such as flights (induced impact). Conversely, the need for transportation may not be responded to, with the result that the employee may seek employment somewhere closer to the home (also an induced impact).

***Direct impacts can be predicted with greater certainty than indirect and induced impacts***

Given the broad range of possible outcomes, determined not only by the character of the indirect impacts, but also the particular context in which responses are triggered, induced socio-economic impacts are more difficult to predict with a high level of certainty.

***The relationship between direct, indirect, and induced impacts is not static***

The relationship between direct, indirect, and induced impacts is not static. Over time, impacts will alter the baseline conditions of a community. As such, the nature of direct, indirect, and induced impacts will change. These dynamic relationships are simplistically illustrated in Figure 5.1-2.

**Figure 5.1-2 Relationships Between Direct, Indirect, and Induced Impacts<sup>4</sup>**

### 5.1.5.5 Causes and Effects of Socio-economic Impacts

*Possible scenarios of impacts were considered*

The nature of the direct, indirect, and induced socio-economic impacts will also be determined by the needs and preferences of individuals and groups of individuals, and the decisions made in response to such needs by individuals themselves, communities, governments, and project proponents. Various scenarios of impacts and responses to impacts were considered through systematic reasoning about causes and effects between possible

<sup>4</sup> Redrawn, with modifications, from Kalinska (1981), Figure 2, pg 220.

socio-economic impacts and the potential implications for individuals, families, and communities.

***The diagrams demonstrate the cause and effect relationships in impact prediction and analysis***

The diagrams presented in Figures 5.1-3 and 5.1-4 serve to demonstrate the reasoning applied to the prediction and analysis of socio-economic impacts in Section 5.3.3. These figures and the related discussion points show the range of possible cause and effect relationships that can influence the social and economic impacts on individuals, families, and communities.

***The diagrams and discussion points are illustrative only***

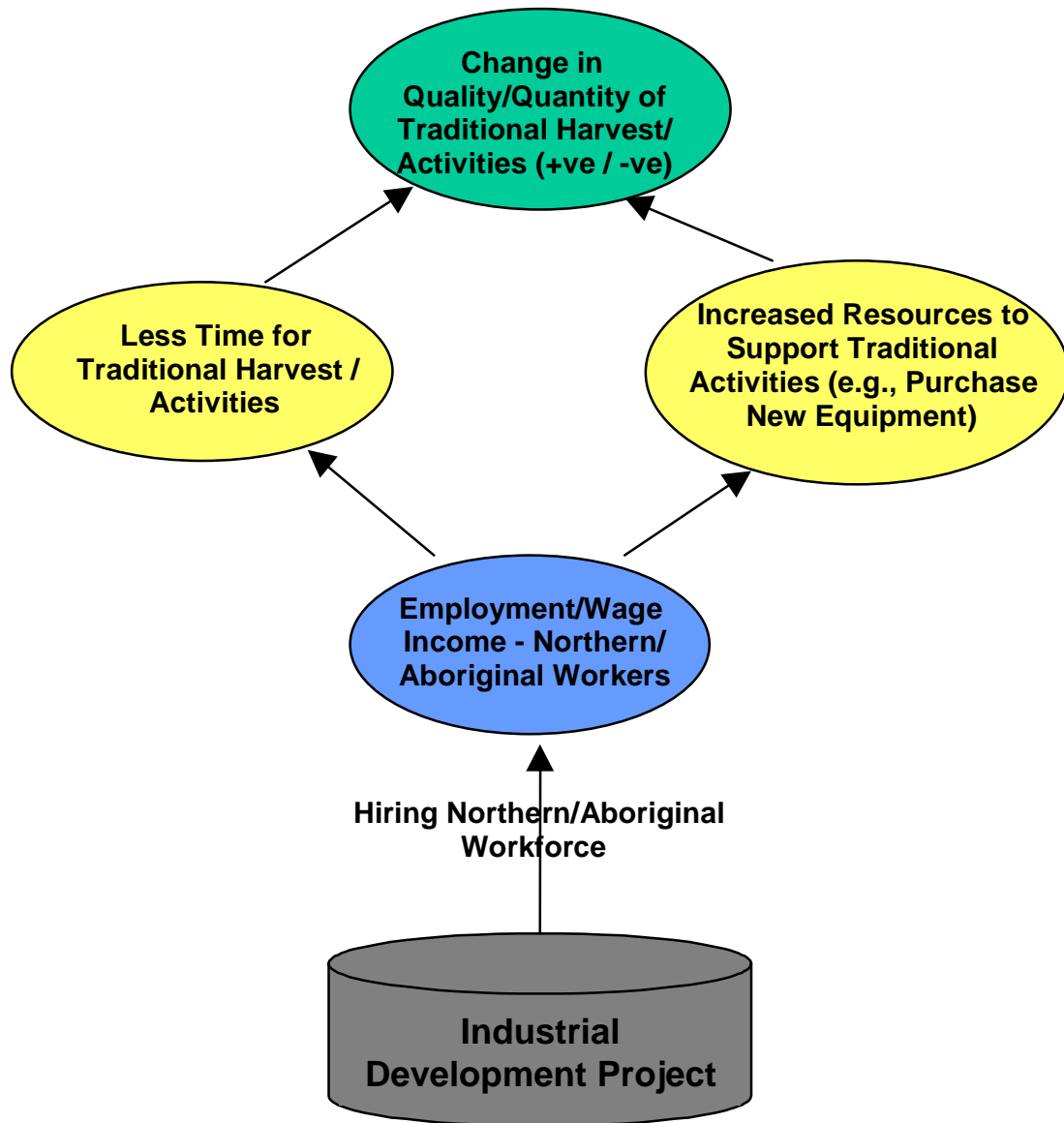
In reviewing the diagrams and the related discussion points, the following assumptions and limitations should be noted:

- The diagrams and discussion points are illustrative only; they are presented to illustrate the kind of reasoning applied to the analysis.
- The diagrams and discussion points are not the actual analysis.
- The linkages and relationships shown in the diagrams are illustrative only.
- The linkages and relationships illustrated are not intended to be exhaustive or comprehensive.
- The diagrams do not demonstrate the potential for mitigation or impact management.
- The diagrams only consider the potential socio-economic effects of the construction/operation of the proposed mine (not post-closure), nor the cumulative effects with other development/activities.

***Simplified illustration of potential linkages between impacts of an industrial development project and the practice of traditional activities***

Figure 5.1-3 provides a simplified generic illustration of the potential relationships between an industrial development project and impacts on the practice of (Aboriginal) traditional activities. The example was chosen to demonstrate the kind of reasoning applied to the SEIA for the Snap Lake Diamond Project. As such, the figures assume that the industrial development project is situated in the NWT and that its implementation will result in the expansion of the wage economy into the NWT's small and predominantly Aboriginal communities. It is further assumed that the project seeks to optimize the hiring of a northern and/or Aboriginal workforce, and that a rotational work schedule will be in place for the project employees. However, the figure illustrates linkages that will not apply to the Snap Lake Diamond Project. The actual SEIA for the Snap Lake Diamond Project (Section 5.3.3) discusses only the potential positive and negative impacts specific to the project.

**Figure 5.1-3 Relationships Between an Industrial Development Project and Traditional Aboriginal Activities**



The relationships illustrated in Figure 5.1-3 may simply be described as follows:

- The policy of hiring northern and Aboriginal people for the project will result in employment and wage income for individuals, who may or may not have current or previous involvement in the wage economy.

- Given that the workforce will operate on a rotational schedule, individuals may have less time available to pursue traditional harvest and other traditional activities.
- This, in turn, may result in a decline in the quantity or quality of traditional harvest or traditional activities.
- On the other hand, individuals participating in the wage economy will have increased resources to support traditional activities. For example, they will have disposable income to purchase new equipment or tools (e.g., snowmobiles, firearms, and fishing gear) to be used for traditional harvest or traditional activities.
- This, in turn, may result in an overall improvement in the quantity or quality of traditional harvest or traditional activities.
- In the figure, employment and the wage income comprise the direct impact of the project; less time and increased resources illustrate possible indirect impacts, and the change in traditional activities is the induced impact.

***Detailed illustration of the potential relationships between impacts of an industrial development project and the practice of traditional activities***

Figure 5.1-4 provides a more detailed illustration of the potential relationships and linkages between an industrial project and impacts on the practice of traditional activities. As demonstrated, a number of factors at different levels (individual, family, community, regional, societal) exert additional influence on the potential changes shown in the diagram. The possible influence of the various factors on some of the socio-economic effects shown in Figure 5.1-4 are described below.

***An industrial development is only one contribution to the wage economy***

The policy of hiring Aboriginal and northern people for the construction and operation of a project will result in employment and wage income for individuals, who may or may not have current or previous involvement in the wage economy. However, the overall level of wage employment and income in Aboriginal communities will be determined not only by a particular project, but also by other resource development activities (e.g., mining projects, oil and gas, timber, secondary jobs, business opportunities), economic development (e.g., tourism, outfitting), and devolution of government services in the community, region, or territory.

***Increased employment opportunities may provide incentives for educational attainment***

The policy of hiring Aboriginal and northern people for a project may mean that a certain level of job and skills training is provided for potential employees. The opportunity for future employment may also provide incentive for individuals to pursue educational and training programs.



**Figure 5.1-4      Relationships/Linkages Between an Industrial Development  
Project and Traditional Aboriginal Activities**

***Project employment may affect time devoted to traditional harvest or activities***

Individuals employed at the project or in secondary industries, (e.g., by suppliers of goods and services in secondary industries) may have less time or interest in pursuing traditional harvest or traditional activities due to rotational work schedules. This, in turn, may result in a decline in the quality and quantity of traditional harvest and activities at the community level. However, other factors (e.g., influence of 'western' culture; lack of skill/knowledge; substance abuse) may also result in an individual having less time or interest in traditional harvest or activities. This may also result in a subsequent decline in quantity and quality of harvest/activities at the community level.

***Employment at the project may increase disposable income available to improve traditional harvest/activities***

Wage employment (at the project, suppliers of goods and services, in secondary industries) may result in the availability of increased resources to support traditional activities (e.g., individuals will have disposable income to purchase new equipment or tools, such as snowmobiles, firearms, fishing gear) to be used for traditional harvest or activities. Other factors will also support traditional harvest or activities at the individual, family, and community level. For example, in recent years, community and regional efforts to share the knowledge and values of Elders, hunters, trappers, and fishermen with the younger people have increased.

***Project employees will be in the community with their families less***

Individuals employed by an industrial development (or by suppliers of goods and services, in secondary industries) will spend less time with their families and/or in their home communities, due to the rotational work schedule. This could result in a decline in family relationships or community wellness in general. However, other factors may also contribute to this type of effect. For example, individuals may pursue other wage employment outside the community, perhaps outside the NWT, in order to earn a livelihood. Individuals remaining in the community, without employment or meaningful activity, may also contribute to poor family relationships and poor community wellness. The increasing infiltration of western culture through broadcast and electronic media, education, and economic development has also resulted in changes in family relationships and community wellness.

***Employment may decrease reliance on social services***

Wage employment for an individual may result in a decline in reliance on social services, and a corresponding improvement in family relationships and community wellness.

***Traditional harvests may be influenced by environmental factors***

The overall quality and quantity of traditional harvests may be influenced by factors such as climate change and the long-range transport of atmospheric pollutants from outside the NWT, as well as the potential cumulative effects of individual industrial developments.

*Changes to the quality of the environment may reduce traditional activities*

Changes in the biophysical environment may reduce the quality and quantity of fish, caribou, or other wildlife and plants of importance to Aboriginal culture and subsistence. This may, in turn, reduce the quality and quantity of traditional harvest or traditional Aboriginal activities.

*This reasoning is generic*

The figures above are generic, and serve merely to demonstrate the kind of systematic reasoning that has informed the prediction and analysis of potential impacts of the Snap Lake Diamond Project. The actual predicted direct, indirect, and induced impacts of the Snap Lake Diamond Project are presented in Section 5.3.3.

## 5.2 BASELINE

### 5.2.1 Northwest Territories

#### 5.2.1.1 Regional Setting

*Dynamic changes are occurring within the NWT*

The NWT is undergoing rapid and complex socio-political and socio-economic changes. This broader context of dynamic change has important bearings on the assessment of socio-economic impacts of the proposed Snap Lake Diamond Project. This section outlines some of the forces of change occurring in the NWT. It then provides an analysis of the key demographic changes in the NWT during the 1980s and 1990s. It also presents some of the goals and visions for the territory, as established by the GNWT in recent years.

#### 5.2.1.2 Forces of Change within the NWT

*NWT is affected by multiple change factors and influences*

The NWT is a region affected by multiple factors and influences. This has generated both opportunities and stresses for individuals, families, communities, and all levels of government. The opportunities and stresses are linked to a large extent to the uncertainty about the effects of changes (e.g., new requirements for labour force skills, changing economic circumstances). Political developments, including the settlement of Aboriginal land claims and the rapidly evolving regulatory and governance regime in the NWT, also cause uncertainty. Other noticeable changes have occurred in population growth and location, the diversification of the economic structure, the education and health levels of residents, and the social well being of individuals and communities.

***Some of the many substantial changes are listed***

The following list includes some of the more substantial changes over the last 20 years:

- land claim negotiations and settlements<sup>5</sup>;
- increased devolution of the delivery of programs from the federal government to the GNWT;
- the division of the NWT and the establishment of Nunavut;
- government restructuring and reorganization, particularly at the federal and territorial levels;
- improved transportation access (e.g., better flight schedules and more extensive use of winter roads);
- intensified resource exploration and development; and,
- industry changes (e.g., new mine developments, closures of other mine projects, and renewed interest in oil and gas development).

***Over the last decade, the political, economic, and social environment of the NWT has been characterized by change and uncertainty***

The multitude of changes listed above has impacted individuals and communities in the NWT in several ways:

- Division of the former NWT, ongoing settlement of land claims, and negotiation of self-government agreements have altered the geographic and administrative map of this territory.
- The loss of jobs through downsizing of the territorial government and mine closures has produced some emigration from the NWT, and the loss of many skilled and experienced members of the labour force.
- Opportunities for employment and access to higher quality social services (i.e., including health care and education) in larger regional centres have also produced a redistribution of the population to these larger centres from smaller communities.
- For the individuals remaining in smaller communities, there are increasingly limited opportunities for long-term employment in the wage economy. This change, and a reduced level of participation in the traditional economy, has placed an ever-growing burden on government funded social safety nets.

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<sup>5</sup> These include the finalized land claims in the Inuvialuit and Gwich'in Settlement Regions, and the Sahtu Settlement Area as well as ongoing land claim and self-government negotiations in other areas. On January 7, 2000, a comprehensive land claim and self-government agreement in principle was signed between The Dogrib Treaty 11 Council and the governments of Canada and the NWT. On July 25, 2001, the Akaitcho Territory Dene First Nations (consisting of Dettah, N'Dilo, Lutsel K'e, and Deninu Kue) signed a framework agreement with the governments of Canada and the NWT to set out an approach and process for negotiating the Akaitcho agreement in principle.

- Regulatory and legislative changes have led to the creation of various new planning and approval bodies, which in turn have required time to develop and implement their procedures.

*The Government of the Northwest Territories emphasizes benefits from non-renewable resource development*

The capacity of the GNWT to respond to these changes has diminished considerably over the last 10 years. As fiscal capacity (*i.e.*, ability to manage the public economy) has declined, the GNWT's vision and priorities have begun to emphasize economic self reliance through the development and value-added production of the north's non-renewable resources. With the opening of the country's first diamond mine and the potential growth in the natural gas industry, non-renewable resource development has become the cornerstone of the government's plans for economic and social development. Following the election of the 14<sup>th</sup> Legislative Assembly, the GNWT has begun to focus greater attention on generating income and employment benefits for northern residents through non-renewable resource development and to more explicitly identify its role as a partner in this process.

*Changes that occur within the NWT are also affected by broad global forces of change*

The substantial changes that have occurred within the NWT are also affected by broad global forces of change, including the following:

- rapid technological advances and communications (satellite technology, cell phones, e-mail);
- international financing of resource development (global financing);
- increased demand for northern resources (including oil, gas, and minerals);
- climate change and its effect on the quality of the environment; and,
- increased global environmental awareness (*i.e.*, concern about air quality, pollution, and the degradation of land and water resources).

### 5.2.1.3 Social and Economic Trends in the 1980s and 1990s

*The population of the NWT in the late 1990s was more urbanized and better educated than in the mid-1980s*

The NWT experienced considerable changes in socio-economic conditions during the 1980s and 1990s. In general, the population of the NWT in the late 1990s was more urbanized, better educated, and lived in smaller family units than in the mid-1980s. The following provides information on specific socio-economic conditions in the territory, based on territorial and national statistical data.

#### 5.2.1.3.1 Population

*The NWT's population has grown almost 25% in the last decade*

The NWT's population grew from 33,527 in 1986 to an estimated 41,606 in 1999, an increase of almost 25% (Table 5.2-1). Population growth,

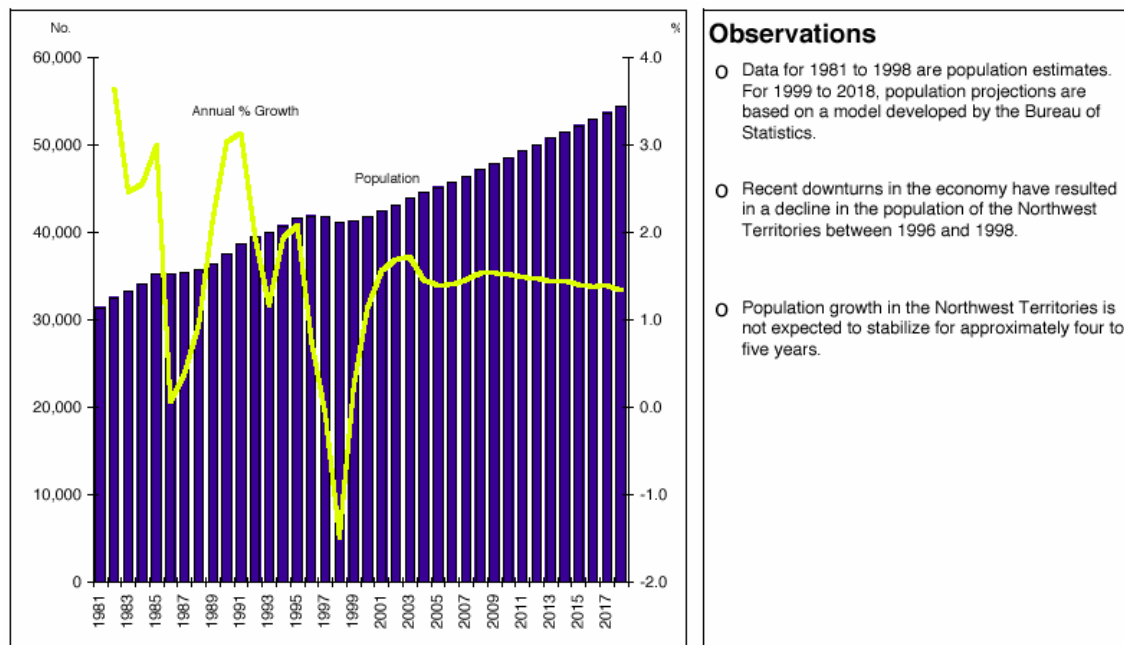
however, has not been entirely steady during this period. As illustrated in Figure 5.2-1, the population growth rate and the size of the population fluctuated during the 1980s and 1990s. Nevertheless, there was a net population growth in the NWT during this period.

**Table 5.2-1 Northwest Territories Population, 1986 - 1999**

	1986	1991	1999
Population of NWT	33,527	36,044	41,606 (estimate)

Sources: GNWT Bureau of Statistics 1999b.

**Figure 5.2-1 Northwest Territories Population Growth and Projections, 1981-2018**

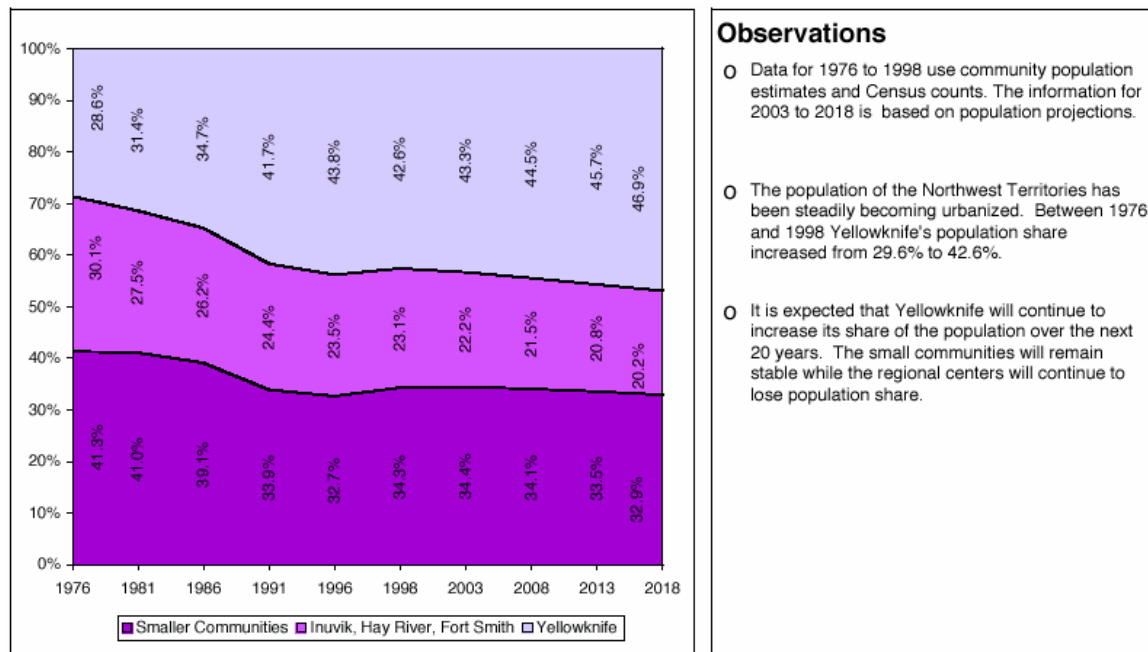


GNWT Bureau of Statistics 1999c.

### 5.2.1.3.2 Population by Community Size

**Yellowknife population increased while mid- and small size community populations decreased**

In the period from 1986 to 1998, the NWT became increasingly urbanized. Yellowknife, the largest community in the territory, comprised 34.7% of the NWT's population in 1986 and 42.6% of the population by 1998. Meanwhile, the proportion of the NWT population in both medium-sized communities (Inuvik, Hay River, and Fort Smith) and smaller communities decreased during the same period (Figure 5.2-2).

**Figure 5.2-2 Population Share by Community Size, 1976-2018**

GNWT Bureau of Statistics 1999c.

### 5.2.1.3.3 Employment

**NWT has increased both employment and unemployment rates**

In 1999, the NWT had both a higher employment rate and a higher unemployment rate than in 1986. This is explained by the increase in the participation rate during the same period. Also, the NWT's population as a whole is aging, so the proportion of the population of working age (*i.e.*, above 15 years old) increased during this period (Table 5.2-2).

**Table 5.2-2 Northwest Territories Labour Force, 1986 and 1999**

	1986	1999
Total labour force 15+ years (%)	70	78
Participation rate (%)	74.5	78.3
Unemployment rate (%)	11.2	13.7
Employment rate (%)	66.2	67.5

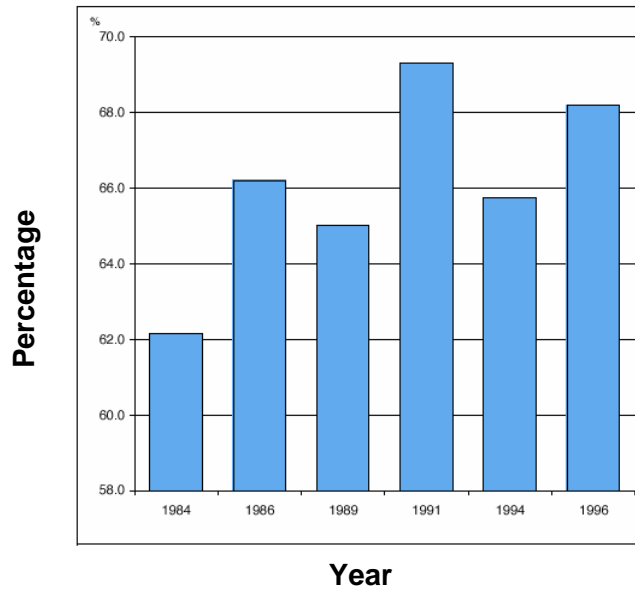
Source: GNWT Bureau of Statistics 1999a.

**Employment has fluctuated**

Historically, the employment rate in the NWT has fluctuated depending on a range of issues and circumstances (Figure 5.2-3). However, there has been a general increase in the employment rate since 1986. During the 1990s, a general trend of increased employment rates in the small and medium-sized

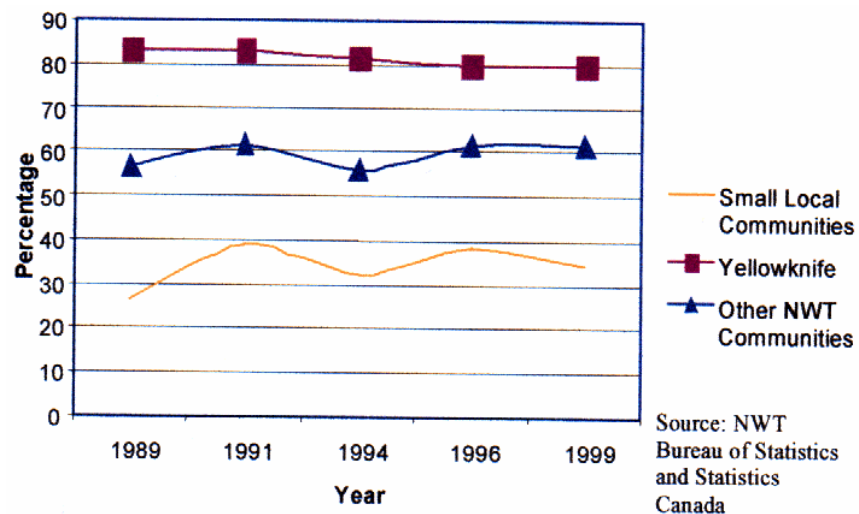
communities occurred, with a slightly decreasing employment rate in Yellowknife (Figure 5.2-4).

**Figure 5.2-3 Northwest Territories Employment Rate, 1984 to 1996**



GNWT Bureau of Statistics 1999c.

**Figure 5.2-4 Northwest Territories Employment Rate by Community Type, 1989-1999**



Source: GNWT 2000a.

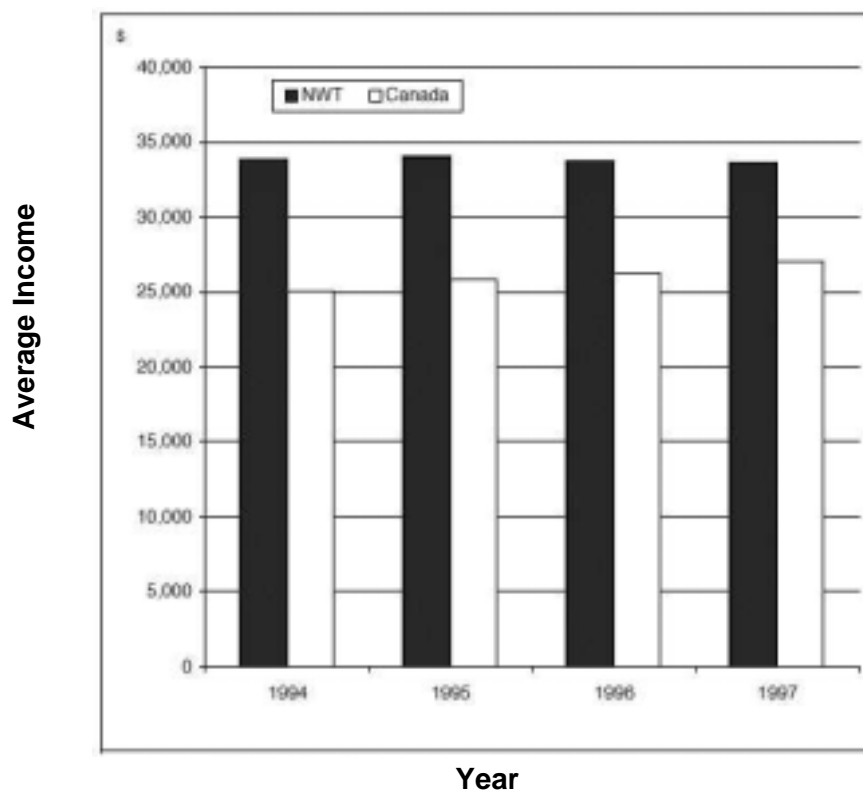


#### 5.2.1.3.4 Income

*Average income in the NWT is steady and remains higher than the Canadian average*

In recent years, the average individual income in the NWT has remained relatively constant (at around \$34,000), in comparison to a slight rise in the average individual income for Canada as a whole. Nevertheless, average incomes in the NWT remain substantially higher than the Canadian average (Figure 5.2-5).

**Figure 5.2-5 Average Income in the Northwest Territories and Canada, 1994 – 1997**

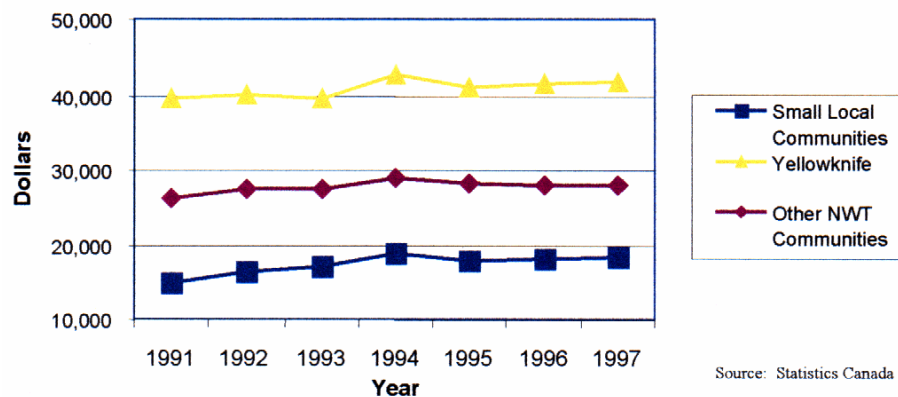


GNWT Bureau of Statistics 1999c.

*Average income has risen faster in small communities*

Within the NWT, average individual income has risen more in the small communities than in either Yellowknife or medium-sized communities. The income gaps between small communities, medium-sized communities, and Yellowknife, however, remain substantial (Figure 5.2-6).

**Figure 5.2-6 Average Income in Northwest Territories Communities, 1991 - 1997**



GNWT Bureau of Statistics 1999c.

#### 5.2.1.3.5 Average Number of Persons Per Dwelling

*NWT average number of persons per dwelling is higher than the national average, but declining*

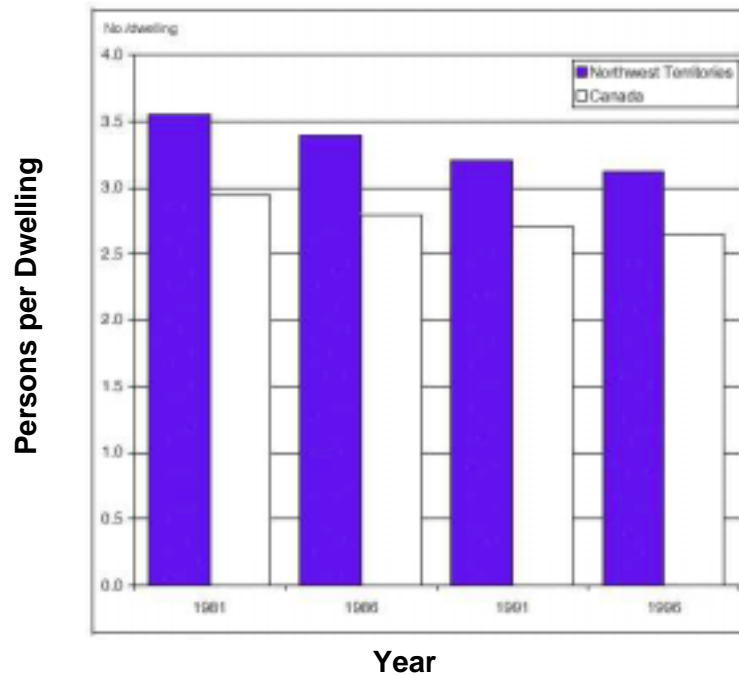
In the decade between 1986 and 1996, the NWT continued to have a substantially higher average for the number of persons per dwelling than the national average (Table 5.2-3). The average number of persons per dwelling in the NWT declined by 9% during this period, as compared to a 5.4% decline at the national level. As a consequence, the gap between the NWT and Canada in the average number of persons per dwelling decreased from 21% to 17% during this 10-year period. Figure 5.2-7 indicates that the NWT has been following the Canadian trend of decreasing household size.

**Table 5.2-3 Persons Per Dwelling in the Northwest Territories and Canada, 1981 - 1996**

	1981	1986	1996
Average persons per dwelling in the NWT	3.6	3.4	3.1
Average persons per dwelling in Canada	2.9	2.8	2.65
Difference between the NWT and Canada (%)	24.1	21	17

Source: GNWT Bureau of Statistics 1999c.

**Figure 5.2-7 Average Persons Per Dwelling in the Northwest Territories and Canada, 1981 to 1996**

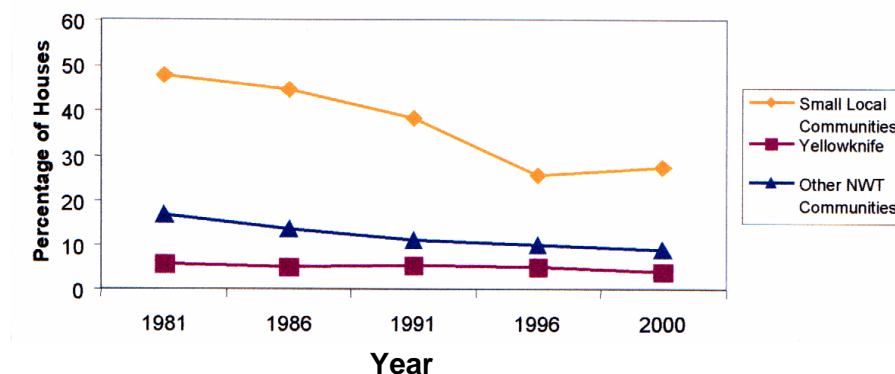


GNWT Bureau of Statistics 1999c.

*There were fewer houses with six or more people in 2000*

The change in the percentage of houses with six or more residents during this period is also substantial. In small communities, the percentage dropped from nearly 50% in 1981 to less than 30% in 2000. Medium-sized communities and Yellowknife also had reductions in the percentage of houses with six or more residents during the 1980s and 1990s, although the decrease was less noticeable than for small communities (Figure 5.2-8).

**Figure 5.2-8 Percentage of Houses with Six or More People**



Source: GNWT 2000a.

### 5.2.1.3.6 Migration

*NWT supported by Canadian migration rather than international immigration*

The NWT has traditionally been, and continues to be, a region of Canada that experiences a substantial amount of migration from elsewhere in Canada for the purposes of employment. A relatively small proportion of people moving into the NWT is comprised of international immigrants (Table 5.2-4).

**Table 5.2-4 Immigration Status in the Northwest Territories, 1986 and 1999**

	1986	1996	1999
Born in NWT (%)	56	54.4	n/a
Moved only within NWT for employment (%)	n/a	n/a	23.3
Born elsewhere in Canada (%)	38	n/a	n/a
Moved from elsewhere in Canada to NWT for employment (%)	n/a	n/a	70.8
Born outside Canada (%)	5	6.6	n/a
Moved from outside Canada to NWT for employment (%)	n/a	n/a	3.3

Sources: GNWT Bureau of Statistics 1999a.

n/a = not available.

*Smaller communities have fewer migrants from outside the territory or Canada*

The proportions between internal Canadian migrants and migrants from outside the country vary according to the size of communities. Smaller communities have a larger proportion of internal migrants, and a smaller proportion of immigrants from outside the NWT or Canada, than medium-sized communities and Yellowknife (Table 5.2-5).

**Table 5.2-5 People Who Moved from Another Community for Employment Purposes, Northwest Territories 1999**

	Within NWT	Elsewhere in Canada	Outside of Canada
Yellowknife (%)	14.2	77.8	4.6
Hay River, Fort Smith, Inuvik (%)	31.7	66.3	2.0
Rest of the communities (%)	38.5	56.9	1.4

Source: GNWT Bureau of Statistics 1999a.

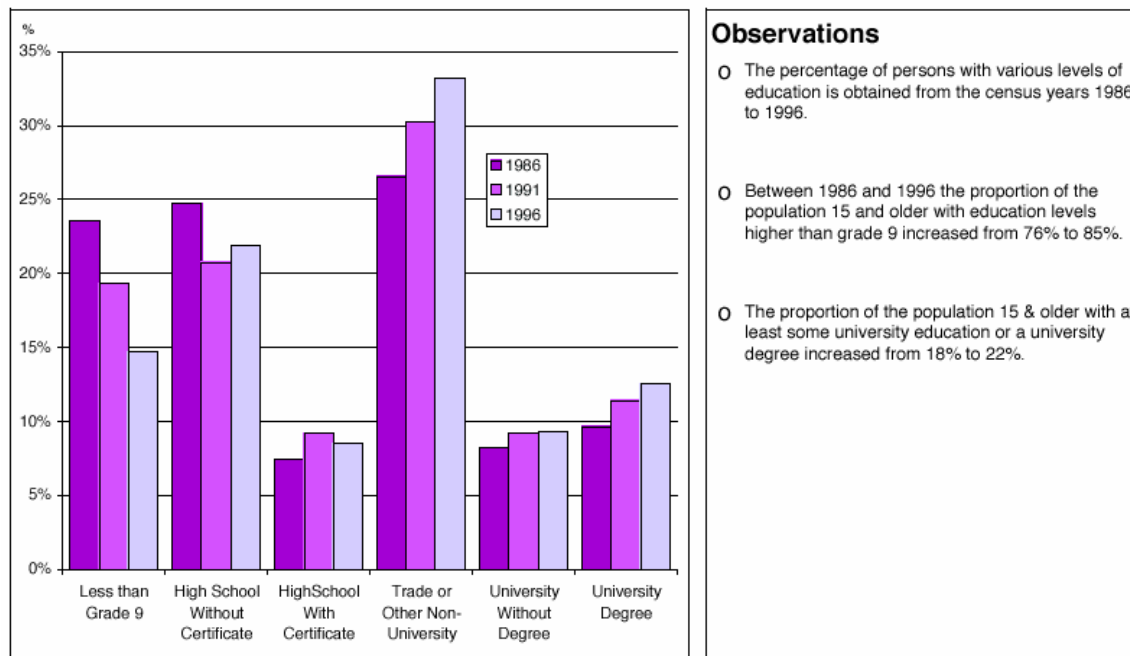
### 5.2.1.3.7 Education

*Substantial gains in education level in the 80's and 90's*

One of the largest social improvements in the NWT during the 1980s and 1990s was the increase in the level of education. In the period between

1986 and 1996, the proportion of the population with less than grade nine education was reduced by more than half, while those with a trade certificate or university degree increased by about 50%. Sizeable gains were also present in completing high school and attending university. The changes in level of education in the NWT from 1986 to 1996 are portrayed in Figure 5.2-9.

**Figure 5.2-9 Northwest Territories Population 15 and Older by Highest Level of Schooling**



Source: GNWT Bureau of Statistics 1999c.

***Continued gains in the number of people finishing grade nine***

From 1989 to 1999, the proportion of the NWT's population with certificates or degrees from a post-secondary institution increased slightly; however, the proportion of people with grade nine education or less decreased dramatically (Table 5.2-6).

**Table 5.2-6 Highest Level of Schooling in the Northwest Territories, 1989 to 1999**

	1989	1994	1999
Less than grade nine (%)	22.5	15.6	12.8
With certificate or diploma (%)	37.1	38.0	38.7
University with degree (%)	12.4	14.6	14.0

Sources: GNWT Bureau of Statistics 1999a.

### 5.2.1.3.8 **Summary**

*The NWT has changed in the past two decades*

The data provided above demonstrates the substantial changes that have occurred in the NWT during the past two decades. Overall, education levels have improved, employment levels have increased, and income levels have been maintained while household size has dropped.

### 5.2.1.4 **NWT Economy in the Future**

*“Towards a Better Tomorrow” emphasizes the need to balance economic benefits, social impacts, and environmental protection*

On March 31, 2000, the Legislative Assembly released a summary of its vision, goals, and priorities in “Towards a Better Tomorrow”. The need to generate fiscal resources to support improvements in the quality of life for northerners was inherent in the GNWT’s strategic direction. The GNWT also emphasized the need to ensure that resource development strikes a balance between economic benefits, social impacts, and environmental protection. Commitments to do so must be built into all resource development projects. In the absence of a new resource revenue sharing arrangement with the federal government, the GNWT has committed to work with industry and Aboriginal partners to ensure that income and employment benefits from these initiatives are realized by northern residents. Through the benefits generated by non-renewable resource development, the GNWT has set the following priorities:

- self-reliant individuals, families and communities, working with governments toward improving social well being;
- better governance through partnerships;
- a northern-controlled economy that is balanced, diversified, stable, and vibrant; and,
- adequate resources helping all levels of government to become more self-reliant in meeting the needs of the people they serve.

*A key theme of the GNWT’s 2000-2003 business plans is to work in partnerships to foster development*

A key theme of the GNWT’s 2000-2003 business plans is partnerships with Aboriginal and other governments, industry and business, and stakeholders and residents. These plans identify the tremendous potential for non-renewable resource development in the north and the attention that northern diamonds, oil, and gas are generating nationally and internationally. Where this attention is fostered, investment capital is likely to follow. This capital is needed to support the primary and secondary development initiatives that will lead to balanced development, economic diversification, and long-term fiscal sustainability.

***Obstacles must be overcome to reduce the disparity between communities***

However, such sustainable development in the NWT faces unique challenges and difficulties: remote access to markets, limited transportation infrastructure, high transportation and communication costs, lack of capital, high energy costs, and a small, widely dispersed population. These factors create an uneven distribution of economic opportunities in the north. Inequity is exacerbated by the parallel distribution of education and skill levels, various social problems, and overall community wellness. The disparity between the larger regional centres and smaller communities in terms of overall social and economic conditions continues to grow. Overcoming these obstacles and creating some mechanism for sharing the benefits of non-renewable resource development has become the GNWT's top priority.

***The premier's economic strategy panel concluded that non-renewable resource development is critical***

Reconciling the challenges to economic development in the north, with the potential for long-term economic and social prosperity, was the task of the premier's economic strategy panel. In "Common Ground", the panel's final report tabled in the Legislative Assembly on June 26, 2000, the panel concluded that the non-renewable resource development sector is critical to the development of the territorial economy (GNWT 2000c). Establishing long-term commitments with local communities and creating sustainable livelihoods was seen by the panel as a requirement for sustainable development of the northern economy. The panel agreed that this can only be achieved through the following lasting contributions to local communities:

- providing employment opportunities;
- transferring technology and skills;
- stimulating economic activity; and,
- involving local partnerships.

***Partners efforts must be coordinated***

The establishment of a non-renewable resource development strategy, to coordinate and facilitate roles and efforts of the various partners, will be instrumental to implementing the panel's recommendations.

***Sustainable use of renewable resources is of vital importance to the people and economy of the NWT***

Sustainable use of renewable resources (*e.g.*, fish, forests, and wildlife) is a way of life for the Aboriginal communities in the north. Traditional harvesting for food provides an important alternative to store-bought meat and fish. Commercial activities, such as trapping and commercial harvesting, provide opportunities to earn income that are compatible with traditional skills and lifestyles. The panel recognized that, although considerable government support of the traditional economy is already in place, there must be better coordination of the services and monies provided.

To achieve this, the true economic value of traditional activities needed to be measured, monitored, and included in territorial economic accounts. Given the increasing cost of land-based activities, wage incomes from mining, and oil and gas projects can enhance or subsidize participation in traditional land use activities. Wildlife is also important from a tourism perspective and provides opportunities for recreational hunting as well as non-consumptive activities (*e.g.*, wildlife viewing, photography).

***Communities are seeking a balance between traditional resource use and wage employment***

Most communities outside of the regional centres continue to rely on the sustainable use of renewable resources for their cultural, physical, and economic sustenance. While Aboriginal communities in the north are exploring other avenues for economic development, they are seeking to balance these emerging opportunities with maintaining values and traditional lifestyles attached to the land and wildlife. Opportunities for wage employment that provide flexible rotation schedules may afford employees the time and resources to also continue traditional activities.

***Most local economies in the north are currently unsustainable***

The NWT as a whole, and most local economies in the north, are currently unsustainable, depending on substantial government transfer payments. These local economies can be characterized as a mix of wildlife harvesting, wage employment, and social assistance payments. In the regional centres direct employment in government and in government support services accounts for the largest percent of wage income, followed by primarily resource extraction industries. Worldwide, there is a growing market for northern products, including meat, fish, arts and crafts, and northern technologies. Tourism is a rapidly growing industry with as yet unknown potential. For the most part, however, local economic development projects have been heavily subsidized by the federal and territorial governments.

***Mining can create opportunities***

Mining can play an important role in creating new and long-term business and employment opportunities. These opportunities could also lead to increased business capacity for small, medium, and larger enterprises located in the north.

## **5.2.2 Historical Aboriginal Interest in the Snap Lake Area**

### **5.2.2.1 Background**

***Yellowknives, Dogrib, Chipewyan and Métis have used land in the vicinity of the Snap Lake Diamond Project***

The Aboriginal population in the primary and employment catchment communities for the proposed Snap Lake Diamond Project are Yellowknives, Dogrib, Chipewyan, and Métis. Historically, the Chipewyan



are the largest group and once occupied a territory spanning north to south from the Arctic coast to the sub-arctic forests, and east to west from Hudson Bay to the barren lands. In the last two centuries, the Chipewyan have been concentrated around the eastern and southern shores of Great Slave Lake. Today the Chipewyan reside in communities from Lutsel K'e in the north to Fort Smith and Fort Fitzgerald on the NWT and Alberta border. The Dogrib live between Great Bear and Great Slave lakes. The Métis also resided and used the North Slave area and reside primarily in Rae/Edzo, Yellowknife, and several catchment communities around Great Slave Lake (e.g., Fort Resolution, Fort Smith, Hay River, and Fort Providence).

### 5.2.2.2 Existing Treaty and Land Claims

*Land claim processes in the NWT are proceeding*

To date, three comprehensive land claims have been signed in the NWT: the Inuvialuit Final Agreement (1984), the Gwich'in Final Agreement (1992), and the Sahtu Dene and Métis Comprehensive Land Claim Agreement (1993). These three agreements are currently being implemented. Additionally, the Dogrib Treaty 11 have signed an agreement in principle for a comprehensive land claim and self government agreement. The Akaitcho Territory Dene First Nations have signed a framework agreement. The North Slave Métis Alliance (NSMA) also claim an interest in the area.

#### 5.2.2.2.1 Treaty 8

*Treaty 8 included southern NWT*

Treaty 8 was signed over a period of two years. On July 25, 1900, the Chiefs and Headmen of "the south shore of the Great Slave Lake, between the mouth of Hay River and old Fort Reliance, near the mouth of Lockheart's River", signed an adhesion to Treaty 8 that represented the "Dogribs, Yellowknives, Chipewyans and Slaves of lower Hay River, who trade at Fort Resolution"(Macrae 1990).

*The Akaitcho Territory Dene First Nations have signed a Framework Agreement*

Yellowknives adherents to Treaty 8 and their descendants reside in the communities of Dettah and N'Dilo. The Yellowknives, together with the Chipewyan communities of Lutsel K'e and Fort Resolution, have formed the Akaitcho Territory Dene First Nations. The Akaitcho Territory Dene First Nations' framework agreement will be used as the basis for negotiating a lands, resources, and self-government agreement to implement provisions of Treaty 8 that these First Nations signed in 1900. The Snap Lake Diamond Project is not within the area covered by Treaty 8.

### 5.2.2.2.2 Treaty 11

***Treaty 11 included land from the Beaufort Sea to south of Great Bear Lake; Treaty 11 communities are negotiating an agreement***

Treaty 11 was signed in 1921, covering the area from the Beaufort Sea to south of Great Bear Lake. Treaty 11 communities adjacent to the Snap Lake area include the Dogrib communities of Rae/Edzo, Wekweti, Wha Ti, and Gameti. Under Treaty 11, these communities are negotiating a comprehensive land claims agreement with self-government provisions. An agreement-in-principle for a combined land claim and self-government was signed in January 2000. The Snap Lake Diamond Project area is within the boundary of Treaty 11.

### 5.2.2.3 Land Uses

***Dogrib, Yellowknives, Chipewyan, and Métis have used the Snap Lake area***

For centuries, the Dogrib, Yellowknives, Chipewyan, and Métis have used the region for traditional land use practices. Some maintain these traditional practices today<sup>6</sup>.

***Aboriginal historically lived off the land***

The Dogrib, Yellowknives, Chipewyan, and Métis have historically lived off the land. Their diet, clothing, arts and crafts, medicines, culture and spirituality reflected their close interactions with their natural environment.

***Aboriginal societies depended on such traditional practices as hunting, fishing, trapping, and berry picking***

Aboriginal societies depended on such traditional practices as hunting, fishing, trapping, and berry picking. Dene from the primary communities in the area generally hunted for caribou, moose, buffalo, bear, duck, and geese. Caribou, in particular, constituted the major source of food, clothing, and material for shelter. Fishing was also an important activity. Whitefish and trout were important as harvested species. Plants, such as blueberries and cranberries, were harvested for their fruits as well as for medicinal values.

***Trapping became important***

With the appearance of Europeans, trapping also became a common land use practice among Aboriginal people. Fur bearing animals, such as fox, were trapped for commercial value. Animal hides also provided material for clothing and crafts (such as drums) for Aboriginal people.

***Participation in traditional land uses has decreased***

Participation in traditional land use practices is substantially lower today compared to historical levels of participation. Year round permanent settlements have resulted in some cultural loss. A dependency on social assistance has also lowered the degree of traditional land use practice.

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<sup>6</sup> The Dene Mapping project has produced a database of land use patterns and activities of the Dene Elders, hunters, and trappers from the communities of Dettah, Yellowknife, Lutsel K'e, Wha Ti, Wekweti, and Rae/Edzo. This project describes and delineates the traditional land use practices from the early 1900s to 1974.

***Harvested foods  
are still very  
important***

Nevertheless, harvested foods continue to play a very important dietary and economic role in most Dene communities (Sly 2001). As food prices in the communities can be more than 50% higher than in Yellowknife, many people rely on harvesting as their primary food source (Diavik Diamond Mines 1998). For example, in 1999, all communities in the Snap Lake Diamond Project area reported that over 90% of their population (and in many cases 100%) consumed harvested meat or fish. In addition, communities such as Lutsel K'e, Wekweti, Wha Ti, Rae/Edzo, and Dettah reported that well over half of their population were actively participating in traditional land use practices and obtain their meat and fish through harvesting (GNWT Bureau of Statistics 2001a). For communities like Dettah, the traditional economy has been reported as strong, and many people hunt, fish, and trap for personal and community use.

***Most primary  
communities want  
traditional land uses  
to be maintained***

Most primary communities want to ensure that traditional land uses are indeed maintained and practised by Dene people in the future. To this end, communities such as Lutsel K'e organize a summer camp at which Elders teach youth about traditional land use and knowledge.

#### **5.2.2.4 Aboriginal Spiritual Relationship to the Land**

***The Dene have a  
cultural and  
spiritual  
relationship with  
the land***

The cultural identity of the Dene people is closely connected to the land. The Dene have historically had a complex and sacred relationship with the land to the extent that "the land is the heart and spirit" (Lutsel K'e Dene First Nation 2001) of the Dene way of life. The Dene attach great importance in their lives directly to the land. Dene culture and history is based on the land and their lives are inseparably intertwined with it. Historically, there was and to some extent still remains, a dependency on the land in terms of it providing food, herbal medicines, and an opportunity to take part in traditional activities. Dene lifestyles and economic systems, social orders, and spirituality functioned in relation to their surrounding natural environment.

***The Elders believe  
that respect for  
the land is closely  
related to the well-  
being of the  
people***

Traditional knowledge studies (e.g., Lutsel K'e Dene First Nation 2001) illustrate that the Dene relationship with the land is symbiotic and is based on mutual care and reciprocity. The study describes the Dene belief that the environmental integrity of the land is directly linked to the health of the people and their lifestyle. The Elders believe that showing respect to the land ensures the health of the Dene people. By expressing respect and thanks to the creator for the land, water, and wildlife the Dene people benefit from what the creator has provided.

*Dene spirituality is based on the connection with the land and other life forms*

Traditional knowledge, provided through the teachings of the Elders, is based on the premise that all parts of the natural world are alive and interconnected. The Dene believe that the land is alive in the same way the people are alive. Elders have stated that the Dene people used to share a common language with the animals (Lutsel K'e Dene First Nation 2001). Dene spirituality is based upon the interconnection and interaction with the land around them. Activities such as hunting and fishing were a show of respect to ensure that waste and excessive use did not occur and that harvesting took place with the permission and willingness of other beings.

*Emerging lifestyle changes will affect spirituality of Aboriginal people*

However, change has occurred to Aboriginal culture, economy, and political and social order, as well as to the physical environment of the Dene and Métis. Greater participation in the wage economy, and the influence of western institutions of education, medicine, and religion throughout the last half of the twentieth century have also affected Aboriginal spiritual and cultural health and practises. In addition, the decrease in participation in traditional land use practices and the emerging lifestyle changes will also continue to affect the spirituality of Aboriginal people.

### 5.2.2.5 Individual and Community Wellness

*The level of education has been rising in all the primary communities, but unemployment rates remain high, housing shortages are common, and crime appears to be increasing*

Life expectancy has been increasing steadily in the NWT over the last two decades. An exception is non-aboriginal women, whose life expectancy has remained stable at 80 years since the early 1990's (GNWT Bureau of Statistics 1999c). In addition, birth rates in the Aboriginal communities remain high. As a result, populations are increasing in the primary communities. The level of education has been rising in all of the primary communities, but unemployment rates remain high. Housing shortages are common, and crime (when data are available) appears to be increasing with the exception of Yellowknife.

*Substance abuse has had an impact on the social cohesiveness of families and communities*

Individual and community wellness is influenced by the above social factors. Substance abuse has also had an impact on the social cohesiveness of families and communities. It has been identified as an important factor in family violence, crime, self-esteem, and unstable interpersonal relationships (Canadian Environmental Assessment Agency 1999).

*"Shaping Our Future: A Strategic Plan for Health and Wellness" focuses on improving the health and well-being of individuals, families, and communities*

The GNWT, through the Department of Health and Social Services, has developed a strategy to address some of the causes of health and wellness problems. The GNWT (1998) provided a strategic plan for health and wellness that focuses on improving the health and well being of individuals, families, and communities. It also focuses on improving the following aspects of the health and social services system:

- human resources;
- financial resources; and,
- program and service delivery.

***The territorial and federal governments offer a number of programs under their respective areas of health and social services***

The territorial and federal governments offer a number of programs under their respective areas of health and social services. The GNWT programs include early intervention and support to families and children, child protection services, adoptions, family violence prevention, mental health, and addictions. The GNWT attempts to take a community-based approach to service delivery. As such, there are a number of health and social services boards in the NWT including Lutsel K'e health and social services and the Dogrib Community Services Board. Health Canada provides such programs for the federal government. This department offers a number of programs focused on child and family services, mental health, and substance abuse. Programs cover community mental health, solvent abuse, and national native alcohol and drug abuse.

***Three building blocks are identified***

The GNWT (1998) strategic plan identifies three building blocks for ensuring a health and social services system that meets the needs of people in the territory:

- strong partnerships;
- a continuum of programs and services; and,
- a healthy public policy.

***The provision of health and social services in the Snap Lake primary communities is fragmented and, often, inaccessible***

However, the provision of health and social services in the Snap Lake Diamond Project primary communities is fragmented and, often, inaccessible to the people who live in the communities. While such programs identified do exist, not all are being implemented on a consistent or a community basis. Substance abuse treatment programs, for example, are only offered in Yellowknife and Hay River. People from other communities who want to enrol in a substance abuse treatment program cannot do so in their home communities. In addition, mental health programs offered through community-based boards, such as the Dogrib Community Services Board and the Lutsel K'e health and social services, do not necessarily have residential mental health workers in the communities. Rather, mental health workers are scheduled to visit most of the communities on a monthly basis.

## 5.2.3 Profiles of Primary Communities

### 5.2.3.1 Definitions and Limitations

*Information comes from several sources*

The following community profiles are based on information from a number of secondary sources supplemented by interviews with community members and representatives.

*Primary communities are those communities expected to be the most affected by the Snap Lake Diamond Project*

Primary communities (Figure 5.2-10), as defined by De Beers, are those communities expected to be the most affected by the proposed Snap Lake Diamond Project. They are the communities in closest proximity to the proposed project site. These are Lutsel K'e, Gameti, Rae/Edzo, Wha Ti, Wekweti, Dettah, Yellowknife, and N'Dilo. Profile descriptions of each of the primary communities follow. Figure 5.2-10 also shows the location of employment catchment communities, which are profiled in Appendix V.1.

*Profile data are independently randomly rounded*

The profile data have been taken from the NWT Bureau of Statistics and Statistics Canada. To ensure confidentiality, census data are independently randomly rounded. As a result, all numbers from the census end in the digit 0 or 5. In cases where absolute numbers are 10 or less, this results in totals that are inconsistent with their sums, particularly in smaller communities. Inconsistencies may also be the result of non responses to the census within each of the communities. These data do not necessarily distinguish between Aboriginal and non-aboriginal people.

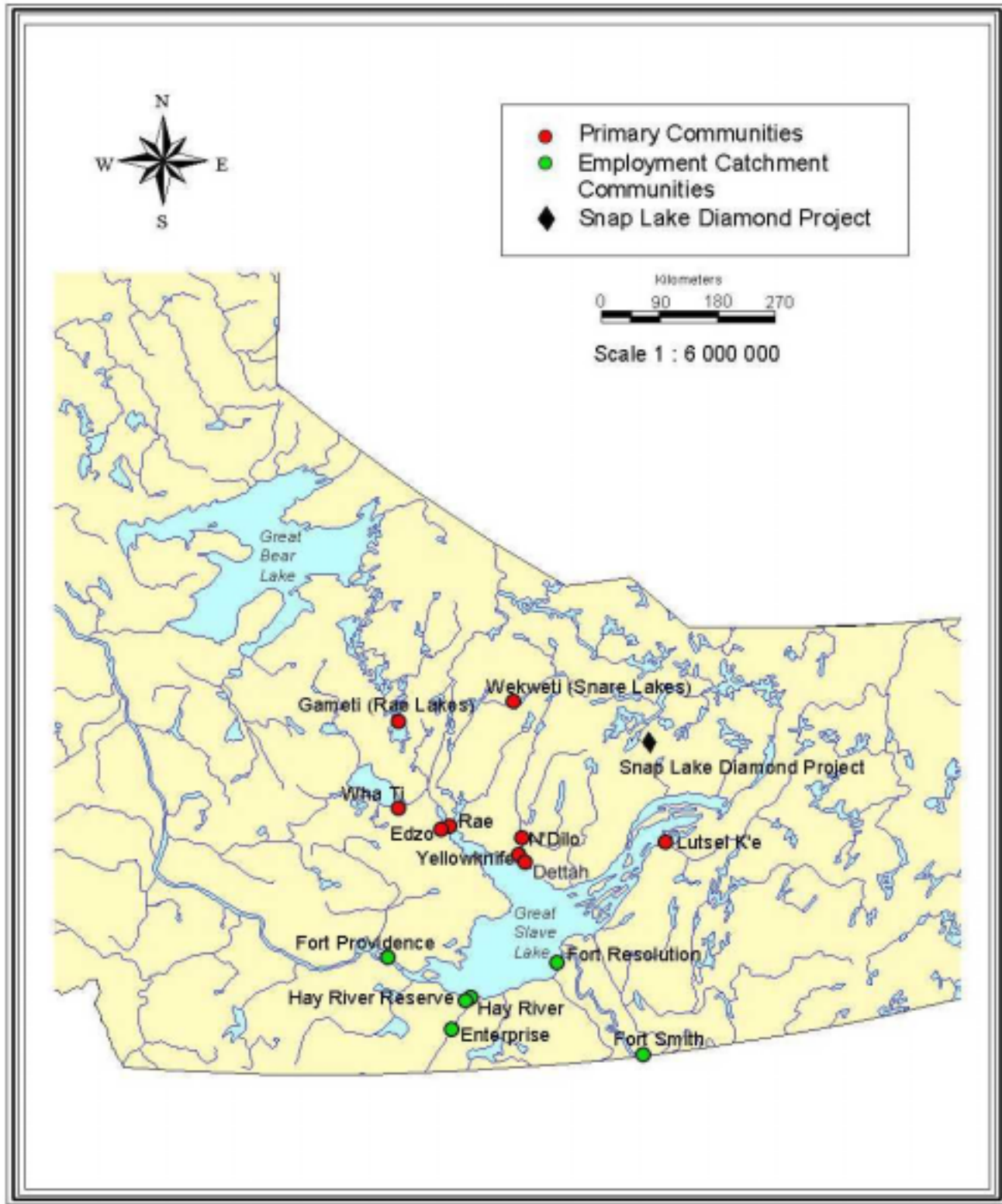
*Information on birth and death rates may not be the same as data in population tables*

The information presented on birth rates and death rates was taken from "NWT Bureau of Health and Social Services; Resources, Wildlife and Economic Development; and Bureau of Statistics" (GNWT 2000a). The information reflects data that were collected for the period from 1992 to 1997 and may not necessarily reflect the information presented in the NWT Bureau of Statistics population table.

*Terms found in graphs and tables are defined*

For interpretation of the graphs and tables indicating labour force statistics, the NWT Bureau of Statistics uses the following definitions:

- *labour force* refers to "persons who were either employed or unemployed during the reference week" (when the data were collected);
- *employed* refers to "persons who during the reference week; (i) did any work at all, excluding housework, maintenance around the home, and volunteer work; or (ii) were absent from their job or business because of vacation, illness, on strike or locked out, etc";

**Figure 5.2-10 Socio-economic Study Communities**

- *unemployed* refers to “persons who during the reference week; (i) were without work, had actively looked for work in the previous four weeks and were available for work; or (ii) had been on temporary lay-off and expected to return to their job; or (iii) had definite arrangements to start a new job within the next four weeks”;
- *participation rate* refers to “the percentage of persons 15 years of age and over who are in the labour force”;
- *unemployment rate* refers to “the percentage of the labour force who were unemployed during the reference week”; and,
- *employment rate* refers to “the percentage of persons 15 years of age and over who were employed during the reference week”(GNWT Bureau of Statistics 2001b).

*Tables do not include individuals attending school*

The graphs illustrating employment rate by education levels in the community profiles for Lutsel K’e, Gameti, Wha Ti, Wekweti, and Dettah show “not available” (n/a) for certain education levels because the information was not available from the various government statistics resources. The tables illustrate information for individuals who reported having less than a grade nine education, attained a high school or trade school certificate, or attained a university degree. They do not include those individuals who are currently attending a high school, trade school, or a university. Therefore, the columns may not add to 100%.

### **5.2.3.2 Lutsel K’e**

#### **5.2.3.2.1 Background**

*Population of Lutsel K’e is predominantly Chipewyan Dene*

Lutsel K’e is located on the east arm of Great Slave Lake, approximately 200 kilometres (km) east of Yellowknife. The population of Lutsel K’e is predominantly Chipewyan Dene. The settlement is accessible by air and by water.

#### **5.2.3.2.2 Population**

*The population of Lutsel K’e is shown*

The population of the community is summarized by age and gender in Table 5.2-7. The estimates provided for the year 2009 were calculated by the NWT Bureau of Statistics based on current trend information.



**Table 5.2-7 Lutsel K'e Population by Age and Gender**

Age (Years)	1991	2000	2009
0-4	34	50	33
5-9	27	38	32
10-14	40	34	48
15-24	59	48	65
25-44	90	125	115
45-59	32	31	69
60 & Over	22	51	45
<b>Total</b>	<b>304</b>	<b>377</b>	<b>407</b>
<b>Male</b>	<b>162</b>	<b>198</b>	<b>219</b>
<b>Female</b>	<b>142</b>	<b>179</b>	<b>188</b>

Source: GNWT Bureau of Statistics 2000a.

*Population has  
been increasing  
since 1991*

The population of Lutsel K'e has been increasing since 1991. The population growth between 1991 and 2000 was 24% (GNWT Bureau of Statistics 2000a). The birth rate for Lutsel K'e has ranged between five and nine births per year from 1992 to 1997. Historically, teen birth rates have been low for Lutsel K'e (one to three births per year between 1992 and 1995). In 1996 and 1997, no teen births were reported. Death rates have also remained constant with one to three deaths reported per year from 1992 to 1997 (GNWT 2000a).

### 5.2.3.2.3 **Employment**

*Participation rate  
is 66.4%, and  
unemployment  
rate is 28.4%*

The employment breakdown of the community is shown in Table 5.2-8. Of the Lutsel K'e population, 244 persons are 15 years or older. Of these 244 persons, 162 are part of the labour force. However, 116 persons of the 162 participating in the labour force were employed in 1999, while 46 were not. This translates into a participation rate of 66.4%, and an unemployment rate of 28.4%. The increase in employment rate has reduced the number of income support cases in Lutsel K'e from 37 in 1996 to 28 in 1999. The employment rate has increased continually since 1986, but the unemployment rate has fluctuated widely.

**Table 5.2-8 Lutsel K'e Employment Participation**

	1986	1991	1996	1999
Participation rate (%)	41.7	62.2	54.8	66.4
Unemployment rate (%)	20.0	26.1	13.0	28.4
Employment rate (%)	33.3	43.2	45.2	47.5

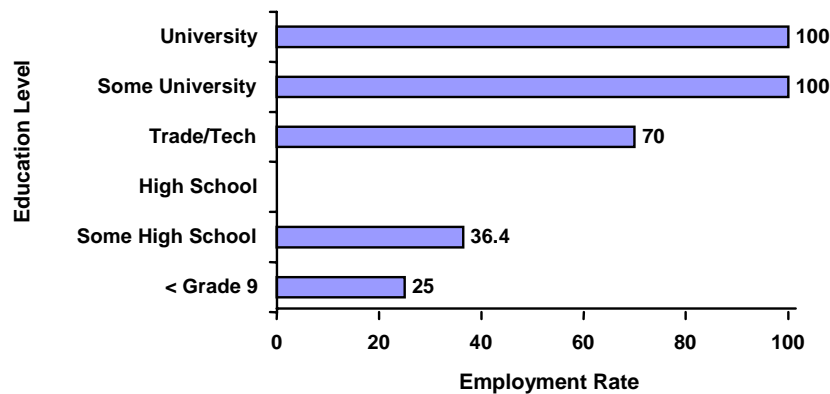
Source: GNWT Bureau of Statistics 1999a.

### 5.2.3.2.4 Education

*Level of education is related to employment*

The level of education achieved suggests an association with employment rate. Figure 5.2-11 illustrates that the higher the level of education achieved (some university education and a university degree), the greater the likelihood for employment (100% each respectively). No data are available for high school graduates in 1996.

**Figure 5.2-11 Lutsel K'e Employment Rate by Education Levels, 1996**



Source: GNWT Bureau of Statistics, 1999a.

*The level of education has been rising in Lutsel K'e*

The level of education achieved has been rising in Lutsel K'e (Table 5.2-9). In 1989, 46% of the population reported having less than a grade nine education, but in 1999 only 30% reported having less than a grade nine education. The data seem to suggest that more of the population reported achieving a high school certificate and university degree.

**Table 5.2-9 Lutsel K'e Education Levels**

	1989	1994	1999
< Grade nine (%)	46.2	27.8	29.5
High school/trade certificate attained (%)	31.3	37.2	36.5
University degree attained (%)	1.5	1.3	4.9

Source: GNWT 2000a.

Note: the columns may not add to 100% as discussed in Section 5.2.3.1.

### 5.2.3.2.5 Traditional Activities

*Involvement in traditional activities is changing*

Involvement in traditional activities has fluctuated for the Lutsel K'e population. Participation in traditional activities such as trapping, hunting,

fishing, and arts and crafts decreased between 1988 and 1993, but increased from 1993 to 1998 (Table 5.2-10).

**Table 5.2-10 Lutsel K'e Traditional Activities Participation**

	1988	1993	1998
Hunt/fish (%)	53.1	31.8	73.8
Trap (%)	33.8	8.5	33.6
Arts and crafts (%)	24.3	6.7	23.4

Source: GNWT Bureau of Statistics 2001a.

#### 5.2.3.2.6 *Mother Tongue*

*More of the population is speaking English as their mother tongue and as their home language*

The mother tongue of the Lutsel K'e population is Chipewyan. However, since 1986 more of the population has been speaking English as their mother tongue and as their home language (Table 5.2-11). In 1996, the majority of the population had an Aboriginal language as their mother tongue (185 of 300 census respondents), yet the majority of the census respondents spoke English at home (170 of 300).

**Table 5.2-11 Lutsel K'e Language Use**

Mother Tongue	1986	1991	1996
English	20	95	115
Aboriginal	235	175	185
Home Language			
English	35	140	170
Aboriginal	195	100	130

Source: GNWT Bureau of Statistics 1999b.

#### 5.2.3.2.7 *Community Services*

*There is currently no adult education or literacy program in Lutsel K'e*

Community representatives indicated that there is currently no adult education or literacy program being provided in Lutsel K'e. Adult education and literacy programs are not offered on a regular basis.

*Drug and alcohol abuse counselling is available*

There are two drug and alcohol workers in the community available for counselling. If community members want to enrol in a substance abuse treatment program they must do so outside the community. A mental health worker visits the community on a monthly basis. However, interviewees

stated that it had been several months since the mental health worker had been to Lutsel K'e.

### 5.2.3.2.8 *Housing*

*Housing has been less crowded in recent years*

Lutsel K'e residences experienced less crowded housing in 2000 than in 1981. In terms of housing, 44.4% of households (in 1981) in Lutsel K'e had six or more people (Table 5.2-12). In 2000, that number had been reduced to 21.6%.

**Table 5.2-12 Lutsel K'e Historical Indicators of Crowding**

	1981	1986	1991	1996	2000
% Households with six or more persons	44.4	30.0	28.6	17.6	21.6
Average number of persons per household	5.3	5.0	4.0	3.6	3.7

Source: GNWT Bureau of Statistics 2000b.

### 5.2.3.2.9 *Crime*

*No consistent trends exist in crime statistics for Lutsel K'e, although drug and other criminal code crimes have recently increased*

The Lutsel K'e detachment of the Royal Canadian Mounted Police (RCMP) has reported the crime statistics in Table 5.2-13. No trends seem to exist. The frequency of crimes has been inconsistent, with the number of crimes higher in 1992 and 1998, but lower in between. The number of crimes has increased since 1994, with drug and other criminal code crimes being the highest. Sexual assault complaints have also been inconsistent, rising one year and dropping the next. In 1990, eight complaints were reported, 13 were reported in 1992, and in 1994 the number of complaints dropped to seven, but rose to 13 in 1998. In 1999 however, sexual assault complaints dropped to five, the lowest it had been in 10 years.

**Table 5.2-13 Lutsel K'e Crime Frequency**

Crime	1992	1994	1996	1998
Violent crimes	50	20	24	40
Property crimes	67	18	45	32
Other – criminal code	50	53	30	70
Drugs	4	4	3	9
Other – federal statutes	1	-	1	-
<b>Total</b>	<b>172</b>	<b>95</b>	<b>103</b>	<b>151</b>

Source: GNWT 2000a.

### 5.2.3.2.10 *Income*

***Average personal income has risen***

Average personal income has risen in Lutsel K'e in recent years. Average personal income in 1983 was \$7,660 and has risen every year since, peaking in 1994 at \$21,263 (Table 5.2-14). In 1995, average income dropped to nearly \$17,000. However, since 1995 income has been rising, reaching close to \$18,000 in 1996, and \$20,444 in 1997, the second highest it had ever been. Average household income has been rising since 1986, with more households earning more than \$50,000 per year.

**Table 5.2-14 Lutsel K'e Average Household Income by Year**

	1986	%	1991	%	1996	%
< \$10K	20	40	10	14.3	10	11.8
\$10 – 20K	15	30	25	35.7	15	17.6
\$20 – 30K	5	10	15	21.4	15	17.6
\$30 – 40K	10	20	10	14.3	15	17.6
\$40 – 50K	-	-	10	14.3	-	-
> \$50K	5	10	20	28.6	20	23.5
<b>Total</b>	50	100	70	100	85	100

Source: GNWT Bureau of Statistics 1999b.

### 5.2.3.3 *Gameti*

#### 5.2.3.3.1 *Background*

***Population of Gameti is predominantly Dogrib***

Gameti is located on Rae Lake in the Camsell River system, a traditional water travel route. The community is accessible by air and winter road. Gameti is 225 km by air from Yellowknife. The population of Gameti is mainly Dogrib Dene.

#### 5.2.3.3.2 *Population*

***The population of Gameti is shown***

The population of the community is summarized by age and gender in Table 5.2-15. The estimates provided for the year 2009 were calculated by the NWT Bureau of Statistics based on current trend information.

**Table 5.2-15 Gameti Population by Age and Gender**

Age (Years)	1991	2000	2009
0-4	32	36	27
5-9	29	34	26
10-14	33	29	52
15-24	54	50	53
25-44	77	67	79
45-59	20	27	51
60 & Over	24	35	32
<b>Total</b>	<b>269</b>	<b>278</b>	<b>320</b>
<b>Male</b>	<b>139</b>	<b>143</b>	<b>164</b>
<b>Female</b>	<b>130</b>	<b>135</b>	<b>156</b>

Source: GNWT Bureau of Statistics 2000a.

*The population of Gameti has increased*

The population of Gameti has increased since 1991 (269 to 278 persons) (GNWT Bureau of Statistics 2000a). From 1992 to 1994, the birth rate for Gameti remained constant, ranging between four and six births per year. However, the number of births doubled to 11 from 1995 to 1996 and was 10 in 1997. Only one teen birth was reported from 1992 to 1994. Between 1995 and 1997, the average number of teen births was four per year. Death rates have remained constant with zero to two deaths reported per year between 1992 and 1997.

### 5.2.3.3.3 Employment

*Participation rate is 54.5%, and unemployment rate is 42.7%*

The employment breakdown of the community is shown in Table 5.2-16. Of the Gameti population, 189 persons were 15 years and older in 1999. Of these 189 persons, 103 were part of the labour force. However, 59 persons of the 103 in the labour force were employed in 1999, while 44 were not. This translates into a participation rate of 54.5%, and an unemployment rate of 42.7%. The unemployment rate has been increasing since 1991. This observation could be the result of seasonal work in the community (e.g., construction). However, the average number of income support cases has dropped. Discussions with GNWT income support officials identified changes to the regulations making it more difficult for an individual to obtain assistance.

**Table 5.2-16 Gameti Employment Participation**

	1986	1991	1996	1999
Participation rate (%)	39.1	56.3	54.5	54.5
Unemployment rate (%)	22.2	22.2	38.9	42.7
Employment rate (%)	30.4	43.8	33.3	31.2

Source: GNWT Bureau of Statistics 1999a.

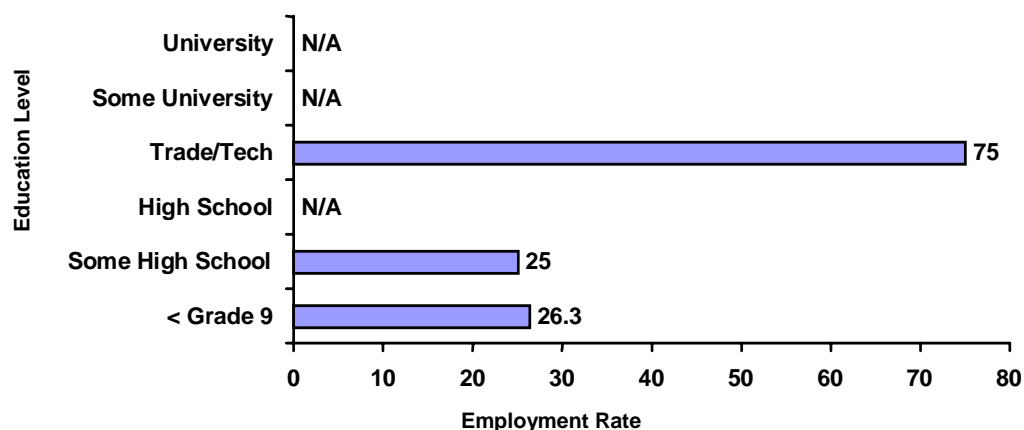
*First Nation staff believed that unemployment was actually lower*

Gameti First Nation staff believed that, to the best of their knowledge, the current unemployment rate was lower than 42.7% in 1999. The same First Nation officials also felt that the employment rate in 1999 was considerably higher than the 31.2% provided in the community profile. At the time of discussions, no figures were provided by the First Nation.

#### 5.2.3.3.4 Education

*Number of high school graduates has been rising*

The Gameti community employment rate by education level is presented in Figure 5.2-12. Data for high school graduates, some university education, and university graduates were not available (Figure 5.2-12). However, the level of education achieved has been rising in Gameti (Table 5.2-17). In 1989, 94.8% of residents reported having less than grade nine education, but in 1999, 51.9% reported having less than a grade nine education. Also in 1989, only 3% reported having graduated from high school; by 1999, that percentage rose to 23%.

**Figure 5.2-12 Gameti Employment Rate by Education Levels, 1996**

Source: GNWT Bureau of Statistics 1999a.

**Table 5.2-17 Gameti Education Levels**

	1989	1994	1999
< Grade nine (%)	94.8	51.7	51.9
High school/trade certificate attained (%)	3	24.7	23.3
University degree attained (%)	0	2.3	1.1

Source: GNWT 2000a.

Note: columns may not add to 100% as discussed in Section 5.2.3.1.

*First Nation officials believe that fewer people have certificates than shown*

First Nation officials indicated that a 23% high school/trade certificate graduate rate seemed high (Table 5.2-17). First Nations officials pointed out that there are no local apprenticeships and no local journeymen in the community.

### 5.2.3.3.5 Traditional Activities

*Gameti's population is maintaining their level of traditional involvement*

Gameti's population is maintaining their level of involvement in traditional activities (Table 5.2-18). Participation in hunting and/or fishing has risen from 32% in 1988 to 43% in 1998. However, participation in trapping has fluctuated from 34% in 1988, to 6% in 1993, then to 24% in 1998. In the same time period, more people became involved with arts and crafts (0.7% to 17%).

*More people may be trapping due to higher fur prices*

First Nation officials felt the numbers indicating the percentage of people participating in trapping seemed low. They suggested that the recent increase in fur prices has increased the number of people participating in trapping.

**Table 5.2-18 Gameti Traditional Activities Participation**

	1988	1993	1998
Hunt/fish (%)	32.1	37.4	42.9
Trap (%)	34.3	6.3	23.8
Arts and crafts (%)	0.7	2.9	16.9

Source: GNWT Bureau of Statistics 2001a.

### 5.2.3.3.6 Mother Tongue

*Dogrib is the typical mother tongue and most Gameti are speaking Dogrib as their home language*

The mother tongue of the Gameti population is Dogrib. In 1996, the majority of the population spoke Dogrib as their mother tongue (225 of 265



census respondents), and also spoke their mother tongue at home (175 of 225 census respondents) (Table 5.2-19).

**Table 5.2-19 Gameti Language Use**

<b>Mother Tongue</b>	<b>1986</b>	<b>1991</b>	<b>1996</b>
English	5	25	40
Aboriginal	170	230	225
<b>Home Language</b>			
English	5	35	50
Aboriginal	150	215	175

Source: GNWT Bureau of Statistics 1999b.

### 5.2.3.3.7 **Community Services**

**Three training programs are being offered**

Community representatives disclosed that three training programs are currently being offered in Gameti: an adult education program; a literacy program; and a pre-trades training program. The First Nation staff interviewed indicated that there is generally not three upgrading programs being offered in the community at one time.

**Programs are generally offered on an ad hoc basis**

Major barriers to providing upgrading programs were described as a lack of funding and facilities. Programs are generally offered on an *ad hoc* basis with little continuity or consistency to the scheduling of such programs. The First Nation staff pointed out that programs end in March because funding ends at that time. As a result, staff stated that no planning can occur.

**Mental health and substance abuse programs are limited**

If individuals wish to enter into a drug and alcohol treatment program they must leave the community to do so. Currently, there is no drug and alcohol worker. However, one community member, who successfully completed the Nechi drug and alcohol training program, is being hired. A mental health worker from the Dogrib Community Services Board visits the community two days per month.

### 5.2.3.3.8 **Housing**

**Overcrowding is a serious issue**

Housing in Gameti consists of 57.1% of households (1981) having six or more people (Table 5.2-20). In 2000, that number was reduced to 34.3%. Discussions with First nation officials confirmed that over-crowding is a serious problem, and that 40% of the houses are without water and fuel.

**Table 5.2-20 Gameti Historical Indicators of Crowding**

	1981	1986	1991	1996	2000
% Households with six or more persons	57.1	42.9	50.0	36.4	34.3
Average # of persons per household	5.7	5.3	4.9	4.4	4.6

Source: GNWT Bureau of Statistics 2000b.

**5.2.3.3.9 Crime****No crime data are available for Gameti**

Crime data are not available for the community of Gameti. There is no RCMP detachment present to collect and report information on crime. Discussions with First Nation officials reported that there is very little to no RCMP services, and that a community justice system is being discussed.

**5.2.3.3.10 Income****Average income has risen steadily**

Average personal income for Gameti has steadily risen, peaking in 1997 at \$17,693 (Table 5.2-21). Average personal income in 1983 was \$10,332. This amount dropped to \$6,171 in 1984. Personal income continued to be low (\$6,000 to \$8,000) from 1984 to 1990. Personal income doubled from \$5,655 in 1990, to \$10,969 in 1991. From 1991 to 1997 income steadily rose, peaking at \$17,693 in 1997. Average household income has been rising since 1986, with more households earning more than \$50,000 per year (32% in 1996). Sufficient data were not available for 1986 since few people reported income.

**Table 5.2-21 Gameti Average Household Income by Year**

	1986	%	1991	%	1996	%
< \$10K	-	-	-	-	10	16.7
\$10 – 20K	-	-	20	40	15	25
\$20 – 30K	-	-	10	20	10	16.7
\$30 – 40K	-	-	15	30	10	16.7
\$40 – 50K	-	-	-	-	10	16.7
> \$50K	-	-	10	20	20	33.3
<b>Total</b>	250	100	315	100	375	100

Source: GNWT Bureau of Statistics 1999b.

### 5.2.3.4 Rae/Edzo

#### 5.2.3.4.1 *Background*

*Rae/Edzo is largely Dogrib Dene*

Rae/Edzo is located 100 km northwest of Yellowknife. The hamlet consists of the communities of Rae and Edzo. The majority of the population is Dogrib. Rae/Edzo is the regional centre for the Dogrib Treaty 11 communities.

#### 5.2.3.4.2 *Population*

*Population data are summarized*

The population of the community is summarized by age and gender in Table 5.2-22. The estimates provided for the year 2009 were calculated by the NWT Bureau of Statistics based on current trend information.

**Table 5.2-22 Rae/Edzo Population by Age and Gender**

Age (Years)	1991	2000	2009
0-4	224	274	195
5-9	170	225	188
10-14	178	189	250
15-24	384	323	385
25-44	389	540	619
45-59	185	180	293
60 & Over	83	133	143
<b>Total</b>	<b>1613</b>	<b>1864</b>	<b>2073</b>
<b>Male</b>	<b>851</b>	<b>968</b>	<b>1061</b>
<b>Female</b>	<b>762</b>	<b>896</b>	<b>1012</b>

Source: GNWT Bureau of Statistics 2000a.

*Slow and steady population growth has occurred since 1991*

The population of Rae/Edzo is larger than other Dogrib communities in the NWT. The population growth between 1991 and 2000 was 15.6% (GNWT Bureau of Statistics 2000a). The birth rate for Rae/Edzo has remained constant, ranging between 49 and 62 births per year from 1992 to 1995. The number of births dropped to 36 in 1996, and rose again to 45 in 1997. Historically, teen birth rates have been consistent for Rae/Edzo (13 to 16 births per year between 1992 and 1995). Since 1996, teen births have been decreasing. In 1996, 10 teen births were reported while 11 were reported in 1997. Death rates have fluctuated between five to 11 deaths reported per year from 1992 to 1997 (GNWT 2000a).

### 5.2.3.4.3 *Employment*

*Participation rate is 55.1%, and the unemployment rate is 46.5%*

The employment breakdown of the community is shown in Table 5.2-23. Of the Rae/Edzo population, 1,177 persons are 15 years or older (1999). Of these 1,177 persons, 648 are part of the labour force. However, 347 persons of the 648 in the labour force were employed in 1999, while 301 were not. This translates into a participation rate of 55.1%, and an unemployment rate of 46.5%. In 1994, 200 average monthly income support cases were reported. In comparison, 169 income support cases were reported in 1999.

**Table 5.2-23 Rae/Edzo Employment Participation**

	1986	1991	1996	1999
Participation rate (%)	41.7	62.2	54.8	55.1
Unemployment rate (%)	27.8	35.2	32.4	46.5
Employment rate (%)	33.7	35.9	34.1	29.5

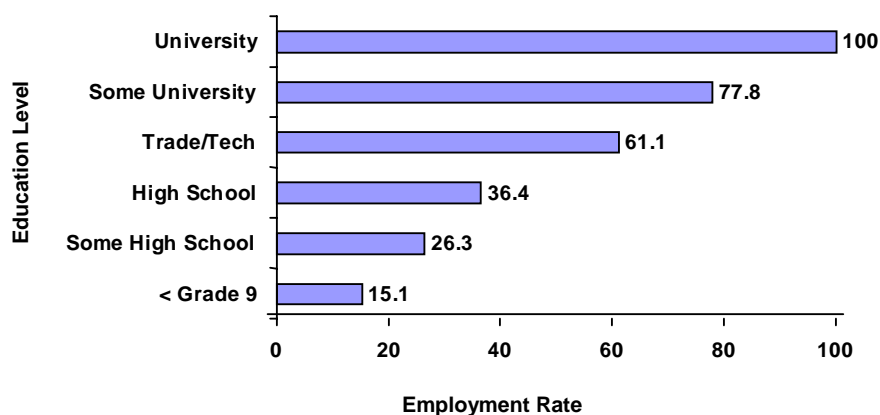
Source: GNWT Bureau of Statistics 1999a.

### 5.2.3.4.4 *Education*

*Employment is related to education*

The level of education achieved suggests an association with employment (Figure 5.2-13). The higher the level of education achieved, the greater the likelihood for employment (100% for university graduates versus 26.3% for those with some high school education).

**Figure 5.2-13 Rae/Edzo Employment Rate by Education Levels, 1996**



Source: GNWT Bureau of Statistics 1999a.

***Level of education achieved has been rising***

The level of education achieved has been rising in Rae/Edzo (Table 5.2-24). In 1989, 60.4% of residents reported having less than grade nine education but in 1999, only 31.4% reported having less than grade nine education. In terms of high school graduates, 43% of the population reported having received diplomas in 1999.

**Table 5.2-24 Rae/Edzo Education Levels**

	1989	1994	1999
< Grade nine (%)	60.4	31.8	31.4
High school/trade certificate attained (%)	18.2	29.6	43
University degree attained (%)	5.5	4.4	3.1

Source: GNWT 2000a.

Note: columns may not add to 100% as discussed in Section 5.2.3.1.

#### **5.2.3.4.5 Traditional Activities**

***Rae/Edzo people are maintaining involvement in traditional activities***

Rae/Edzo's population is maintaining its involvement in traditional activities (Table 5.2-25). Participation in hunting and fishing has risen slightly during the years between 1988 and 1998. However, participation in trapping decreased by approximately 50% from 1988 to 1993, then increased to 11% in 1998. Participation in arts and crafts has remained consistent (approximately 24%).

**Table 5.2-25 Rae/Edzo Traditional Activities Participation**

	1988	1993	1998
Hunt/fish (%)	20.6	24.5	24.7
Trap (%)	14.7	7.6	11.2
Arts and crafts (%)	22.4	24.5	23.9

Source: GNWT Bureau of Statistics 2001a.

#### **5.2.3.4.6 Mother Tongue**

***The population who are speaking English as their mother tongue and as their home language is increasing***

The mother tongue of the Rae/Edzo population is Dogrib. Since 1986, more of the population is speaking English as their mother tongue and as their home language (Table 5.2-26). In 1996, the majority of the population had an Aboriginal language as their mother tongue (64% of census respondents), yet the majority of census respondents spoke English at home (830 of 1525 or 54%).

**Table 5.2-26 Rae/Edzo Language Use**

<b>Mother Tongue</b>	<b>1986</b>	<b>1991</b>	<b>1996</b>
English	210	275	590
Aboriginal	1020	1175	1030
<b>Home Language</b>			
English	275	380	830
Aboriginal	845	960	695

Source: GNWT Bureau of Statistics 1999b.

**5.2.3.4.7 Community Services**

*Rae has a community learning centre that offers training programs*

Community representatives indicated that Rae has a community learning centre through which training programs are being offered. Currently, there is a training program being delivered (18 trainees) oriented towards getting trainees properly prepared for trades entrance exams. These training programs focus on upgrading basic English, science, and math skills.

*Aurora College to start providing upgrading programs*

Major barriers to providing upgrading programs were identified as financial and a lack of facilities. The community learning centre is sponsored by the Rae First Nation. First Nation staff confirmed Aurora College's intent to start providing upgrading programs in Rae again.

*There are some addiction counselors and a mental health worker in the community of Rae*

If individuals wish to enter a drug and alcohol treatment program they must leave the community to do so. Currently, there are some addiction counsellors in the community who have successfully completed the Nechi drug and alcohol training program. This service is sponsored and run through the Dogrib Community Services Board. Currently, there are no facilities and counselling is conducted on an individual basis. A mental health worker from the Dogrib Community Services Board is available in the community.

**5.2.3.4.8 Housing**

*Overcrowding is decreasing*

In terms of housing, 48.9% of households (in 1981) in Rae/Edzo had six or more people (Table 5.2-27). In 2000, that number had been reduced to 29.7%.

**Table 5.2-27 Rae Edzo Historical Indicators of Crowding**

	<b>1981</b>	<b>1986</b>	<b>1991</b>	<b>1996</b>	<b>2000</b>
% Households with six or more persons	48.9	46.0	34.9	31.1	29.7
Average # of persons per household	5.7	5.4	4.8	4.4	4.5

Source: GNWT Bureau of Statistics 2000b.

### 5.2.3.4.9 Crime

***No trends exist in crime statistics***

The Rae/Edzo detachment of the RCMP has reported crime statistics; however, no trends are apparent. The frequency of crimes has been inconsistent, with the number of crimes higher in 1992, 1993, and 1998, but lower in between (Table 5.2-28). The number of some types of crimes has increased in recent years (Table 5.2-28). Sexual assault complaints have also been inconsistent, rising one year and dropping the next. In 1990, 26 complaints were reported, 52 were reported in 1992, and in 1994 the number of complaints peaked at 59. In 1998 and 1999, however, sexual assault complaints dropped to 36 (each year) the lowest it had ever been since 1990.

**Table 5.2-28 Rae/Edzo Crime Frequency**

Crime	1992	1994	1996	1998
Violent crimes	226	208	134	165
Property crimes	205	177	144	265
Other – criminal code	1004	540	277	657
Drugs	5	3	20	13
Other – federal statutes	5	-	3	8
<b>Total</b>	<b>1485</b>	<b>928</b>	<b>578</b>	<b>1108</b>

Source: GNWT 2000a.

### 5.2.3.4.10 Income

***Average personal income has been rising***

Average personal income has been rising in Rae/Edzo, with more households earning greater than \$50,000 per year. In 1983, average personal income was \$9,962; it rose every year following peaking in 1987 at \$13,271 (Table 5.2-29). In 1988, average income dropped to \$8,535, and in 1989, it dropped to \$1,759. Since 1990 average income has been rising, reaching \$18,516 in 1997.

**Table 5.2-29 Rae/Edzo Average Household Income by Year**

	1986	%	1991	%	1996	%
< \$10K <sup>1</sup>	40	16	40	12.7	35	9.3
\$ 10 - 20K	70	28	60	19	95	25.3
\$ 20 - 30K	50	20	50	15.9	60	16
\$ 30 - 40K	30	12	45	14.3	40	10.7
\$ 40 - 50K	15	6	35	11.1	25	6.7
> \$50K	45	18	80	25.4	120	32
<b>Total</b>	<b>250</b>	<b>100</b>	<b>315</b>	<b>100</b>	<b>375</b>	<b>100</b>

Source: GNWT Bureau of Statistics 1999b.

<sup>1</sup> K = thousand.

### 5.2.3.5 Wha Ti

#### 5.2.3.5.1 *Background*

*Population of Wha Ti is Dogrib Dene*

Wha Ti is located approximately 150 km northwest of Yellowknife. The community is accessible by air and winter road. The population is Dogrib Dene.

#### 5.2.3.5.2 *Population*

*The population of Wha Ti is summarized*

The population of the community is summarized by age and gender in Table 5.2-30. The estimates provided for the year 2009 were calculated by the NWT Bureau of Statistics based on current trend information.

*Population growth was 14% between 1991 and 2000*

The population of Wha Ti is larger than many of the other small communities in the NWT. The population growth between 1991 and 2000 was 14.4% (GNWT Bureau of Statistics, 2000a). The birth rate for Wha Ti has fluctuated between five and fourteen births per year from 1992 to 1997. Historically, teen birth rates have been consistent for Wha Ti at one to three births per year (between 1992 and 1996), with the exception of six births in 1997. Death rates have remained constant with zero to three deaths reported per year from 1992 to 1997 (GNWT 2000a).

**Table 5.2-30 Wha Ti Population by Age and Gender**

Age (Years)	1991	2000	2009
0-4	70	59	52
5-9	45	61	40
10-14	66	55	31
15-24	92	106	113
25-44	90	129	171
45-59	38	37	74
60 & Over	15	29	37
<b>Total</b>	<b>416</b>	<b>476</b>	<b>518</b>
<b>Male</b>	<b>228</b>	<b>260</b>	<b>288</b>
<b>Female</b>	<b>188</b>	<b>216</b>	<b>230</b>

Source: GNWT Bureau of Statistics 2000a.

#### 5.2.3.5.3 *Employment*

*Wha Ti participation rate was 54.8%, and unemployment rate was 32.9% in 1999*

In 1999, the work force in Wha Ti had a participation rate of 54.8%, and an unemployment rate of 32.9% (Table 5.2-31). Of the Wha Ti population, 310 persons were 15 years or older (in 1999). Of these 310 persons, 170



were part of the labour force. However, 114 persons of the 170 in the labour force were employed in 1999, while 56 were not. This translated into a participation rate of 54.8% and an unemployment rate of 32.9%. The average number of monthly income support cases has fluctuated in Wha Ti from 84 cases in 1994, to 90 in 1995, to 60 in 1998, and to 69 in 1999.

**Table 5.2-31 Wha Ti Employment Participation**

	1986	1991	1996	1999
Participation rate (%)	45.0	61.7	62.5	54.8
Unemployment rate (%)	33.3	37.9	28.6	32.9
Employment rate (%)	27.5	38.3	46.4	36.8

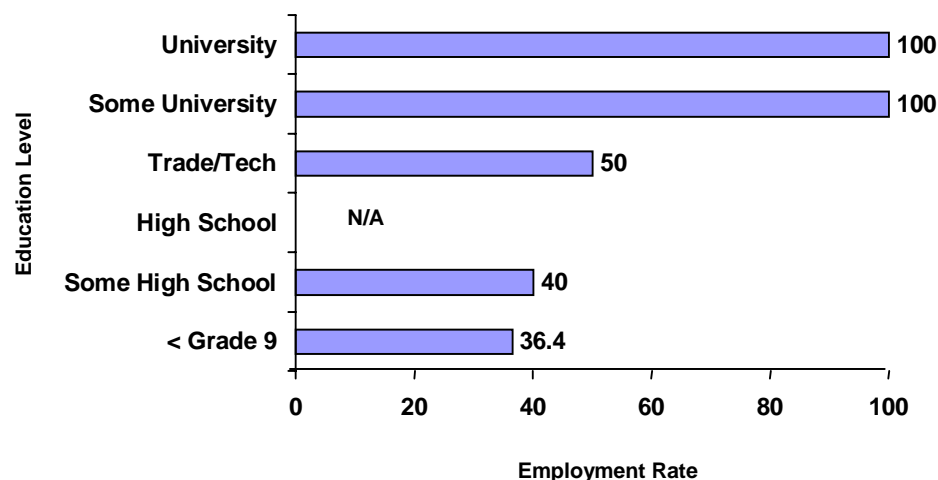
GNWT Bureau of Statistics 1999a.

#### 5.2.3.5.4 Education

*Employment rate is related to level of education*

The level of education received seems to be associated with employment rate in that the higher the level of education achieved, the greater the likelihood for employment (Figure 5.2-14). For example, 100% of university graduates and those with some university education were employed, whereas 36% of those with less than grade nine education were not employed in 1996. No data were available for high school graduates.

**Figure 5.2-14 Wha Ti Employment Rate by Education Levels, 1996**



Source: GNWT Bureau of Statistics 1999a.

*Level of education achieved has been rising*

The level of education achieved has been rising in Wha Ti (Table 5.2-32). In 1989, 68% of residents had less than a grade nine education. However, in

1999, only 34.5% had less than a grade nine education. More residents seem to be moving on to a university degree, with 7.7% of the population reported attaining a degree in 1999 compared to 4.6% in 1989.

**Table 5.2-32 Wha Ti Education Levels**

	1989	1994	1999
< Grade nine (%)	68.0	55.2	34.5
High school/trade certificate attained (%)	7.9	23.8	37.7
University degree attained (%)	4.6	2.7	7.7

Source: GNWT 2000a.

Note: columns may not add to 100% as discussed in Section 5.2.3.1.

*Certificate levels may differ*

First Nation officials felt that the high school/trade certificate level for 1999 was lower than the 37.7% listed in Table 5.2-32.

### 5.2.3.5.5 Traditional Activities

*Participation in traditional activities has fluctuated*

The level of participation in some traditional activities has fluctuated (Table 5.2-33). There has been a decrease in trapping from 30.4% in 1988, to 5.5% in 1998. First Nation officials indicated, however, that trapping has increased as a result of the recent increase in fur prices. Additionally, hunting and fishing declined by approximately 17% from 1988 to 1993, then increased to 66% from 1993 to 1998. Involvement in arts and crafts has decreased from 48% in 1988 to 27% in 1998.

**Table 5.2-33 Wha Ti Traditional Activities Participation**

	1988	1993	1998
Hunt/fish (%)	47.2	30.7	66.0
Trap (%)	30.4	6.1	5.5
Arts and crafts (%)	47.5	31.8	27.2

Source: GNWT Bureau of Statistics 2001a.

### 5.2.3.5.6 Mother Tongue

*Most people still speak Dogrib, their mother tongue, at home*

The mother tongue of the Wha Ti population is Dogrib. Most of the population are speaking their mother tongue and are speaking it as their home language (Table 5.2-34). In 1996, the majority of the census respondents had an Aboriginal language as their mother tongue (320 of

400), and the majority of census respondents spoke their mother tongue at home (260 of 385). The proportion of Wha Ti residents speaking English at home, however, has increased from 20 of 260 persons in 1986, to 125 of 385 persons in 1996 (based on census participation). First Nation officials have confirmed these trends.

**Table 5.2-34 Wha Ti Language Use**

<b>Mother Tongue</b>	<b>1986</b>	<b>1991</b>	<b>1996</b>
English	15	40	80
Aboriginal	325	340	320
<b>Home Language</b>			
English	20	60	125
Aboriginal	240	250	260

Source: GNWT Bureau of Statistics 1999b.

### **5.2.3.5.7 Community Services**

***Literacy programs are currently offered in Wha Ti***

Wha Ti community representatives stated that upgrading programs are being offered. Literacy programs are currently being offered in the community. There are three types of programs offered: low, basic, and Elders' literacy programs. These programs are being offered through Aurora College.

***Barriers to providing upgrading programs include lack of funding***

Major barriers to providing upgrading programs in Wha Ti is the lack of funding and facilities in the community. First Nation staff stated that programs are offered on an *ad hoc* basis, making planning difficult.

***A drug and alcohol worker will be hired***

Wha Ti First Nation will be hiring a drug and alcohol worker who has successfully completed the Nechi training. Wha Ti administration staff reported that to date people have not been properly trained for substance abuse counselling. Treatment programs are available in larger centres like Yellowknife or Hay River.

***There is a social worker in Wha Ti***

There is a social worker in Wha Ti. This individual is responsible for child and family protection issues. The administration staff interviewed stated that there were no counselling services in the community, but there was a need for such services.

### **5.2.3.5.8 Housing**

***Over-crowding has been reduced***

In terms of housing, 57.1% of households (in 1981) in Wha Ti had six or more people (Table 5.2-35). In 2000, that number had been reduced to 29.4%.

**Table 5.2-35 Wha Ti Historical Indicators of Crowding**

	1981	1986	1991	1996	2000
% Households with six or more persons	57.1	50.0	61.5	29.4	36.7
Average # of persons per household	7.7	6.6	5.8	4.8	4.7

Source: GNWT Bureau of Statistics 2000b.

**5.2.3.5.9 Income**

*Average household income has been rising since 1986*

Average personal income in 1983 was \$6,934, and peaked in 1995 at \$18,329 (Table 5.2-36). The average income fell to \$17,568 in 1996, and to \$16,668 in 1997. Average household income has been rising since 1986, with more households earning more than \$50,000 per year (32% in 1996).

**Table 5.2-36 Wha Ti Average Household Income by Year**

	1986	%	1991	%	1996	%
< \$10K <sup>1</sup>	5	9.1	-	-	-	-
\$ 10 - 20K	20	36.4	10	15.4	15	17.6
\$ 20 - 30K	20	36.4	15	23.1	15	17.6
\$ 30 - 40K	5	9.1	10	15.4	10	11.8
\$ 40 - 50K	-	-	10	15.4	10	11.8
> \$50K	5	9.1	-	-	20	23.5
<b>Total</b>	<b>55</b>	<b>100</b>	<b>65</b>	<b>100</b>	<b>85</b>	<b>100</b>

Source: GNWT Bureau of Statistics 1999b.

<sup>1</sup> K = thousand.**5.2.3.6 Wekweti****5.2.3.6.1 Background**

*Most of the settlement (88.9%) is Dogrib Dene*

Wekweti is located on the shore of Snare Lake. It is located on the traditional Dogrib route leading to the headwaters of the Coppermine River. The community is accessible year round by air, and occasionally by a temporary winter road when constructed for community re-supply. Most of the settlement (88.9%) is Dogrib Dene.

**5.2.3.6.2 Population**

*The population of Wekweti is summarized*

The population of the community is summarized by age and gender in Table 5.2-37. The estimates provided for the year 2009 were calculated by the NWT Bureau of Statistics based on current trend information. No data

were available for some age categories; however, the totals include all age categories.

**Table 5.2-37 Wekweti Population by Age and Gender Breakdown**

Age (Years)	1991	2000	2009
0-4	17	12	-
5-9	23	15	-
10-14	12	11	-
15-24	25	47	27
25-44	28	47	58
45-59	-	-	-
60 & Over	18	12	-
<b>Total</b>	<b>131</b>	<b>154</b>	<b>159</b>
<b>Male</b>	<b>71</b>	<b>81</b>	<b>80</b>
<b>Female</b>	<b>60</b>	<b>73</b>	<b>79</b>

Source: GNWT Bureau of Statistics 2000a.

*Some population growth has occurred since 1991*

The population of Wekweti has grown since 1991. The population growth between 1991 and 2000 was 17.5% (GNWT 2000a). The birth rate for Wekweti remained constant, ranging between one and two births per year from 1992 to 1997, with the exception of 1993 when four births occurred. Only one teen birth was recorded for Wekweti in 1995. Death rates have also remained constant with zero to one deaths reported per year from 1992 to 1997 (GNWT 2000a).

### **5.2.3.6.3 Employment**

*The 1999 participation rate was 65.8%, and the unemployment rate was 35.6%*

Of the Wekweti population, 111 persons were 15 years or older in 1999. Of these 111 persons, 73 were part of the labour force. However, 47 persons of the 73 in the labour force were employed in 1999, while 26 were not. This translated into a participation rate of 65.8%, and an unemployment rate of 35.6% (Table 5.2-38). The number of income support cases in Wekweti declined from 26 in 1995 to 11 in 1999.

**Table 5.2-38 Wekweti Employment Participation**

	1986	1991	1996	1999
Participation rate (%)	40	56.3	61.1	65.8
Unemployment rate (%)	33.3	22.2	27.3	35.6
Employment rate (%)	20	50	44.4	42.3

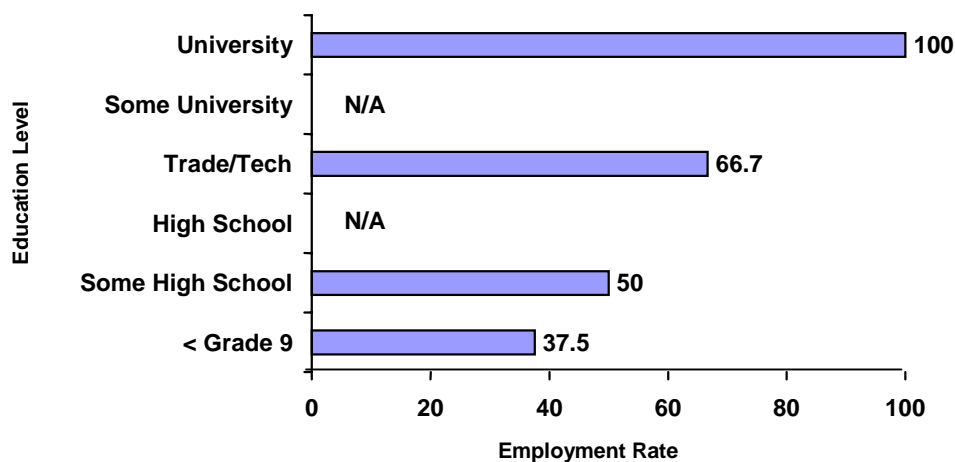
Source: GNWT Bureau of Statistics 1999a.

### 5.2.3.6.4 Education

*Level of education is linked to employment*

As is evident from Figure 5.2-15, employment is highly linked to educational attainment. The higher the level of education achieved, the greater the likelihood for employment. In Wekweti, 100% of the population who reported having a university degree indicated they were employed, while 38% of the population who reported having less than a grade nine education indicated they were employed. No data were available for high school graduates and those attending university.

**Figure 5.2-15 Wekweti Employment Rate by Education Levels, 1996**



Source: GNWT Bureau of Statistics 1999a.

*The level of education has been rising*

The level of education achieved has been rising in Wekweti (Table 5.2-39). In 1989, 91% of residents had less than a grade nine education, but in 1999, only 34.2% had less than a grade nine education. Slightly more than 30% of the population reported having achieved a high school or trade certificate in 1999, and 11% reported achieving a university degree.

**Table 5.2-39 Wekweti Education Levels**

	1989	1994	1999
< Grade nine (%)	91	71.7	34.2
High school/trade certificate attained (%)	1.3	15.2	30.6
University degree attained (%)	3.8	6.5	10.8

Source: GNWT 2000a.

Note: columns may not add to 100% as discussed in Section 5.2.3.1.

### 5.2.3.6.5 *Traditional Activities*

*Participation in traditional activities has fluctuated*

The level of participation in traditional activities in Wekweti fluctuated between 1988 and 1998 (Table 5.2-40). From 1988 to 1998, hunting and fishing increased (from 46.2% to 71.2%), trapping decreased (from 35.1% to 15.0%), while participation in arts and crafts increased (from 37.4% to 43.2%).

**Table 5.2-40 Wekweti Traditional Activities Participation**

	1988	1993	1998
Hunt/fish (%)	46.2	32.6	71.2
Trap (%)	35.1	12.0	15.0
Arts and crafts (%)	37.4	27.2	43.2

Source: GNWT Bureau of Statistics 2001a.

### 5.2.3.6.6 *Mother Tongue*

*Population is speaking Dogrib as their mother tongue and home language*

The mother tongue of the Wekweti population is Dogrib. Most of the population is speaking their mother tongue as their home language (Table 5.2-41). In 1996, the majority of the population had an Aboriginal language as their mother tongue (100 of 130 census respondents), and half of the census respondents spoke their mother tongue at home (65 of 130). In some cases, data for those who spoke English was not available.

**Table 5.2-41 Wekweti Language Use**

Mother Tongue	1986	1991	1996
English	5	-	30
Aboriginal	120	120	100
Home Language			
English	-	-	40
Aboriginal	115	120	65

Source: GNWT Bureau of Statistics 1999b.

### 5.2.3.6.7 *Community Services*

*No adult education, literacy and/or upgrading programs are currently offered*

Based on interviews with First Nation staff, adult education, literacy, or upgrading programs are currently not offered in Wekweti. The position of an adult educator is vacant. The programs are subject to availability of financial and human resources.

***A substance  
abuse workshop  
has been held***

The First Nation staff have reported that until recently there has not been a substance abuse program in the community. Community members receive substance abuse treatment at other locations. Two community members have successfully completed the Nechi training and have held a workshop on drug and alcohol abuse. Staff also reported that there are very little to no counselling services for community members.

### **5.2.3.6.8      *Housing***

***Data are not  
available on  
housing***

Due to the small numbers reported on housing, data trends were not available to examine and report (Table 5.2-42). In 2000, 16.7% of households had six or more persons. First Nation officials indicated that there was a housing waiting list of approximately five families. In addition, several families have requested additions or renovations for their homes.

**Table 5.2-42      Wekweti Historical Indicators of Crowding**

	1981	1986	1991	1996	2000
% Households with six or more persons	-	-	-	-	16.7
Average # of persons per household	5.2	6.5	6.0	3.9	4.1

Source: GNWT Bureau of Statistics 2000b.

\* For historical information from the census, percentages are calculated using rounded information. Because of distortion caused by rounding, percentages are not provided for communities with 50 or fewer occupied private dwellings.

### **5.2.3.6.9      *Crime***

***No data on crime***

Due to Wekweti's small size, no RCMP detachment is present to collect and report data on crimes. However, First Nation officials reported that crime is minimal in the community.

### **5.2.3.6.10      *Income***

***Income statistics  
have not been  
reported***

Average personal income in 1983 was \$5,417, and rose every year with a peak in 1996 at \$19,186. In 1985, average income dropped to nearly \$3,600 from \$7,400 in 1984. In 1986 the average household income rose to \$7,233. In speaking with the First Nation officials they felt that the 1996 income levels identified were high. Income statistics have not been reported for Wekweti, therefore information on average household income is not available.



### 5.2.3.7 Dettah

#### 5.2.3.7.1 Background

*Dettah is predominantly Yellowknives Dene*

Dettah is a small community of approximately 200 people. It is located on the eastern side of Yellowknife Bay, approximately 23 km, by road, southeast of Yellowknife. The settlement is accessible by an all weather road, an ice road across Yellowknife Bay, and by water during the summer. The population of Dettah is 94.7% Yellowknives Dene.

#### 5.2.3.7.2 Population

*Dettah population is summarized*

The population of the community is summarized by age and gender in Table 5.2-43. The estimates provided for the year 2009 were calculated by the NWT Bureau of Statistics based on current trend information. Data for some age categories were not available; however, the totals include all age classes.

**Table 5.2-43 Dettah Population by Age and Gender**

Age (Years)	1991	2000	2009
0-4	17	15	-
5-9	24	24	-
10-14	12	19	-
15-24	31	23	43
25-44	38	86	49
45-59	33	11	49
60 & Over	-	25	-
<b>Total</b>	<b>159</b>	<b>203</b>	<b>211</b>
<b>Male</b>	<b>84</b>	<b>110</b>	<b>110</b>
<b>Female</b>	<b>75</b>	<b>93</b>	<b>101</b>

Source: GNWT Bureau of Statistics 2000a.

*Population growth since 1991 was 27.6%*

The population growth between 1991 and 2000 was 27.6% (GNWT Bureau of Statistics 2000a). The birth rate for Dettah remained constant, ranging between zero and two births per year from 1992 to 1997, with the exception of 1996 when six births were recorded. No teen births were reported for Dettah between 1992 and 1997. Death rates have also remained constant, with one to two deaths reported per year between 1992-1997 (GNWT 2000a).

### 5.2.3.7.3 *Employment*

*Participation rate was 63.8%, and the unemployment rate was 24.7% in 1999*

Of the Dettah population, 152 persons were 15 years or older in 1999. Of these 152 persons, 97 were part of the labour force. However, 73 persons of the 97 in the labour force were employed in 1999, while 24 were not (Table 5.2-44). This translated into a participation rate of 63.8%, and an unemployment rate of 24.7%. The increase in employment rate reduced the average number of monthly income support cases in Dettah, from 12 in 1996 to six in 1999.

**Table 5.2-44 Dettah Employment Participation**

	1986	1991	1996	1999
Participation rate (%)	44.4	55	58.3	63.8
Unemployment rate (%)	50	36.4	21.4	24.7
Employment rate (%)	27.8	40	45.3	48

Source: GNWT Bureau of Statistics 1999a.

### 5.2.3.7.4 *Education*

*Level of education achieved has been increasing slightly*

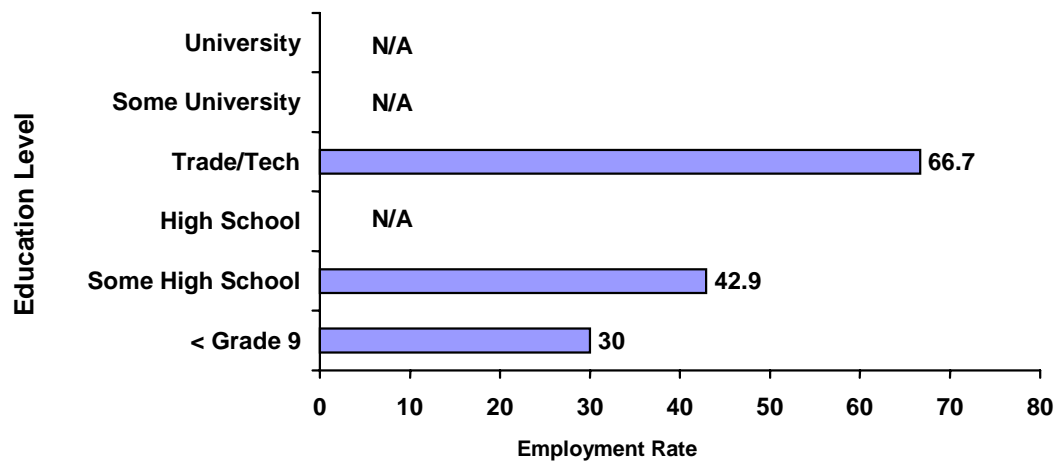
The level of education achieved has generally increased since 1989 in Dettah (Table 5.2-45). No data were available for high school graduates, university graduates nor for those attending university (Figure 5.2-16). In 1989, 52.5% of residents reported having less than a grade nine education, but in 1999 only 33.6% reported having less than a grade nine education. More residents reported having graduated from high school in 1999 than in 1989 (38% and 19.8% respectively). No data were available for university graduates.

**Table 5.2-45 Dettah Education Levels**

	1989	1994	1999
< Grade nine (%)	52.5	23.0	33.6
High school/trade certificate attained (%)	19.8	35.8	38.8
University degree attained (%)	4.1	-	-

Source: GNWT 2000a.

Note: columns may not add to 100% as discussed in Section 5.2.3.1.

**Figure 5.2-16 Dettah Employment Rate by Education Levels, 1996**

Source: GNWT Bureau of Statistics 1999a.

**5.2.3.7.5 Traditional Activities**

*Population is becoming more involved in traditional activities*

During the years between 1988 and 1998, participation by the Dettah population in traditional activities, such as hunting and fishing, increased (Table 5.2-46). In 1988, 19% of the population participated in hunting and fishing, while 49% participated in 1998. The proportion of the population participating in arts and crafts more than doubled between 1988 and 1993 (17.8% and 36.5% respectively), but then declined to 29% in 1998. Involvement in trapping has fluctuated during the same period from 11% in 1988, to 10% in 1993, to 15% in 1998.

**Table 5.2-46 Dettah Traditional Activities Participation**

	1988	1993	1998
Hunt/fish (%)	18.8	31.1	49.3
Trap (%)	10.9	9.5	15.1
Arts and crafts (%)	17.8	36.5	28.9

Source: GNWT Bureau of Statistics 2001a.

**5.2.3.7.6 Mother Tongue**

*More of the population is speaking English as their home language*

The mother tongue of the Dettah population is Dogrib. Since 1986, more of the population has spoken English as their home language (Table 5.2-47). In 1996, the majority of the census respondents had Dogrib as their mother tongue (115 of 185), yet the majority of the census respondents spoke English at home (105 of 185).

**Table 5.2-47 Dettah Language Use**

<b>Mother Tongue</b>	<b>1986</b>	<b>1991</b>	<b>1996</b>
English	10	40	70
Aboriginal	120	85	115
<b>Home Language</b>			
English	20	80	105
Aboriginal	85	30	75

Source: GNWT Bureau of Statistics 1999b.

**5.2.3.7.7 Housing***Overcrowding has dropped*

In terms of housing, overcrowding in particular, 33.3% of households (1981) in Dettah had six or more people (Table 5.2-48). In 2000, that number dropped to 19%.

**Table 5.2-48 Dettah Historical Indicators of Crowding**

	<b>1981</b>	<b>1986</b>	<b>1991</b>	<b>1996</b>	<b>2000</b>
% Households with six or more persons	33.3	33.3	28.6	0.0	19.0
Average number of persons per household	5.3	4.3	4.2	3.4	3.8

Source: GNWT Bureau of Statistics 2000b.

**5.2.3.7.8 Crime***Crime data are not available for Dettah*

The Yellowknife detachment of the RCMP is responsible for policing in Dettah. Hence, crime statistics for Dettah have been amalgamated with Yellowknife. Data specific to Dettah are not available.

**5.2.3.7.9 Income***Income data not available*

Income statistics have not been reported for Dettah, therefore information on average household income is not available.

**5.2.3.8 Yellowknife and N'Dilo****5.2.3.8.1 Background***Population of N'Dilo is counted with Yellowknife*

N'Dilo is a Yellowknives Dene community, located on the northern tip of Latham Island within the city of Yellowknife. Yellowknife is located on Great Slave Lake and is accessible by air, road, and water.

### 5.2.3.8.2 *Population*

*Yellowknife population is summarized*

The population of Yellowknife is summarized by age and gender in Table 5.2-49. The population of Yellowknife is young. Approximately 50% of the residents are under the age of 25 years. The estimates provided for the year 2009 were calculated by the NWT Bureau of Statistics based on current trend information.

**Table 5.2-49 Yellowknife Population by Age and Gender**

Age (Years)	1991	2000	2009
0-4	1637	1429	1274
5-9	1341	1640	1557
10-14	1216	1444	1655
15-24	2774	2690	3260
25-44	7264	7061	6418
45-59	1774	3093	4936
60 & Over	239	671	877
<b>Total</b>	<b>16227</b>	<b>18028</b>	<b>19977</b>
<b>Male</b>	<b>8505</b>	<b>9239</b>	<b>10637</b>
<b>Female</b>	<b>7722</b>	<b>8789</b>	<b>9340</b>

Source: GNWT Bureau of Statistics 2000a.

*Population growth rate between 1991 and 2000 was 11%*

Some census statistics for N'Dilo are combined with the city of Yellowknife. Specific demographic data for N'Dilo are not available. The population of N'Dilo, within Yellowknife, is 209. The population growth in Yellowknife between 1991 and 2000 was 11% (GNWT Bureau of Statistics 2000a). The number of births for Yellowknife has fluctuated, ranging between 290 and 331 per year from 1992 to 1997. The average number of teen births was approximately 20 per year between 1992 and 1997. The lowest number of teen births reported was 16 in 1993, while 24 (the highest) were reported in 1992 and 1994. The number of deaths in Yellowknife has fluctuated ranging from 27 (the lowest) in 1995 to 46 (the highest) in 1994 (GNWT 2000a).

### 5.2.3.8.3 *Employment*

*Participation rate is 86.2%, and unemployment rate is 7.9%*

Of the Yellowknife population, 13,139 persons were 15 years or older in 1999. Of these 13,139 persons, 11,331 were part of the labour force. However, 10,440 persons of the 11,331 in the labour force were employed in 1999, while 891 were not. This translated into a participation rate of 86.2%, and an unemployment rate of 7.9% (Table 5.2-50). The average

number of monthly income support cases has risen in Yellowknife from 267 in 1994 to 431 in 1999.

**Table 5.2-50 Yellowknife Employment Participation**

	1986	1991	1996	1999
Participation rate (%)	87.4	87.3	85.4	86.2
Unemployment rate (%)	5.1	5.1	6.4	7.9
Employment rate (%)	83	82.9	80	79.5

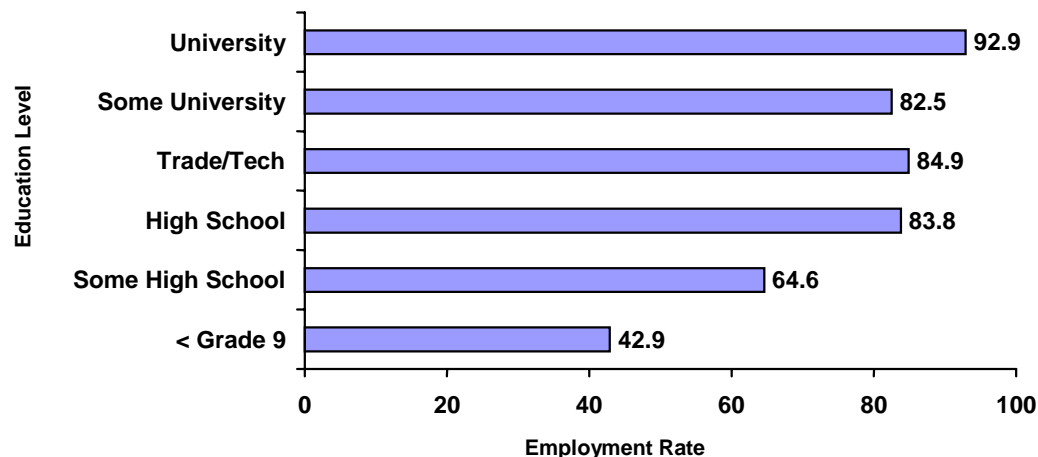
Source: GNWT Bureau of Statistics 1999a.

#### 5.2.3.8.4 Education

*Employment related to education*

The majority of the population in Yellowknife who reported having achieved a high school education or higher were employed (Figure 5.2-17).

**Figure 5.2-17 Yellowknife Employment Rate by Education Levels, 1996**



Source: GNWT Bureau of Statistics 1999a.

*The population proportion having less than a grade 9 education has increased*

The level of education achieved has been changing in Yellowknife (Table 5.2-51). In 1989, 5.9% of the population reported having less than a grade nine education, but in 1999 that number had grown to 18.2%. The same proportion of the Yellowknife population reported graduating from a high school/trade school in 1999 as did in 1989 (approximately 44%). The proportion of the population that reported having achieved a university degree has remained consistent, at approximately 20% from 1989 to 1999.

**Table 5.2-51 Yellowknife Education Levels**

	1989	1994	1999
< Grade nine (%)	5.9	22.5	18.2
High school/trade certificate attained (%)	44.1	42	42.4
University degree attained (%)	20.2	22.5	19.7

Source: GNWT 2000a.

Note: columns may not add to 100% as discussed in Section 5.2.3.1.

**5.2.3.8.5 Traditional Activities**

*Increased involvement in some traditional activities*

During the years between 1988 and 1998, a small proportion of the Yellowknife population participated in traditional activities such as trapping and arts. However, the data suggest that the Yellowknife population is becoming slightly more involved in traditional activities (Table 5.2-52). During 1993 to 1998, participation in hunting and fishing increased from 8% to 40%.

**Table 5.2-52 Yellowknife Traditional Activities Participation**

	1988	1993	1998
Hunt/fish (%)	1.5	8.4	40.4
Trap (%)	0.6	1.3	1.5
Arts and crafts (%)	1.7	3.0	6.9

Source: GNWT Bureau of Statistics 2001a.

**5.2.3.8.6 Mother Tongue**

*Most of the population speak English as their mother tongue and as their home language*

The mother tongue of the Yellowknife population is English<sup>7</sup>. The percentage of the population speaking English as their mother tongue and as their home language is increasing (Table 5.2-53). In 1996, the majority of the population had English as their mother tongue (96% of census respondents), and the majority of census respondents spoke English at home.

**Table 5.2-53 Yellowknife Language Use**

Mother Tongue	1986	1991	1996
English	9,760	12,780	14,315
Aboriginal	300	445	595
Home Language			
English	10,610	14,190	15,970
Aboriginal	90	80	165

Source: GNWT Bureau of Statistics 1999b.

<sup>7</sup> In the 1996 NWT Census, 270 people in Yellowknife identified French as their home language.

### 5.2.3.8.7 Housing

*Overcrowding has decreased*

In terms of housing, 5.7% of Yellowknife households had six or more people in 1981 (Table 5.2-54). In 2000, that number dropped to 3.8%<sup>8</sup>.

**Table 5.2-54 Yellowknife Historical Indicators of Crowding**

	1981	1986	1991	1996	2000
% Households with six or more persons	5.7	4.9	5.4	5.1	3.8
Average number of persons per household	2.8	3.0	3.0	3.0	2.9

Source: GNWT Bureau of Statistics 2000b.

### 5.2.3.8.8 Crime

*The frequency of crimes has dropped with the exception of drug-related crimes and sexual assault complaints*

The Yellowknife detachment of the RCMP has reported on crime statistics (Table 5.2-55). The frequency of crimes has dropped with the exception of drug related crimes. Sexual assault complaints have been inconsistent, rising one year and dropping the next. In 1990, 84 complaints were reported, in 1991, 61 were reported, and in 1993, the number of complaints rose to 93. In 1999, sexual assault complaints totalled 94, the second highest reported since 1993.

**Table 5.2-55 Yellowknife Crime Frequency**

	1992	1994	1996	1998
Violent crimes	511	460	531	489
Property crimes	1259	1190	1182	1025
Other – criminal code	1761	1190	1188	1350
Drugs	66	103	163	77
Other – federal statutes	65	34	23	12
<b>Total</b>	<b>3662</b>	<b>2977</b>	<b>3087</b>	<b>2953</b>

Source: GNWT Bureau of Statistics 2000a.

### 5.2.3.8.9 Income

*Average household income has been rising*

Average personal income in 1983 was \$39,634 and has been relatively consistent over the years. Average personal income peaked in 1994 at \$42,948 (Table 5.2-56). In 1997, average income dropped to \$41,768. Average household income has been rising since 1986, with 73.6% of households earning more than \$50,000 per year.

<sup>8</sup> A study on Yellowknife's housing market, released in November 2001, showed that the city's vacancy rates ranged from zero, for bachelor units and units with three or more bedrooms, to 2.1% for one-bedroom suites. The vacancy rate for privately owned apartments dropped from 2.4% in October 2000 to 1% in October 2001 (CMHC 2001).



**Table 5.2-56 Yellowknife Average Household Income by Year**

	1986	%	1991	%	1996	%
< \$10K	155	3.4	165	3.3	195	3.4
\$ 10-20K	250	6.5	215	4.4	315	5.5
\$ 20-30K	445	11.5	250	5.1	295	5.1
\$ 30-40K	540	14.0	330	5.1	345	6.0
\$ 40-50K	650	16.8	405	8.2	375	6.0
> \$50K	1825	47.2	3560	72.1	4240	73.6
<b>Total</b>	<b>3865</b>	<b>100</b>	<b>4935</b>	<b>100</b>	<b>5760</b>	<b>100</b>

Source: GNWT Bureau of Statistics 1999b.

### 5.2.3.9 North Slave Métis Alliance

*The North Slave Métis Alliance membership is concentrated in Yellowknife and Rae/Edzo*

The NSMA was formed in 1996. The goal of the NSMA was to negotiate and implement a land and resource agreement founded on self-government principles for the indigenous Métis in the North Slave region, and to promote and enhance their educational, economic, social, and cultural development (NSMA 1999). The NSMA represents Métis who reside in both Treaty 8 and Treaty 11 in the North Slave region. The NSMA estimates their membership to be approximately 500 (including status and non-status members). The majority of the membership is located in Yellowknife and Rae/Edzo, although NSMA live throughout the North Slave area.

*The Métis are developing employment opportunities*

The NSMA have been successful at developing a number of businesses. One of their priorities is to enable the development of stable and sustainable employment for their people. To that end, the NSMA is currently involved in the mining industry through the provision of contract services to existing mine projects.

## 5.2.4 Employment Catchment Communities

*Employment catchment community profiles can be found in Appendix V.1*

Community profiles have been developed for each employment catchment community. These communities include Fort Resolution, Fort Smith, Hay River, Hay River Reserve, Enterprise, and Fort Providence. The profiles for all employment catchment communities except Enterprise can be found in Appendix V.1.

## 5.3 IMPACT ASSESSMENT

### 5.3.1 Recent Experiences, Issues, and Concerns

***Subsections within the impact assessment are described***

The prediction and assessment of potential socio-economic impacts of the Snap Lake Diamond Project are closely linked to the identification of current issues and concerns among the primary communities and various stakeholder groups, as well as the implementation of the impact management measures. As such, the impact assessment section is structured in six parts. First, the issues and concerns of primary communities and stakeholder groups are presented. This is followed by the economic impact analysis and the socio-economic impact prediction, analysis, and discussion. Impact management measures to optimize the potential positive impacts and minimize negative socio-economic impacts are then presented, followed by a discussion on the evaluation of residual impacts (impacts after the implementation of impact management measures). The last part of this section discusses the implementation of an impact monitoring plan.

#### 5.3.1.1 Overview of Recent Experiences and Trends

***Recent experience with mining is discussed***

The following section is an overview of the recent experience with mining employment by residents of the primary communities and the NSMA. Recent trends and experiences are discussed in terms of how they impact upon individuals, families, and their communities.

***Meetings with community members and Aboriginal organizations started in 1998***

Meetings with community members and Aboriginal organizations began in 1998, to gather their input regarding past experiences and concerns for future mining development. Since December 2000, De Beers has attempted to visit the primary communities on a regular basis. Meetings were held to provide communities with information on the project, such as timelines, capacity of process plant, footprint of the mine site, infrastructure required for operations, number of employees for construction and operations, and potential business opportunities available to communities. This information was provided to communities through power point presentations, verbal project description, and open house meetings.

***Meetings included consultation***

These meetings also had a consultation component. They were structured so that De Beers could have discussions with a cross-section of the community residents to determine their key socio-economic issues and concerns with regards to the proposed Snap Lake Diamond Project.

***First, issues and concerns were properly identified***

De Beers' approach has been to develop a close working relationship with the primary communities to better understand their recent experiences with the diamond mining industry. To ensure that De Beers' properly understood community members' issues and concerns, De Beers circulated a written summary of community issues for review by community leaders and staff. After the communities' issues and concerns had been identified, the consultation process focused on the collaborative development of solutions to the issues and concerns.

***Aboriginal communities and organizations were consulted***

The communities visited were Rae/Edzo, Wha Ti, Gameti, Wekweti, and Lutsel K'e. In addition, representatives from organizations such as the NSMA, Native Women's Association, and Treaty 11 were also interviewed. De Beers carried out community consultations in all the primary communities except the Yellowknives Dene communities of N'Dilo and Dettah<sup>9</sup>.

***In total, 72 interviews and discussions were carried out in the primary communities***

In total, 72 interviews and discussions were carried out in the primary communities over a 12 month period. A cross section of people were interviewed, including official leaders (Chiefs, councillors), First Nation staff (administrators, economic development coordinators, outreach coordinators, finance officers, social services and health workers, literacy coordinators), mine workers, spouses of mine workers, a community nurse, youth, and Elders. The one-on-one interviews were semi-structured, each lasting between 30 minutes and one hour. The results of these interviews provide the basis for both this section outlining past experiences and current trends, and the following section on community issues and concerns.

### **5.3.1.1.1 Individuals**

***Experiences of individuals are reviewed***

The following section reviews the recent experiences and trends of individuals in the primary communities. A summary of overall individual experience is provided, followed by a more detailed account of the experiences of current mine workers.

#### **A Range of Experiences**

***Some mine workers and family members like the 2/2 work rotation schedule; others find it problematic***

Individuals' experiences with ongoing mining activities are variable. In general, mine projects provide employment for individuals in the primary communities, commonly for the most skilled community members. At times, employees receive some level of training. While some mine workers

<sup>9</sup> The Yellowknives Dene were contacted several times to discuss the potential socio-economic impacts of the Snap Lake Diamond Project. However, they declined the request to speak to De Beers consultants directly, and chose instead to deal with these issues during negotiations with the company.

and family members find the 2/2 work rotation schedule (2 week in/2 weeks out) to their liking, others find it problematic, given their needs for assistance with child rearing and other family related matters.

***Desire for greater employment opportunities expressed***

Aboriginal workers at the Snap Lake site expressed the desire to progress in their careers and employment opportunities. Aboriginal workers want to receive training in order to assume greater responsibilities, receive promotions, and be financially compensated accordingly.

***Employment opportunities for women are limited***

Interviewees noted that very few women are working at the mine sites. Women are primarily hired for kitchen or house cleaning positions. They also tend to receive less training than men and are under-represented in job training courses. Women's employment opportunities are also more limited than for men, due to women's responsibilities to provide child care.

### **5.3.1.1.2 Current Aboriginal Mine Workers**

#### **Mine Employment**

***The majority of Aboriginal and northern mine workers enjoy working***

The majority of Aboriginal and northern mine workers interviewed at the BHP, Diavik, and Snap Lake sites stated that they enjoy working at their respective work places.

#### **Training**

***Training should be specific and oriented towards long-term and meaningful jobs***

Most of the Aboriginal and northern workers stated that they would like more training. Many workers at the Snap Lake site said that they would welcome the opportunity to participate in upgrading or training in the evenings. The workers stated that on-the-job training was one of the best forms of training. They also feel that community-based training prior to starting work at a mine site is important. Workers further expressed that training should be specific and oriented towards long-term and meaningful jobs (*i.e.*, jobs that are appropriate for employees' skills levels and career interests, and allow for training and advancement opportunities). Many BHP employees feel that the literacy program is good, while Aboriginal workers at Snap Lake suggested that a literacy program should be implemented. While Diavik has implemented community-based training programs, community members' experiences with these programs are too recent to be discussed in detail.

## Rotation

### *Rotation preferences vary*

The 2/2 work shift rotation is widely accepted by workers. Many workers at all sites recognized that the 2/2 rotation is the most economically feasible rotation, but that a 1/1 rotation is the most desirable for workers and their families. Preference for the type of rotation seems to differ, however, depending on the circumstance of each individual worker. Single males with no children tend to prefer longer rotations due to the greater pay. All workers with families that were interviewed said that the time spent at home when working a 3/1 rotation is insufficient. Most Snap Lake workers said they found a 3/1 rotation difficult.

## Aboriginal Workers and their Families

### *Extended periods of time away from families are difficult for workers' spouses and children*

Many Aboriginal employees spoke about the recent experiences of the effects of shift rotation on themselves and their families. Although some workers said that the effect on their families is minimal, many Aboriginal workers stated that extended periods of time away from their families is difficult for their spouses and children. The workers stated that their wives or common law partners feel the stress of being a "single parent". The parent at home also becomes the sole disciplinarian with the children. The workers said that their children miss them during their absence. Some of the Aboriginal women working at the mine sites stated that they feel disconnected from their communities when they are at work, in terms of not receiving news from the community or information about community events.

## Incentives

### *Incentive programs are desired*

Many of the workers at the Snap Lake site urged the company to provide incentive programs for employees who successfully complete training programs. The workers suggested such incentives as promotions and pay increases. Workers also feel that incentives related to the amount of time employees have served the company should be considered.

## Support Issues

### *Community-based family counselling and individual counselling is needed at the site*

The Aboriginal and northern mine workers reiterated many community members' concerns about the need for support services. Experiences and trends such as increased family separation, stress, marital problems, family finance counselling and money management issues, and substance abuse were mentioned. The majority of Aboriginal and northern workers interviewed feel that community-based family counselling and counselling at the site are needed to address these issues. Counselling provided at the

site needs to be discrete. Female workers said that they would prefer to speak with a female counsellor.

### **Cultural Issues**

*A cultural awareness program for all employees is important*

The Aboriginal and northern workers conveyed that a cultural awareness program for all employees is important. Some workers feel that a cross-cultural orientation program would be an important initiative. In addition, some workers stated that an anti-racism policy should be implemented. Aboriginal workers also said that access to traditional foods at the site would be positive.

#### **5.3.1.1.3 Families**

*Experiences of families described*

The following section reviews the recent experiences and trends by families in the primary communities. Families in all of the primary communities appear to have very similar experiences as a result of mining employment.

*Increased income through mine employment has increased families' disposable income*

Families' experiences with mine employment have been both positive and negative in all communities. From a positive perspective, mine employment has increased family disposable income, which, in many cases, has allowed families to better provide for themselves and their children. As such, mine employment has directly increased the standard of living for some families.

### **Money Management and Family Financing Problems**

*Some spouses of the mine employees stated that their financial situation has worsened*

While families have enjoyed overall increased income levels, they often do not obtain the full benefits that could be received from wage employment. Issues were raised concerning the use of money generated through employment. In particular, how much of the money is actually spent positively within the community. Mine employees often use their income to pay for commodities through monthly installments, leaving families with little disposable income. Some spouses stated that their financial situation had worsened because they are not receiving any funds from their spouse, nor are they eligible for family income support. Thus, although the family income has increased, spouse and children may have less disposable income to spend within the community.

### **Marital Issues**

*Many spouses indicated that mine employment has added stress to their marriages*

Many spouses indicated that mine employment has added stress to their marriages. Some spouses of mine workers said that their husbands have extra marital affairs in Yellowknife during their time off work.

### **Rotational Issues**

*People in the communities tend to prefer the 2/2 work rotation schedule*

People in the communities tend to prefer the 2/2 work rotation schedule (as currently used by BHP) to a 3/1 rotation. Workers say they are tired when they return home and find it difficult to adjust to being at home again. Some interviewees said that the separation caused some disruption with their families.

### **A Need for Support Services**

*Community members stated that there are no support services for themselves or their families*

Community members stated that there are no support services for either themselves or their families. They said that support services, such as family finance counselling and family counselling, are needed. Specific support services for women are necessary when their husbands or common law partners are at the mine site. There is currently no support network for women. Counselling services on-site are also needed for workers.

#### **5.3.1.1.4 Communities**

*Community experiences are described*

The following section reviews the recent experiences with mine employment by the primary communities. The first part is a general summary of the overall community experiences and trends. The second part is more specific and details the particular experiences of each of the primary communities.

### **A Balanced Approach**

*A sustainable balanced approach to development is needed*

There is strong interest among the communities in the proposed diamond mine, and the potential benefits that mining activities can bring to communities. However, there is also concern for the potential social and environmental effects of mining activities and mine employment. Representatives from all communities expressed the need for a balanced approach to both the development and operation of the mine. It was expressed that a sustainable approach to development must take into account the social, economic, environmental, and cultural aspects of the affected people and their communities.

### **Economic Development**

*Communities are interested in business opportunities*

Community representatives said that they are interested in enhancing the positive impacts of mine employment, including community business opportunities. They want to derive greater economic benefits from the project in the form of employment, training, and sustainable business ventures (both mine related and non-mine related). Based on communities' recent experiences with mining activities, community members are now

seeking higher paid jobs, supervisory type of employment, and increased responsibilities that will enable them to use their improved skill sets.

*Mining companies create a "brain drain" in communities*

Community representatives also noted that mining companies tend to take the skilled and employable workers from the community, creating a "brain drain" effect in the communities. This creates a need for more education and training to ensure that there are people to fill community jobs and meet other community needs.

### **Environmental Protection**

*Communities seek direct involvement in the environmental planning and monitoring*

Community members expressed strong interest in protecting the natural environment from mine development and operations. Communities seek direct involvement in the environmental planning and monitoring of the mine site and associated activities. They also want to be involved in the monitoring of caribou around the site.

### **Need for Close Working Relationships**

*Companies did not always meet commitments*

Community members expressed disappointment with past experiences in cooperating with mining companies. It was described that, after agreements had been signed between companies and communities, companies did not follow through on some of the training and employment commitments.

*Community members want to work closely with mining companies*

Community members want to work closely with mining companies on many issues, such as employment and training. Community representatives proposed that greater contact with mines may be achieved by hiring a community liaison person.

### **Lutsel K'e**

*Increased career paths and education levels identified at Lutsel K'e*

In the community of Lutsel K'e, a trend in increased education attainment is emerging. More youth are attending community college or university. This recent trend provides hope that future labour demands by the Snap Lake Diamond Project will be filled by young Aboriginal professionals. Community members clearly recognize the need to raise the level of education in order to increase the number of community members qualified for mine employment. Further, youth in the community have identified mining as a possible future career option. A recent survey of students in grades five to 10 showed that approximately 8% of the students indicated mining related employment as their career goals. This is a recent trend in the community, as youth indicated little interest in mining careers a few years ago.



***People of Lutsel K'e would like appropriate training to begin before the mine is in operation***

As the closest community to Snap Lake, the people of Lutsel K'e have a strong interest in the proposed development and its potential benefits for the community. People of Lutsel K'e are also very interested in employment and training initiatives for youth. Based on its previous experiences with diamond mining activities, the community would like appropriate and relevant training to commence before the mine is in operation. Community members feel that comprehensive community-based and on-site training are needed to ensure proper training.

***Lutsel K'e is interested in contracts and joint ventures***

Lutsel K'e community members have also expressed interest in the development of relevant community enterprises. Entering into working arrangements and/or partnerships with De Beers to develop community enterprises to serve the Snap Lake Diamond Project also holds some interest. Community members would like to pursue business opportunities by obtaining contracts and by establishing joint ventures for activities related to the development and operation of the proposed mine. As such, they would like to see more mine employment through existing and future contracts. In addition, the community is interested in some form of a partnership with De Beers to further community-based economic initiatives not directly related to mine activities.

***Concern for social effects of rotational employment***

Recent negative experiences with the effects of the increased wage economy and rotational employment are of concern to some people in the community. Such concerns include the lack of support for child care and child rearing responsibilities, as well as a possible decline in cultural and traditional activities in the community. There is also a concern with the effects of separation of families. The trend of mine workers spending a substantial portion of their pay and time off in Yellowknife needs to be addressed. Many community members support the concept of direct flights from the project site to the community.

***The Treaty 11 Dogrib are seeking partnerships***

**The Treaty 11 Dogrib (Wha Ti, Wekweti, Gameti, Rae-Edzo)**

The Treaty 11 Dogrib expressed support for development of the proposed Snap Lake Diamond Project. The Dogrib are currently seeking partnerships with industry and government while trying to ensure that these partnerships reflect the short- and long-term needs of the Dogrib people. The Dogrib have moved beyond the "government concept" of socio-economic concessions from new development. For example, the Treaty 11 Dogrib are interested in an equity share of the mine. This direction coincides with the joint ventures that the Dogrib have already established with such groups as SNC Lavalin, PCL Contracting, Canadian Helicopters, and Beaver National.

***Self-government initiative***

These development partnerships and joint ventures also complement the Dogrib's work on their self-government initiative. Currently, the Dogrib are negotiating a self-government agreement with the governments of Canada and the NWT.

***Addressing social issues and life skills***

The Dogrib are increasingly participating in the wage economy. Community members said that social issues related to this participation need to be addressed. They suggested that training is needed in many areas, such as money management and counselling for substance abuse. Organizational capacity building is also needed at all levels of the community. Some positive effects of mine employment on the Dogrib communities were noted. Some Dogrib community members who are earning an income, for example, have been able to build new homes for themselves. Also, in response to the need for increased training, an increasing number of Dogrib people are gaining a higher education. In particular, the number of Dogrib attending university is growing.

**Wha Ti*****Greater employment and business opportunities***

The Wha Ti First Nation is generally interested in the proposed Snap Lake Diamond Project, specifically in the employment and business opportunities it may bring to the community. Based on its recent experience with other diamond mine activities, Wha Ti community members said that they would like more community members to receive employment through these projects. In addition, the community would have liked to benefit more from business opportunities related to previous mining projects. The Wha Ti Development Corporation has only received one contract from current diamond mine activities.

***Community-based training is needed***

Interviewees in Wha Ti commented that training initiatives for mine employment with other mining companies did not start soon enough for the community members to take advantage of employment opportunities. It was reported that community-based training should be implemented in a timely manner to ensure training opportunities are accessible to all community members.

***The number of skilled people within the community has decreased***

A recent trend in Wha Ti is the strong interest in trades work. To date, however, there have been no certified apprentices. Instead, there has been a decrease in the number of skilled people within the community, as many of the skilled community members have become engaged in mine employment.

***Flights to communities***

The Wha Ti First Nation supports the idea of direct flights between the mine site and the community.

**Gameti**

*Need for provision of direct flights between the sites and the community was identified*

Between 15 and 20 community members from Gameti work at the BHP mine. One individual works at the Snap Lake Diamond Project, and a few individuals work at the Diavik. Based on their recent participation in mine employment, the community members strongly advocate the provision of direct flights between the mine sites and the community. Many people interviewed in Gameti feel that providing direct flights would encourage people to spend money within the community and alleviate social problems associated with mine employment.

*Successful employment linked to past training programs*

Many people in the community attribute the high levels of employment at BHP to training received from PCL Construction in the early 1990's, when constructing the airstrip. However, people in Gameti feel that employment rates with the mine companies could be higher. Gameti community members would like direct benefits from mining activities in the form of jobs and business opportunities.

*Workplace literacy programs should be put in place immediately*

Many interviewees from Gameti noted that low educational grade levels among community members is a problem in the workforce. A literacy training program has just begun in the community. Many community members feel that work place literacy programs should be put in place in a timely manner.

*Women employees receive lower pay*

Interviewees of the Gameti First Nation noted that very few women from their community work for the mining companies. The majority of women employees are hired for cleaning or kitchen work, receiving lower pay. Women in Gameti indicated that they would like to work in the mining industry. The need to provide child care, however, makes it difficult for both parents to work at the same time.

*Community-based training is essential*

People in Gameti feel that community-based training is essential for maintaining an Aboriginal workforce at the mines. In addition, training programs should focus on youth in Gameti. It was noted that some diamond mine companies only offer unskilled positions and do not provide training to enable community members to assume more skilled positions.

*Gameti is interested in working closely with De Beers on employment, business opportunities, and monitoring*

Based on their recent experiences of working with diamond mine companies, members of the Gameti First Nation said that they would like to work more closely with De Beers than they have with mining companies in the past. They would like to work together with the company on a number of issues including employment, training, business opportunities, and environmental monitoring. Community members feel that company commitments need to be in writing and then sent to the community after the

community and the company reach an agreement. Gameti members also feel that De Beers should focus on more remote communities with regards to establishing partnerships and business opportunities, as well as the direct benefits of the project.

### **Wekweti**

***Wekweti has not received much mine employment from current diamond mine activities***

Wekweti has not received much mine employment from current diamond mine activities. This may be explained by the low levels of education and training in the community. In general, there are very few people working outside the community. Wekweti community members would like their employment situation to change.

***Wekweti seeks an on-going and open working relationship***

The Wekweti First Nation would like to have open communication and a close working relationship with De Beers. They feel that this has not occurred with other mining companies. Community members feel that an on-going and open working relationship will ensure that both the community's and company's needs are achieved.

***Community-based training needs to be implemented to ensure the highest possible success rate***

Community members feel that training is very important in order to create mining employment opportunities for their people. Interviewees in Wekweti feel that community-based training needs to be implemented to ensure the highest possible training success rate. Community members are willing to travel to another community (*e.g.*, Wha Ti) to participate in training programs. However, specific mine employment training should be offered in their own community.

***Women receive little employment training***

Currently, only two women from the community work in the diamond mine industry. These women are employed in catering and house cleaning. People in Wekweti maintain that women receive very little employment training.

***There is interest in business opportunities and partnerships with De Beers***

The Wekweti First Nation members are interested in business opportunities and partnerships with De Beers. The community would like to benefit from contracts with the company. The community is also interested in entering into business partnerships for economic activities not related to mining.

### **Rae/Edzo**

***Rae/Edzo has had an interactive relationship with the diamond mining industry***

The community of Rae/Edzo has had an interactive relationship with the diamond mining industry. Several reasons have contributed to this interactive relationship. Firstly, the community acted upon its interest to become involved early in mining industry development in the area. Secondly, accessibility by road to the community has facilitated

involvement. Thirdly, having the largest population base outside of Yellowknife increased corporate interest in developing a linkage with Rae/Edzo.

***Mining companies need to keep in touch with the community after negotiations have been completed***

Based on the community's experiences with mining companies, interviewees stated that they would like closer working relationships with the companies, especially with De Beers. They said that they would like involvement with De Beers from the outset of the Snap Lake Diamond Project development. Some interviewees noted that, after negotiations have been completed and agreements signed, the mine companies often become less involved with the communities and that communication between the company and the community then becomes inhibited. It was stated that companies need to keep in touch after negotiations have been completed and that more open communication is needed.

***Employment training should happen sooner and commitments should be met***

Community members of Rae/Edzo suggested that employment training should be timely, so that a trained work force is available during the operations phase. They also suggested that training should be provided for positions that are not entry level. Interviewees stressed that mine companies need to keep the commitments they make with regards to training and employment.

***The qualified members have been hired by the mining companies***

Interviewees from Rae/Edzo noted that most of the community's qualified members have been hired by mining companies, leaving a limited number of qualified people in the community.

### **The Yellowknives Dene<sup>10</sup>**

***The Yellowknives Dene are pursuing economic benefits from the mining industry***

The Yellowknives Dene consist of two communities, the N'Dilo First Nation and the Dettah First Nation. The Yellowknives Dene are involved in the mining industry through the development of the Deton'Cho's diamond cutting facility, located in N'Dilo, and through their participation in the review of other mine developments. The Yellowknives Dene are pursuing economic benefits from the mining industry through direct employment and local business contract opportunities.

***Mining activities should result in economic benefits for the Yellowknives Dene people***

The Yellowknives Dene believe that the mining activities should result in economic benefits for their people. They also believe that mining activities

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<sup>10</sup> The Yellowknives Dene were contacted several times to discuss the potential socio-economic impacts of the Snap Lake Diamond Project. However, they declined the request to speak to De Beers consultants directly, and chose to instead deal with these issues during negotiations with the company.

and their own initiatives in the mining industry must ensure the environmental integrity of their lands (Diavik Diamond Mines 1999).

### **North Slave Métis Alliance**

The NSMA is currently involved in the mining industry through the provision of contract services to EKATI™.

*Comprehensive training is essential for enabling participation in local economic activities*

Based on their recent experiences with mining activities, NSMA interviewees stated that comprehensive training is essential for enabling NSMA members to participate in local economic activities. On-the-job training is considered very important, as is the further development of the skills of those currently working. Training programs for NSMA members entering the workforce are also needed to increase employment opportunities. NSMA members want to focus on training and mine industry employment opportunities for youth. They also want to specialize in trades positions and to encourage youth and other members at large to enrol in apprenticeship programs. Interviewees stressed that training programs need to commence before the mine is in operation. Training plans should be discussed with the NSMA and specific positions at the proposed Snap Lake site should be identified well in advance.

*Life skills, money management, and family financing are important for social development*

NSMA members stated that life skills, money management, and family financing are important components for social development. Provision of training in life skills development is considered important to help meaningful, long-term employment for the Métis people.

*There is interest in establishing partnerships*

NSMA members said that they would like to further develop partnerships in the construction, operation, and monitoring of the Snap Lake Diamond Project. The NSMA wish to expand their business opportunities in the mining industry and, as such, seek new business ventures with companies like De Beers.

*Traditional knowledge must be incorporated*

Interviewees expressed the view that the knowledge and wisdom of their Elders and land-users must be considered by De Beers and be incorporated into the economic and social development of the region.

## **5.3.1.2 Community Concerns**

### **5.3.1.2.1 Introduction**

*Community issues and concerns have informed the socio-economic impact prediction and analysis*

Through the interviews with community members and representatives, issues and concerns with the proposed Snap Lake Diamond Project were identified. Together with the experiences and trends in the primary

communities (as presented in Section 5.3.1.1), these issues and concerns constitute important information considered for the socio-economic impact prediction and analysis.

### **5.3.1.2.2 Key Socio-economic Issues and Concerns**

***A summary of  
Aboriginal socio-  
economic  
concerns***

The following is a summary of the socio-economic issues and concerns of the Aboriginal peoples in the primary communities with regards to mineral exploration and mine development.

***Improve standard  
of living with  
minimal costs to  
communities and  
the land***

Members of the primary communities, the NSMA, and Aboriginal groups discussed socio-economic concerns of mining and exploration activities. The primary socio-economic concern of these communities and organizations is to ensure the improvement in the quality of life of their people through the creation of jobs, long-term employment, training, and the protection of the land and resources upon which they depend.

***The primary  
communities want  
opportunity  
without  
jeopardizing the  
land***

The primary communities are generally interested in the development of the Snap Lake Diamond Project. Aboriginal groups seek benefits from development projects in the form of long-term employment, training, increased community capacity, business opportunities, and equity sharing. However, the First Nations and Aboriginal organizations seek this overall improved standard of living at minimal costs to their communities and the land. While they support the development of the Snap Lake Diamond Project, they also feel it must not jeopardize the Aboriginal peoples' relationship with the land and their ability to carry out traditional land use practices.

***Specific concerns  
are discussed***

Major specific concerns are discussed in the following sub-sections. Some approaches to addressing these concerns, as expressed in the interviews and consultation meetings, are also presented.

### **Employment**

***Long-term  
employment over  
a broad range of  
jobs is desired***

One of the most important socio-economic concerns for the First Nation and Aboriginal organizations is the attainment of meaningful and long-term employment (*i.e.*, employment that is appropriate for employees' skill level and career interests, and which allows for training and advancement opportunities) in every sector of the economy. The hiring of Aboriginal people and northerners for the broadest range of jobs needs to be pursued.

***Employment and  
employment  
programs should be  
provided  
preferentially to the  
primary communities***

Communities would like to see preferential hiring for Aboriginal people in the primary communities. Some people feel that they do not have the same access to employment opportunities within the mining industry as other

groups and non-natives. At the same time, community members feel that hiring should be done on an equal basis among the primary communities. The objective would be to ensure that the communities consistently have equal job opportunities and training at the mine, so that income disparities between individuals and communities are kept to a minimum.

***A focus on youth education and employment programs is desired***

The Dene and the Métis want various segments of their societies to share the benefits of mine employment opportunities. As such, the communities want to focus on youth employment programs to encourage Aboriginal youth to seek employment opportunities in mining. High school students, youth who have dropped out of high school, and university and college students should all be sought out. Communities would also like companies to provide university and college students with summer employment opportunities.

***Stability in employment is often linked to education and skill development***

Stability in employment is often linked to education and skill development. Aboriginal communities feel that they will benefit much more from their relationship with De Beers if training and education programs are provided that better prepare Aboriginal people for the lifestyle changes they will likely experience by engaging in wage employment.

***A listing of jobs has been requested***

Communities would like a listing of the jobs that will be available at the Snap Lake Diamond Project in order to plan for such positions. Communities would like De Beers to work with local human resource personnel on employment and training initiatives.

***Progress should be monitored jointly***

A joint process to evaluate and monitor the hiring of Aboriginal people is also desired. This would ensure that Aboriginal people are employed in meaningful jobs with the opportunity of advancement. Long-term efforts among government, industry, and communities are required to achieve these objectives.

## **Training**

***The effective implementation of appropriate training will require co-operation between government, communities, and industry***

First Nations and Aboriginal organizations seek strong commitment from industry and government to provide appropriate training programs for all sectors in the workforce. Appropriate training means training that is designed and delivered to specifically meet the needs of the targeted population. In this sense, appropriate training must be financially and geographically accessible and culturally appropriate. The effective development and implementation of relevant training courses will require co-operation between government, communities, and industry.



***Training programs need to be comprehensive***

Community representatives stressed that training programs need to be comprehensive. Comprehensive training means that different training programs be complementary and coordinated, rather than *ad hoc*, fragmented, and funding dependent. It is an approach that ensures on-going training opportunities towards employment. It was pointed out that training needs to be relevant and appropriate both in substance and delivery.

***Pre-employment and on-the-job training is needed***

Community members feel that both pre-employment and on-the-job-training are necessary to create a stable and growing Aboriginal mining workforce. Pre-employment training programs should be available prior to the construction of the mine, so that Aboriginal and northern workers can be a part of the construction workforce. On-the-job-training should be provided to further develop the skills of those currently employed at the mine. A community-based approach to training should be taken wherever possible, in order to make training accessible to the greatest number of community members.

***Apprenticeship training programs are desired***

First Nations and Aboriginal groups would like their members to be trained and hired for skilled positions. There is interest among the communities in supervisory and trades positions. As such, the provision of apprenticeship training programs is also desired.

***Increased organizational capacity and institutional strengthening of the primary communities is needed***

Increased organizational capacity and institutional strengthening of the primary communities is needed to ensure future participation of Aboriginal and northern people in all levels of the economy. This is an important issue for the communities, as there is concern that all trained and qualified community members will leave the community and seek employment elsewhere. This would leave the communities with little capacity within the workforce.

**Life Skills*****Life skills training will enable Aboriginal people to adapt to the wage economy***

As skills development and participation in the wage economy increases, life skills must also be developed to enable Aboriginal and northern people to capture and retain employment opportunities. Life skills provide a foundation for individuals and families to function well in an environment where the wage economy plays an important role. Communities, in cooperation with government and industry, must ensure that appropriate and relevant life skills training occurs.

***Pre-existing social conditions should be addressed***

First Nations and Aboriginal groups feel that life skills training must address the pre-existing community social conditions. Community members identified money management, family financing, family separation

counselling, cross-cultural awareness, and addiction counselling (alcohol, drug use, and gambling). Training in these life skills would help prepare community members for more specific training.

## **Education**

### ***Adequate educational opportunities needed***

Primary community members are concerned with ensuring provision of adequate education opportunities to their people. This concern has both a short- and a long-term focus.

### ***The short-term focus is to upgrade existing education levels***

The short-term focus is on upgrading personal education levels, as well as developing alternative means of providing education to the current workforce. Community-based adult education and literacy programs are seen as an effective way of providing upgrading services to community members. Mine employees stated that they would like to participate in upgrading courses and training in the evenings.

### ***The long-term focus is to keep students in school longer***

The long-term focus is on career planning and making education more relevant and accessible to community members. Community members want education programs to be offered at various levels and in a broad range of disciplines. There is particular concern with keeping students in school to successfully graduate. There is also interest in increasing the enrolment of students in post-secondary learning institutions, and providing them with employment opportunities within or near their home community. These concerns are particularly important since jobs in the mining industry usually require at least a grade 10 education, and often grade 12 or higher.

### ***The primary responsibility lies with government***

The primary responsibility for providing education rests with the government. Community based adult education and upgrading programs, as well as upgrading courses provided on-site by the mining industry, can also play a role in helping individuals increase their levels of educational achievement.

## **Business Opportunities**

### ***Business opportunities, including partnerships, are desired for both mining and non-mining activities***

Residents in the primary communities want more business opportunities that will further improve the employment levels, skills development, financial stability, and overall economic sustainability of the communities. Communities and Aboriginal groups seek business contracts for mine related activities and activities not directly related to Snap Lake Diamond Project. Social equity may be enhanced by promoting economic development and employment opportunities in the communities. Community members would like to engage in partnerships with De Beers to carry out some of the potential business opportunities.

## Family

*Support services are needed on-site and in the community to address family stability*

The stress of family separation due to shift rotation work must be addressed through appropriate support services for all family members. Community members have suggested that support services need to be offered both on site for mine employees and in communities for spouses or common law partners and children. Couples counselling is also needed. Community members emphasize that the design of shift rotation work schedules must reflect this very serious concern with family stability.

## Aboriginal Cultures

*Aboriginal people from the primary communities have suggested four ways that their culture, language, and traditional practices can be preserved*

Aboriginal people in the primary communities have identified the protection of their culture, language, and traditional practices as a concern. Protection can be achieved by integrating their culture in training and education programs, and in employment circumstances. Interviewees suggested the following four approaches to reinforcing culture, language, and traditional practices.

- 1) Community and cultural events can be supported by financial and logistical assistance and/or promotion.
- 2) Cultural and traditional practices can be recognized during project construction and operations (*e.g.*, by allowing time off to pursue cultural and traditional activities).
- 3) Traditional tasks related to resource gathering (*e.g.*, fishing and hunting) may be further developed through local community business and service activities.
- 4) Elders can be hired to contribute their ecological knowledge and understanding to enhance impact assessment, monitoring, and management.

*Aboriginal people strongly advocate the use of traditional knowledge*

The First Nations and Aboriginal groups feel strongly that traditional knowledge must be used in the assessment, monitoring, management, and mitigation of mine impacts. The use of traditional knowledge allows for Aboriginal perspectives and values to be incorporated into the project. It also enhances the understanding of issues such as the interactions of people with their local environment.

## Traditional Resource Use

*The potential loss of fishing and hunting opportunities is a concern*

Aboriginal groups and First Nations have clearly articulated their concern over the potential loss of fishing and hunting opportunities and habitat, due to potentially decreased availability and access to fish and wildlife, as a

result of diamond mining activities. Community members would face an economic loss related to higher food expenses. They would face social losses, in terms of any loss of traditional practices and a change in diet. Most groups and First Nations also feel that they should be financially compensated for any loss in the availability of fish and wildlife resulting from diamond mining activities.

***Effects of diamond mining on caribou are a concern***

First Nations and Aboriginal organizations are unanimous in their concern over the potential adverse effects of diamond mining on caribou herds and caribou habitat. Any effect on caribou is seen as an adverse effect on the people of the primary communities. Caribou are economically important as a food source. Hunting of caribou is a socially important traditional practice.

***A joint monitoring program that includes traditional knowledge is recommended***

To minimize any effects on caribou, First Nations and Aboriginal organizations strongly recommended that a joint Aboriginal and government monitoring plan be designed and implemented. First Nations believe that the plan should be a community-based program that incorporates traditional knowledge.

***Sites of cultural and spiritual importance need to be protected***

Many community members feel that traditional use areas for fishing and hunting, caribou migration routes, burial sites, historical sites, and sites of cultural and spiritual importance need to be protected. It was emphasized that these sites are of social and cultural importance for the people living in the primary communities.

### **Contamination and Environmental Integrity**

***Possible contamination of land, water, and wildlife is a concern***

First Nations and Aboriginal organizations identified possible contamination of land, water, and wildlife, as well as the potential impacts of possible contamination on people. Specifically, community members identified the long-term effects of contamination on a decline in wildlife consumption and harvesting, and the limited ability to carry out traditional practices, as major socio-economic concerns. Interviewees stressed the need to ensure both the short and long-term environmental integrity of the surrounding area.

***Long-term effects of hazardous materials, especially effects of spills are a concern***

Many First Nations and Aboriginal groups expressed concern over the leakage, management, transportation, and long-term effects of hazardous materials on the land, water, and wildlife. Community members also raised the concern about hazardous materials being spilled enroute to and from the site, and any potential impacts in the form of a decline in traditional practices and the degradation of wildlife habitat.

***Land should be reclaimed***

First Nations believe that, although the reclamation of lands is not a solution to eliminating impacts of mining activities, it still should occur. Lands should be cleaned up and revitalized to allow for continued traditional land use practices.

### **5.3.1.3 Other Key Stakeholders**

***Stakeholder groups represent a variety of interests***

Large development projects such as the Snap Lake Diamond Project bring about a range of impacts that are of particular concern to interest groups. A number of stakeholder groups are based in Yellowknife, representing a variety of interests from the private, public, and non-governmental sectors. This section presents the various socio-economic concerns of a selection of these groups, with regards to mineral exploration and mine development of the Snap Lake Diamond Project. The issues and concerns have been organized by sector: private, public, and non-governmental.

#### **5.3.1.3.1 Private Sector**

***Private sector is identified***

Stakeholder groups representing the private sector were the NWT and Nunavut Chamber of Mines, the NWT Construction Association, and the Yellowknife Chamber of Commerce.

***Private sector supports the Snap Lake Diamond Project***

Private sector groups are supportive of the Snap Lake Diamond Project. They feel that the greatest impact of the project will be improved economic development opportunities in Yellowknife and the north. Opportunities will occur through the expansion of existing businesses and further infrastructure development and construction. Private sector representatives stated that mining is an important part of the economy in Yellowknife. However, representative also stated that mining could play an even larger role if a greater portion of the mine project labour pool lived in the city.

***The need for greater emphasis on the development of trades people is identified***

Private sector representatives identified a need for greater emphasis on the development of trades people and employment in the construction industry in the NWT. As well, the need for more funding of training programs was identified. It was suggested that communities need to be more involved in training programs. The mining industry has created the mine training committee that consists of industry, educators, and Aboriginal people. Members of this committee feel that the main focus should be on pre-employment programs such as the mining trades access program that offers entry-level upgrading and training for skilled trades.

***Families need support in their adjustments to the rotational shift work schedule***

It was suggested that families in the employment catchment communities need support in their adjustments to the rotational shift work schedule. Companies need to ensure that potential employees and their families understand the demands of the 2/2 shift rotation. It was also suggested that employees must make adjustments to their lifestyle in order to adapt to working outside of their residential community.

***Greater emphasis should be placed on moving employees to the NWT***

Private sector groups expressed concern that there are not enough northern workers to satisfy the labour demands of the mine project. A greater emphasis should be placed on encouraging employees to live in the north. There is also a need to provide support and assistance to employees moving to the north.

***Yellowknife needs to upgrade and increase the number of housing units***

In order to accommodate the increased number of residents in the north, the housing units available in Yellowknife need to be upgraded and the number of units needs to be increased. Additionally, the city should implement a strategy to develop new facilities and to improve the education system<sup>11</sup>.

***More emphasis should be placed on the northern content policy***

Private sector representatives believe that spending in the north needs to be increased. To ensure a focus on the needs of the north, decisions concerning development projects should be made in the north and more emphasis should be placed on the northern content policy. This policy should create maximum opportunities for northerners and northern businesses.

### **5.3.1.3.2 Public Sector**

***Three levels of government were consulted***

Stakeholder groups representing the public sector included the city of Yellowknife, the GNWT, and the federal government. All three levels of government were asked for their input on socio-economic issues and concerns.

***The public sector representatives showed general support for the project***

The public sector representatives showed general support for the project, on the following conditions:

- De Beers will work with the public sector to ensure that benefits accrue to northern communities; and,
- mitigation measures are in place to decrease any negative impacts.

<sup>11</sup> In a study of the rental market for October 2001, figures showed that the housing vacancy rate in the city of Yellowknife was near zero (CMHC 2001).

***Social problems may increase with increased levels of wage income***

Public sector representatives expressed particular concern for the potential increase in social problems associated with increased levels of wage income. They were also concerned that any negative effects (*e.g.*, alcoholism, drug addiction, spousal abuse) that are not resolved through mitigation will have to be dealt with by the GNWT. It was suggested that emphasis be placed on monitoring for adaptive management and life skills training.

***Mining companies should focus on mining job training and on-the-job training***

It was expressed that there are not enough people in the north to satisfy the labour demands of the mining project. Companies should focus on mining job training and on-the-job training. The public sector representatives wanted De Beers to endorse a policy that would make it mandatory for their employees to live in the north (as is currently the policy of some mining companies). Public sector representatives were concerned that contracts are often not attainable by many northern companies.

### **5.3.1.3.3 Non-governmental Women's Organizations**

***Two women's organizations provided input***

Interviews were conducted with two non-governmental women's organizations: The Status of Women Council and the Native Women's Association. In addition, publications and annual reports from The Status of Women Council were reviewed.

***Families may achieve a higher standard of living***

Representatives of the women's groups felt that, with the increase in employment and income generated by the project, families may achieve a higher standard of living. In addition, mine employment could potentially create a more positive sense of well being and enable positive role modelling.

#### **Pre-existing Conditions**

***Mining activities could exacerbate certain pre-existing dysfunctional conditions***

The women's organizations representatives expressed great concern with the many social problems that currently exist in communities, including substance abuse, drug addiction, suicide rates, teen pregnancy, fetal alcohol effect (FAE), fetal alcohol syndrome (FAS), sexual abuse, HIV/Aids, and Hepatitis C. They stated that mining activities could exacerbate some of these pre-existing dysfunctional conditions in the communities. The interviewees emphasized that, first and foremost, some of these pre-existing conditions in the communities must be addressed in order to create a stable and healthy Aboriginal workforce.

***Women seeking employment face several barriers***

Members of the women's groups stated that mining companies need to focus on creating workplaces that are culturally sensitive and that encourage women to work in non-traditional jobs. A specific issue that needs to be addressed is harassment on the job. Women seeking employment currently face such issues as low pay, limitations as to the location and areas where

they can get jobs, and costs and inaccessibility of child care. It was reported that there is a lack of information for women on career possibilities as well as access to informal hiring networks.

### **Training Issues**

***Need for training programs for women***

The women's organizations representatives stressed the need for training programs for women. It was suggested that workshops be created for women to work with other women in communities to reach employment goals. To further this idea, it was also suggested that mining companies develop role model and mentorship programs and that career development workers should focus specifically on women. Members of the women's groups reported that they would like to cooperate with mining companies to develop training programs toward mining industry employment for women.

***The 2/2 work rotation schedule is problematic for women***

The members of the women's organizations explained that the 2/2 work rotation schedule is problematic for women and is disruptive to families. It is particularly difficult for women to be away from their children for extended periods of time.

***Money management counselling services should be provided***

Another major concern of women is the lack of access to income. There are no banking services in the communities and women often do not have access to money. Members from both women's organizations suggested that money management counselling services should be provided.

## **5.3.2 Economic Impact Assessment**

***Snap Lake Diamond Project will create jobs, business opportunities, and royalty payments***

The following section provides a detailed review of the economic impact that would result from the Snap Lake Diamond Project development. When developed, the project will create 450 construction jobs and in excess of 500 jobs during the operation of the mine facility. Job opportunities will largely accrue to the primary communities with the result being changes in the economic circumstance of many families of those communities as well as the communities themselves. Given that the mine is a major development project, it is expected to be a catalyst for benefiting Aboriginal and northern business. The development will also generate considerable taxes and royalty payments for the government of Canada and for the GNWT. This economic analysis section documents the total employment that will result as well as the contribution to labour income and the gross domestic product (GDP). GDP is the market value of all final goods and services produced domestically in a single year and is the single most important measure of economic performance. The economic impacts on the primary communities, the GNWT, and Canada are also discussed.



*Economic impacts at the national and NWT levels are provided*

The economic impact analysis provides information on the economic impacts of the Snap Lake Diamond Project at the national and NWT levels. The economic impacts have been estimated for the construction, operation, and mine closure phases of the project based on the pre-feasibility data for these three phases. The operations phase is based on 3,000 tonnes/day production.

### 5.3.2.1 Models and Assumptions

*Employment, gross domestic product, and labour income were estimated*

Three variables were measured to determine the impacts: employment; GDP; and labour income. The economic impact modelling was done in conjunction with the NWT Bureau of Statistics and Statistics Canada. Established input-output (IO) models and methodology were used.

#### 5.3.2.1.1 Input-output Models

*Input-output models are used to estimate total economic impact of the project*

The NWT Bureau of Statistics' IO model is a structural model of the NWT economy. The Statistics Canada inter-provincial IO model represents the national economy. The models were used to estimate the total economic impact of the Snap Lake Diamond Project, presenting estimates of direct, indirect, and induced economic impacts associated with the project. Based on the observed inter-connection between industries in the economy, the multiplying of demand is traced through these industrial linkages to yield a set of aggregate economic impacts.

*The models measure direct, indirect, and induced impacts*

The IO models measure the following economic impacts:

- **Direct impacts** are the resources (inclusive of contracted resources) purchased by a proponent to meet its production needs.
- **Indirect impacts** are ripple effects that occur when the proponent buys inputs from other firms, and those firms expand production to meet demand.
- **Induced economic impacts** represent the increased production required to meet increased household demand for commodities that is generated by the increased labour income (net of taxes and savings) associated with the increased production.
- **Total open economic impacts** is the sum of direct and indirect impacts.
- **Total closed economic impacts** is the sum of direct, indirect, and induced economic impacts.

### **5.3.2.1.2 NWT Bureau of Statistics Input-Output Model Description**

*The core of the NWT model is three tables: input, output, and final demand*

The Bureau of Statistics' IO model is a structural model of the NWT economy. It is the only model that isolates the NWT from Nunavut. The core of the IO model is a set of three tables (input, output, and final demand), which presents the most detailed accounting of the NWT economy available. The tables together detail the supply and disposition of individual commodities and the commodity composition of the output of industries, and the complete costs of production of industries. The tables comprise detailed information obtained from Statistics Canada's surveys of establishments and enterprises.

*The model simulates a change in the economy*

One of the most common uses of the IO model is to simulate the impact of a demand shock on the economy. The term 'shock' means any change or departure from the status quo; in this case, the changes in demand for goods and services associated with the construction, operation, and closure phases of the Snap Lake Diamond Project. Any increase in consumption of goods and services will generate direct, indirect, and induced economic production.

*The model uses the inter-industrial linkages to track the total production of goods and services*

The IO model simulates the impact of an industry output or final demand shock on the economy, by exploiting the inter-industrial linkages of the input and output tables to track the total production of the goods and services in order to satisfy the output or final demand shock. It indicates which domestic industries were directly responsible for meeting the demand and how much of that demand was siphoned or "leaked" off to foreign imports and other "leakages" such as inventories. This first round of impact is referred to as the direct effects. These direct suppliers will, in turn, purchase goods and services from other industries as inputs. The model repeats this process of purchasing intermediate inputs until the model has identified all the indirect commodities in the full chain of the production process. The accumulation of these rounds of impact is referred to as the indirect effects. The direct and indirect effects combine to form the total open model impacts.

### **5.3.2.1.3 Statistics Canada Input-Output Model**

*The Canadian input-output tables present one of the most complete and detailed frameworks available*

The IO model uses the Canadian IO tables to track and quantify the economic activity generated by changes in consumption or production. The Canadian IO tables present one of the most complete and detailed accounting frameworks of the Canadian economy available. As such, the model has the greatest potential of all major economic models for capturing the flows of goods and services between industries and consumers at relatively detailed levels.

*The input-output model estimates the additional economic activity*

This model also simulates the impact of a demand shock on the economy. The IO model estimates how much total economic activity a new industrial project will generate and which industries or regions will benefit the most.

*The input-output and demand tables consist of 243 industries by 679 commodities*

The Canadian model also consists of input, output, and final demand tables. At the most detailed level, they consist of 243 industries by 679 commodities (including primary inputs, and various margins). Each cell of information in the input table contains the dollar value of the parts, services, raw materials, or labour used up in the production process of the associated industry. The input table provides a detailed breakdown of the total production costs. The output table works in a similar manner, but provides a detailed breakdown of the individual goods and services comprising the industry total output. The final demand table gives detailed information on goods and services that are bought by many categories of buyers (consumers, industries, and government) for both consumption and investment purposes. For convenience, the final demand table includes imports, exports, and non-tax government revenues.

*The method is similar for both models*

The Canadian IO model simulates the impact of a shock or a change in final demand or industry output on the economy by exploiting the inter-industrial linkages. The method is the same as that described for the NWT.

#### **5.3.2.1.4 Tax and Fiscal Impact Model**

*The Government of the Northwest Territories input-output model estimates tax and overall revenue impacts*

Department of Finance, GNWT estimates the tax and overall revenue impacts of projects analyzed by the IO models used by the NWT Bureau of Statistics and Statistics Canada. The tax and fiscal impact model estimates the tax and overall revenue impacts for the GNWT and the government of Canada. The tax and overall revenue impacts on provincial governments are not calculated.

*About 80% of Northwest Territories tax revenues from economic growth are offset by a drop in the federal grant*

Approximately 80% of additional territorial tax revenues arising from economic growth are offset by a drop in the formula financing grant. Net federal fiscal impacts are calculated as incremental tax revenues plus any savings on formula financing grant payments to the NWT.

*Direct, indirect, and induced economic impacts are calculated*

The model estimates tax revenues based on the direct, indirect, and induced economic impacts associated with specific projects. Tax and fiscal impacts, including corporate taxes and NWT mineral royalties, have been included in the impact assessment. Corporate taxes and NWT mineral royalties have been estimated directly by De Beers. The economic impact assessment excludes the security deposit calculation, which will be determined through a subsequent process between government and De Beers.

### 5.3.2.1.5 *Input-output Model Assumptions*

**Key modelling assumptions are identified**

A number of key modelling assumptions were made. The assumptions are based on an analysis of the initial estimate of labour force requirements and potential labour supply in the project labour market area, and the operations at EKATI™ Diamond Mine and the Diavik Diamond Mine. The following key assumptions have been used in the modelling:

- The percentage of workers who will actually reside in the NWT, referred to as “local labour”, are assumed to be 40% during construction, 60% during operations, and 60% during the mine closure phase.
- Resident workers are defined as those who currently live in the NWT and those who move to take up residency in the NWT and work at the mine. Of the percentage estimated to be resident in the NWT, one-half (50%) are likely to be recruited from outside the NWT given the current challenging labour force supply shortage. The 50% estimate applies only to the operation and mine closure phase of the project. These figures are generally consistent with the experience of the EKATI™ Diamond Mine and Diavik Diamond Mine. There is no migration assumed for the construction phase.
- All dollar values presented in the analysis are measured in constant year 2001 dollars.
- All employment figures are expressed as full time equivalencies (FTEs), unless otherwise noted.
- The economic impacts were modelled in two categories: impacts on the NWT; and, impacts on Canada (which include NWT impacts).
- The demographic multiplier used by the NWT Bureau of Statistics to estimate tax and fiscal impacts on the GNWT through the formula grant due to changes in NWT population is 2.2 persons per household based on the profile of mining households from the *1999 NWT Labour Force Survey* (GNWT Bureau of Statistics 1999a).
- Compensation to labour factors of production for construction was assumed to be \$65.80 per hour for 70 hours per week; \$4,606 per week per labour unit for 3 weeks per shift; and, \$13,818 per shift per labour unit for 13 shifts per year to equal \$179,634 per labour unit.
- Compensation to labour factors of production for operations of \$108,206 per year per labour unit is provided by De Beers.
- Compensation to labour factors of production for closure used the same compensation as operations of \$108,206 per year per labour unit. It was assumed that production workers would be employed to undertake de-commissioning and closure activities.

- Fuel was estimated at 80% diesel and 20% propane.
- Construction is assumed to occur over a two year period from 2004 to 2005; the average production expenditure is based on the average expenditures over the period from 2005 to 2026; and, mine closure activities are modelled for the year 2027, based on a total cost of \$25 million. This excludes any potential longer term monitoring costs that may be required.

### **5.3.2.1.6      *Employment and Income***

*There are direct, indirect, and induced employment and income effects*

Employment and income effects will be differentiated as direct (number of mine employees expressed in economic modelling terms as FTEs), indirect (increase in employment by businesses supplying goods and services to the mine), and induced (increase in employment by businesses benefiting from increased expenditures on the part of new employees of the mine and its suppliers).

*The mine will require approximately 500 employees annually during the operation phase*

The Snap Lake Diamond Mine will require approximately 500 employees annually during the operation phase. (Approximately 25 contract employees will also supply services such as catering at the site.) The 500 employees are expressed as FTEs for purposes of economic modelling because the input-output models run on average salary estimates rather than actual workers on site. This economic modelling methodology is accepted by government and industry. During the construction phase, an average of 450 workers, including contracted workers, will be required.

### **5.3.2.1.7      *Economic Impacts***

*Economic impacts are presented in a variety of ways*

The economic impacts of the Snap Lake Diamond Project are presented in terms of employment impacts, GDP impacts, labour income impacts, tax and fiscal impacts, and corporate tax and NWT mineral royalty impacts. Economic impacts are presented as either total over the life of the project (*i.e.*, cumulative) or as average annual figures. Dollar values are rounded to the nearest thousand.

### **5.3.2.1.8      *Tax and Fiscal Impacts***

*The project will have a number of substantial tax and fiscal impacts*

The Snap Lake Diamond Project will have a number of substantial tax and fiscal impacts for the government of Canada and the GNWT. The impact modelling work has included an analysis of the total cumulative tax and fiscal impacts:

- corporate income tax;
- federal surtax;

- taxes;
- grant reduction;
- mineral royalties; and,
- net revenue for government.

### **5.3.2.1.9 Inflation and Cost of Living Impacts**

*Assumptions pertaining to inflation were based on the consumer price index*

The calculations for the economic impact assessment do not make any assumptions about, or provide any adjustments for, inflation or cost of living changes. Based on a preliminary review of consumer price index (CPI) information, inflation was not addressed specifically in the socio-economic assessment. The basis for this assumption is described briefly below.

*The consumer price index is frequently used to measure inflation and cost of living increases*

The CPI is a measure of the rate of price changes for goods and services bought by Canadian consumers. It is obtained by comparing, through time, the cost of a fixed basket of commodities purchased by consumers in a particular year. Since the basket contains commodities of unchanging or equivalent quality and quantity, the index reflects only pure price movements. The CPI is frequently used in Canada to estimate the extent to which this purchasing power of money changes. For these reasons, it is widely used to measure inflation (or deflation).

*The relative change in consumer price index for Yellowknife has remained below that of Canada during EKATI™ and Diavik mine development*

The CPI is provided for major centres in Canada, including Yellowknife. There are no CPI measures for any other communities in the NWT. Examination of the CPI for Canada and Yellowknife for the period 1994 to the end of 2001 indicates that no extraordinary inflationary pressures were experienced in Yellowknife. This includes the period for which the construction and operations impacts of the EKATI™ and Diavik diamond mines would have become evident. The CPI for Canada in 1996 was 105.9 (where the base year 1992 = 100) and 116.4 in 2001. The corresponding numbers for Yellowknife are 108.2 and 113.1 respectively. Also, the relative change in CPI for Yellowknife has remained below that of Canada since 1997. The 2000 inflation rate for Canada and Yellowknife was 2.7% and 1.7% respectively. A combination of changes in public sector and private sector expenditures and employment patterns, as well as other structural changes within the economy, were likely contributing factors.

*Many primary communities have not experienced substantial increases in food prices*

The closest partial measure of the cost of living in the study area, other than Yellowknife, is the “Food Price Survey” conducted by the NWT Bureau of Statistics. Surveys were completed in 1991, 1997, 2000, and 2001, although the results of the 2001 survey were not available from the GNWT at the time of EA submission. Examination of the existing “Food Price Survey” data

from 1997 and 2000 indicates some food cost increases in certain communities in the study area, notably Rae Edzo. However, communities such as Wekweti, Wha Ti, and Lutsel K'e do not appear to have experienced substantial increases in food prices relative to Yellowknife.

*Inflation was not considered further*

Given the lack of any apparent link between CPI with the development of EKATI™ and Diavik Diamond Mines, the potential impact of the Snap Lake Diamond Project on inflation was not considered any further.

### 5.3.2.2 Canada Impacts

*The estimated economic impacts are shown in Table 5.3-1*

Table 5.3-1 presents the estimated economic impacts, as derived from the IO analysis, for Canada and the NWT. The impacts for the construction and the closure phases are presented in their entirety because the two phases are completed in less than two years (2004-2005) and one year (2027), respectively. The operations phase, which occurs over a period of 22 years (2005-2026), is presented in terms of annual impacts. The economic impacts by project phase for Canada overall, which include the associated impacts on the NWT, are presented below. The impacts for the NWT (excluding the rest of Canada), which are also shown in Table 5.3-1 will be discussed in Section 5.3.2.3.

#### 5.3.2.2.1 Construction Phase

*The Snap Lake Diamond Project is proposed to be constructed over a 2-year period at a cost of \$269.9 million*

The Snap Lake Diamond Project is proposed to be constructed over a two-year period, 2004 to 2005, at a cost of some \$269.4 million (Table 5.3-1). Approximately 15% of the total construction cost is for labour income, direct and indirect, in the NWT. The specialized nature of the underground design and equipment requirements result in substantially larger impacts on Canada through indirect and induced employment to provide the various goods and services during the construction phase. The impacts from the construction phase are based on the economic modelling assumption that 60% of the labour required will be from outside the NWT.

*Total employment is estimated at 3,140 jobs*

Total employment impacts for Canada (including the NWT) are estimated at 3,140 jobs expressed as FTEs. Direct project employment is estimated at 220 FTEs. An additional 1,940 indirect FTEs and 980 induced FTEs are expected to result from the project.

*Total labour income is estimated at \$188.8 million*

Total labour income impacts for Canada are estimated at some \$188.8 million. Direct project labour income is \$39.4 million. An additional \$102.3 million is attributable to indirect labour and \$47.1 million to induced labour income.

**Table 5.3-1 Economic Impacts of the Snap Lake Diamond Project**

Timing	Canada Impacts			NWT Impacts		
	Total Construction	Annual Operations	Total Mine Closure	Total Construction	Annual Operations	Total Mine Closure
	2 Years: 2004-2005	22 Years: 2005-2026	1 Year: 2027	2 Years: 2004-2005	22 Years: 2005-2026	1 Year: 2027
<b>Total Expenditure (\$'000)</b>	<b>269,400</b>	<b>n/a</b>	<b>25,000</b>	<b>269,400</b>	<b>n/a</b>	<b>25,000</b>
<b>Average Annual Expenditure (\$'000)</b>	<b>n/a</b>	<b>120,700</b>	<b>n/a</b>	<b>n/a</b>	<b>120,700</b>	<b>n/a</b>
<b>Local Labour Assumption (%)</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>40</b>	<b>60</b>	<b>60</b>
<b>Employment Impacts (Number of Jobs)</b>						
Direct project employment	220	500	110	220	500	110
Indirect	1,940	640	140	560	260	40
Total open	2,160	1,140	250	780	760	150
Induced	980	520	120	220	170	30
Total closed	3,140	1,660	370	1,000	930	180
<b>Gross Domestic Product Impacts (\$'000)</b>						
Direct project GDP	39,436	56,361	11,317	39,436	56,361	11,317
Indirect	144,498	42,055	9,043	62,828	20,495	3,050
Total open	183,934	98,417	20,360	102,264	76,856	14,367
Induced	77,443	42,450	9,246	26,034	19,787	3,758
Total closed	261,378	140,867	29,606	128,298	96,643	18,125
<b>Labour Income Impacts (\$'000)</b>						
Direct project labour income	39,436	53,995	11,317	39,436	53,995	11,317
Indirect	102,260	28,239	6,103	46,067	14,605	2,137
Total open	141,696	82,234	17,420	85,503	68,600	13,454
Induced	47,075	25,669	5,595	16,544	12,574	2,388
Total closed	188,771	107,903	23,015	102,047	81,174	15,843

Note 1: Primary data source: Snap Lake Diamond Project pre-feasibility study.

Note 2: Impacts for Canada include NWT impacts, but no impacts for Nunavut.

Note 3: "Direct Project" impacts represent direct exogenous impacts; while "Indirect" impacts represent both direct endogenous and indirect endogenous impacts.

Note 4: Employment estimates are rounded to the nearest 10.

Note 5: Economic impacts were assessed on October 19, 2001.



***Total gross domestic product is estimated at \$261.4 million***

The total GDP for Canada is estimated at \$261.4 million. Direct project GDP will total \$39.4 million. Indirect GDP is estimated at \$144.5 million, while induced GDP accounts for some \$77.4 million.

### **5.3.2.2.2 Operations Phase**

***The mine is projected to have annual expenditures of \$120.7 million for 22 years***

The Snap Lake Diamond Mine is projected to have an operating life of 22 years from 2005 to 2026. Average annual expenditures are estimated at \$120.7 million (Table 5.3-1).

***34,940 person years of employment will result from mine related activities***

Annual employment impacts for Canada are estimated at 1,660 FTEs. Direct project employment is estimated at 500 FTEs. An additional 640 indirect FTEs and 520 induced FTEs are expected to result from the project (Table 5.3-1). Non-resident labour will be reduced to 40% during the operation phase

***Annual labour income impacts for Canada during the operations phase are \$107.9 million***

Annual labour income impacts for Canada during the operations phase are estimated at some \$107.9 million. Direct project labour income will be \$54.0 million. An additional \$28.2 million is attributable to indirect labour and \$25.7 million to induced labour.

***Annual gross domestic product for Canada is estimated at \$140.9 million***

The total annual GDP for Canada is estimated at \$140.9 million. Direct project GDP will total \$56.4 million annually. Indirect GDP is estimated at \$42.1 million annually, while induced GDP accounts for some \$42.5 million annually.

### **5.3.2.2.3 Mine Closure Phase**

***Closure will cost \$25 million***

The closure of the Snap Lake Diamond Mine will take place over a one year period, in 2027, at a cost of some \$25.0 million. This excludes any potential longer term monitoring costs that may be required.

***Total employment is estimated at 370 full-time equivalents***

Total employment impacts for Canada are estimated at 370 FTEs. Direct project employment is estimated at 110 FTEs. An additional 140 indirect FTEs and 120 induced FTEs are expected as a result of the mine closure activities.

***Total labour income is estimated at \$23.0 million***

Total labour income impacts for Canada are estimated at some \$23.0 million. Direct project labour income is \$11.3 million. An additional \$6.1 million in indirect labour and \$5.6 million in labour income is attributable to induced labour.

*The gross domestic product is estimated at \$29.6 million*

The total GDP for Canada is estimated at \$29.6 million. Direct project GDP will total \$11.3 million. Indirect GDP is estimated at \$9.0 million, while induced GDP accounts for some \$9.3 million.

#### 5.3.2.2.4 Overall Canada Cumulative Economic Impacts

*Cumulative impacts for all three phases are shown in Table 5.3-2*

Table 5.3-2 presents the estimated total cumulative impacts from Table 5.3-1 for the period 2004-2027 for Canada and for the NWT. The Canadian cumulative impacts are discussed here; the NWT impacts are discussed in Section 5.3.2.3. Table 5.3-2 represents a summation of the tax and fiscal impacts for all three phases.

**Table 5.3-2 Total Cumulative Economic Impacts (2004-2027) of the Snap Lake Diamond Project**

	Canada Impacts	NWT Impacts
<b>Employment Impacts (#)</b>		
Direct project employment	10,860	10,860
Indirect	15,560	6,100
Total open	26,420	16,960
Induced	12,020	3,820
Total closed	38,440	20,780
<b>Gross Domestic Product Impacts<sup>1</sup> (\$'000)</b>		
Direct project GDP	1,240,294	1,240,294
Indirect	1,041,144	498,432
Total open	2,281,438	1,738,726
Induced	982,628	447,409
Total closed	3,264,065	2,186,135
<b>Labour Income Impacts<sup>1</sup> (\$'000)</b>		
Direct project labour income	1,190,349	1,190,349
Indirect	704,365	356,452
Total open	1,894,714	1,546,801
Induced	594,429	284,317
total closed	2,489,143	1,831,118

Note 1: Employment estimates are rounded to the nearest 10.

Note 2: Canada impacts include NWT impacts.

Note 3: Cumulative economic impacts include the impacts from the construction, operations and closure phases.

Note 4: Total cumulative economic impacts were assessed on October 19, 2001.

<sup>1</sup> These calculations do not make any assumptions about, or provide any adjustments for inflation or cost of living changes.

*Direct and total cumulative impacts are shown in Table 5.3-2*

The direct and total (direct, indirect, and induced) cumulative economic impacts for Canada are shown in Table 5.3-2. Direct project impacts

include employment, GDP, and labour income of 10,860 FTEs, \$1.24 billion, and \$1.19 billion, respectively. The total of direct, indirect, and induced impacts include employment, GDP, and labour income of 38,440 FTEs, \$3.264 billion, and \$2.489 billion, respectively.

### 5.3.2.3 Northwest Territories Impacts

*Impacts on the Northwest Territories are also on Table 5.3-1*

Presented below are the economic impacts by project phase for the NWT, excluding the associated impacts on the rest of Canada. These impacts are also shown in Table 5.3-1.

#### 5.3.2.3.1 Construction Phase

*Mine construction will cost \$269.4 million*

The Snap Lake Diamond Project is proposed to be constructed over a two-year period at a capital cost of some \$269.4 million.

*Total employment impacts for the Northwest Territories is estimated at 1,000 jobs*

Total employment impact for the NWT is estimated at 1,000 jobs expressed as FTEs. This represent 32% of the total employment impacts for Canada overall. Direct project employment is estimated at 220 FTEs. An additional 560 indirect FTEs and 220 induced FTEs are expected to result from the project.

*Total labour income impact for the Northwest Territories is estimated at some \$102.0 million*

Total labour income impact for the NWT is estimated at some \$102.0 million. This represents nearly 54% of the total labour income impact for Canada overall. Direct project labour income will be \$39.4 million. An additional \$46.1 million will be attributable to indirect labour and \$16.5 million to induced labour income.

*Total gross domestic product for the Northwest Territories is estimated at \$128.3 million*

The total GDP for the NWT is estimated at \$128.3 million. This represents some 49% of the total GDP impact for Canada overall. Direct project GDP will total \$39.4 million. Indirect GDP is estimated at \$62.8 million, while induced GDP will account for some \$26.0 million.

#### 5.3.2.3.2 Operations Phase

*Estimated annual expenditure is \$120.7 million*

The Snap Lake Diamond Mine is projected to have an operating life of 22 years. Average annual expenditures are estimated at \$120.7 million.

*Annual employment impacts for the Northwest Territories will be 930 full time equivalencies*

Annual employment impacts for the NWT are estimated at 930 FTEs. Direct project employment is estimated at 500 FTEs. An additional 260 indirect FTEs and 170 induced FTEs are expected to result from the project. In the NWT, nearly 19,610 person years of employment are expected to

result from mine related activities that are attributable to the 22 year operations phase of the project.

*Annual labour income impacts for the Northwest Territories are estimated*

Annual labour income impacts for the NWT during the operations phase are estimated at some \$81.2 million. This represents 75% of the total labour income impact on Canada. Direct project labour income will be \$54.0 million. An additional \$14.6 million will be attributable to indirect labour and \$12.6 million to induced labour income.

*Annual gross domestic product for the Northwest Territories will be \$96.6 million*

The total annual GDP for the NWT is estimated at \$96.6 million. Direct project GDP will total \$56.4 million annually. This represents 69% of the total GDP impact on Canada. Indirect GDP is estimated at \$20.5 million, while induced GDP will account for some \$19.8 million annually.

### **5.3.2.3.3 Mine Closure Phase**

*Mine closure will take one year and cost \$25.0 million*

The closure of the Snap Lake Diamond Mine will take place over a one year period, in 2016, at a cost of some \$25.0 million. This excludes any potential longer term monitoring costs that may be required.

*Total Northwest Territories employment impacts of 180 full time equivalents estimated*

Total employment impacts for the NWT are estimated at 180 FTEs. Direct project employment is estimated at 110 FTEs. An additional 40 indirect FTEs and 30 induced FTEs are expected as a result of the mine closure activities.

*Total Northwest Territories labour income impacts of \$15.8 million estimated*

Total labour income impacts for the NWT are estimated at some \$15.8 million. Direct project labour income will be \$11.3 million. An additional \$2.1 million will be attributable to indirect labour and \$2.4 million to induced labour income.

*Gross domestic product for the Northwest Territories estimated at \$18.1 million total*

Total GDP for the NWT is estimated at \$18.1 million. Direct project GDP will total \$11.3 million. Indirect GDP is estimated at \$3.1 million, while induced GDP will account for some \$3.8 million.

### **5.3.2.3.4 Overall NWT Cumulative Economic Impacts**

*20,780 total employment impacts and \$2.186 billion in total gross domestic product impacts are expected*

The overall cumulative economic impacts for the NWT over the life of the mine are presented in Table 5.3-2. The cumulative impacts for the construction, operations and closure phase are shown for employment, GDP, and labour income. Direct project impacts include employment, GDP, and labour income of 10,860 FTEs, \$1.24 billion, and \$1.19 billion, respectively (Table 5.3-2). The total of direct, indirect, and induced impacts include

employment, GDP, and labour income of 20,780 FTEs, \$2.186 billion, and \$1.831 billion, respectively (Table 5.3-2).

### **5.3.2.3.5 Tax and Fiscal Impacts**

*The project will have a number of substantial tax and fiscal impacts for federal and territorial governments*

The Snap Lake Diamond Project will have a number of substantial tax and fiscal impacts for the government of Canada and the GNWT. The following four tables show the tax and fiscal impacts on an annual and cumulative basis.

*Table 5.3-3 presents the estimated tax and fiscal impacts*

Table 5.3-3 presents the estimated tax and fiscal impacts for the federal and NWT governments, as derived from the tax and fiscal impacts model. The impacts for the construction and the closure phases are presented in their entirety. The operations phase, which occurs over a period of 22 years (2005-2026), is presented in terms of annual impacts. The "other taxes" category is comprised of the following taxes: personal income tax; employment insurance premiums; payroll tax; fuel taxes; property tax; goods and services tax; and tobacco taxes. This category does not include corporate income taxes and mineral royalties, or the potential incremental impact from migration of people into the NWT.

*Table 5.3-4 presents the cumulative tax and fiscal impacts*

Table 5.3-4 presents the estimated cumulative impacts from Table 5.3-3, by project phase, for the period 2004-2027 for the federal government and GNWT. As well, a separate total cumulative impact table that represents a summation of the tax and fiscal impacts for all three phases is included. The federal government will receive an estimated total of \$493.8 million in other taxes over the life of the project. The GNWT will receive a total of \$128.9 million (Table 5.3-4).

*The components in Table 5.3-5 were estimated by De Beers*

Table 5.3-5 presents the estimate of cumulative corporate income tax, federal surtax, and mineral royalties to be paid by De Beers on the proposed Snap Lake Diamond Mine. De Beers derived the estimates for all three components and utilized these estimates in the modelling assumptions and procedures.

*Corporate income tax will be \$442.8 million*

The federal government will receive an estimated total of \$442.8 million in corporate income tax over the life of the project. The GNWT will collect some \$221.8 million (Table 5.3-5).

*Federal surtax will be \$17.7 million*

The federal government will collect some \$17.7 million through the federal surtax. There is no surtax payable to the GNWT (Table 5.3-5).

**Table 5.3-3 Tax and Fiscal Impacts of the Snap Lake Diamond Project**

Timing	Federal Government Impacts			Government of the NWT Impacts		
	Total Construction	Annual Operations	Total Mine Closure	Total Construction	Annual Operations	Total Mine Closure
	2 Years: 2004-2005	22 Years: 2005-2026	1 Year: 2027	2 Years: 2004-2005	22 Years: 2005-2026	1 Year: 2027
<b>Total Expenditure ('000)</b>	<b>\$269,400</b>	<b>n/a</b>	<b>\$25,000</b>	<b>\$269,400</b>	<b>n/a</b>	<b>\$25,000</b>
<b>Average Annual Expenditure ('000)</b>	<b>n/a</b>	<b>\$120,700</b>	<b>n/a</b>	<b>n/a</b>	<b>\$120,700</b>	<b>n/a</b>
	(\$'000)			(\$'000)		
Taxes	35,570	21,505	4,401	6,373	5,769	766
Grant reduction	..	..	..	-5,092	-4,609	-612
Savings on NWT grant	5,092	4,609	612	..	..	..
Net revenues	40,662	26,114	5,013	1,281	1,160	154

Note 1: Estimates of "taxes" were determined by the Department of Finance, Government of the Northwest Territories (GNWT).

Note 2: "Taxes" does not include corporate income taxes and mineral royalties.

Note 3: "Taxes" is comprised of the following taxes: personal income tax; employment insurance premiums; payroll tax; fuel taxes; property tax; goods and services tax; and tobacco taxes.

Note 4: Federal government and GNWT tax and fiscal impacts are mutually exclusive from one another.

Note 5: It is assumed that for the operations phase 50% of the local labour component will come from in-migration to the Northwest Territories (NWT).

Note 6: Total tax and fiscal impacts does not include potential incremental GNWT per capita transfers related to in-migration.

Note 7: Tax and fiscal impacts were assessed on October 19, 2001.

**Table 5.3-4 Cumulative Tax and Fiscal Impacts (2004-2027) of the Snap Lake Diamond Project**

Timing	Federal Government Impacts			Government of the NWT Impacts		
	Total Construction	Annual Operations	Total Mine Closure	Total Construction	Annual Operations	Total Mine Closure
	2 Years: 2004-2005	22 Years: 2005-2026	1 Year: 2027	2 Years: 2004-2005	22 Years: 2005-2026	1 Year: 2027
<b>Total Expenditure ('000)</b>	<b>\$269,400</b>	<b>n/a</b>	<b>\$25,000</b>	<b>\$269,400</b>	<b>n/a</b>	<b>\$25,000</b>
<b>Average Annual Expenditure ('000)</b>	<b>n/a</b>	<b>\$120,700</b>	<b>n/a</b>	<b>n/a</b>	<b>\$120,700</b>	<b>n/a</b>
	(\$'000)			(\$'000)		
Taxes	35,570	453,876	4,401	6,373	121,759	766
Grant reduction	..	..	..	-5,092	-97,283	-612
Savings on NWT grant	5,092	97,283	612	..	..	..
Net revenues	40,662	551,159	5,013	1,281	24,475	154

<b>TOTAL CUMULATIVE IMPACTS</b>	<b>Federal Government (\$'000)</b>	<b>GNWT (\$'000)</b>
Taxes	493,848	128,897
Grant reduction		-102,987
Savings on NWT grant	102,987	
Net revenues	596,835	25,910

Note 1: Estimates of "taxes" were determined by the Department of Finance, Government of the Northwest Territories (GNWT).

Note 2: "Taxes" does not include corporate income taxes and mineral royalties.

Note 3: "Taxes" is comprised of the following taxes: personal income tax; employment insurance premiums; payroll tax; fuel taxes; property tax; goods and services tax; and tobacco taxes.

Note 4: Federal government and GNWT tax and fiscal impacts are mutually exclusive from one another.

Note 5: It is assumed that for the operations phase 50% of the local labour component will come from in-migration to the Northwest Territories (NWT).

Note 6: Total tax and fiscal impacts does not include potential incremental GNWT per capita transfers related to in-migration.

Note 7: Cumulative tax and fiscal impacts were assessed on October 19, 2001.

**Table 5.3-5 Cumulative Corporate Income Tax and Royalty Impacts (2004-2027) of the Snap Lake Diamond Project**

<b>CUMULATIVE IMPACTS 2004-2027</b>	<b>Federal Government (\$'000)</b>	<b>GNWT (\$'000)</b>
Corporate income tax	442,826	221,754
Federal surtax	17,740	
Grant reduction		-177,403
Savings on NWT grant	177,403	
Mineral royalties	233,513	
Net revenues	871,483	44,351

Note 1: Estimates of "corporate income tax" and "mineral royalties" were provided by De Beers Canada Mining Inc.

Note 2: Estimates of "grant reduction" and "savings on NWT grant" were determined by the GNWT based on data provided by De Beers Canada Mining Inc.

Note 3: Federal government and Government of the Northwest Territories (GNWT) tax and fiscal impacts are mutually exclusive from one another.

Note 4: Impacts in this table were assessed on October 19, 2001.

*The total cumulative impact of all of the tax and fiscal impacts is shown in Table 5.3-6*

Table 5.3-6 presents the estimated total cumulative impact of all of the tax and fiscal impacts from Tables 5.3-4 and 5.3-5. This table represents the estimated total revenues, for the federal and territorial governments, associated with the proposed Snap Lake Diamond Mine over the period 2004-2027.

**Table 5.3-6 Total Cumulative Tax and Fiscal Impacts of the Snap Lake Diamond Project**

<b>Cumulative Impacts 2004-2027</b>	<b>Federal Government (\$'000)</b>	<b>GNWT (\$'000)</b>
Corporate income tax	442,826	221,754
Federal surtax	17,740	
Taxes	493,848	128,897
Grant reduction		-280,390
Savings on NWT grant	280,390	
Mineral royalties	233,513	
Net revenues	1,468,318	70,261

Note 1: Total tax and fiscal impacts does not include potential incremental GNWT per capita transfers related to in-migration. Tax and fiscal Impacts.

Note 2: Impacts in this table were assessed on October 19, 2001.

*The Government of the Northwest Territories will see a reduction of \$280.4 million in the formula grant*

Under the existing financing formula between Canada and the GNWT, the increase in taxation revenue as a result of the project will result in a reduction of some \$280.4 million in the grant to the GNWT. Conversely,



	the federal government will realize a savings of \$280.4 million from the grant reduction to the GNWT (Table 5.3-6).
<b>Federal royalties are estimated at \$233.5 million</b>	Under the terms of the <i>Canada Mining Regulations</i> mineral royalties only accrue to the federal government. De Beers has independently calculated the total royalties payable from the project at \$233.5 million (Table 5.3-6).
<b>The federal government will realize total net revenues of nearly \$1.468 billion</b>	The federal government will realize net revenues of nearly \$1.468 billion over the life of the Snap Lake Diamond Project. The GNWT will realize net revenues of \$70.3 million from the project's activities, this excludes estimated per capita funding of \$17,450 annually under the federal formula grant.
<b>The Government of the Northwest Territories may receive \$84.5 million from per capita funding</b>	<p>The GNWT may receive \$84.5 million from per capita funding through increased population from migration into the NWT over the life of the Snap Lake Diamond Project. The grant formula includes a per capita funding factor linked to the gross expenditure base which is escalated by a three-year moving average of the lesser of:</p> <ul style="list-style-type: none"> <li>• growth in provincial-local government spending; or,</li> <li>• GDP multiplied by the ratio of the three-year moving average of the population growth rate of the NWT relative to the three-year moving average of the population growth rate of Canada as a whole.</li> </ul>
<b>The annual per capita grant formula to the Government of the Northwest Territories has declined to \$12,000</b>	In September 2001 Statistics Canada released economic data, which resulted in changes to the provincial-local forecast. The forecast was revised downwards which lowered the growth rate and therefore the amount each additional individual means to the grant formula by the time the additional person has been in the grant formula for the three years. The \$17,450 per capita figure that was initially provided in June 2001 by the Fiscal Policy Division, Department of Finance, GNWT, was revised downward in October 2001 to \$12,000 per capita.
<b>The net grant formula increase to the Government of the Northwest Territories would be \$3.96 million annually during the operations phase</b>	Based on the economic modelling assumption that 60% of the labour would originate from outside the NWT, of which 50% would locate in the NWT, the number of persons would be 150. Using the average mining household size of 2.2, based on the profile of mining households from the <i>1999 NWT Labour Force Survey</i> (GNWT Bureau of Statistics 1999a), the total population increase would be 330 persons. Using the \$12,000 per capita figure, the net grant formula increase to the GNWT would be \$3.96 million annually during the operations phase and \$0.87 million during the closure phase. The cumulative total over the operations and mine closure phases is

estimated at \$84.5 million. There is no migration assumed for the construction phase, consequently there is no per capita funding impact.

### 5.3.2.4 Summary of Economic Impact Assessment

*Average annual expenditures are estimated at \$120.7 million for 22 years*

The economic analysis of the Snap Lake Diamond Project illustrates that there are many economic benefits for the NWT and Canada if the proposed mine is developed. During the operations phase, the economic analysis determined that the average annual expenditures are estimated at \$120.7 million over the mine life of 22 years.

*Nearly 19,610 person years of employment are expected, with annual labour income impacts of \$81.2 million*

With regards to jobs in the NWT, nearly 19,610 person years of employment are expected to result from mine related activities that are attributable to the 22 year operations phase of the project. This level of employment will translate into an annual labour income impacts for the NWT during the operations phase at an estimated \$81.2 million. An additional \$14.6 million is attributable to indirect labour and \$12.6 million to induced labour income.

*Impact prediction and analysis is based on data gathered and analyzed during the issue identification and profiling steps*

If the Snap Lake Diamond Project is developed, the direct project GDP will total \$56.4 million annually and the indirect GDP is estimated at \$20.5 million, while induced GDP accounts for some \$19.8 million annually.

## 5.3.3 Socio-economic Impact Assessment

### 5.3.3.1 Introduction

*This purpose of this section is to identify and analyze changes*

The purpose of this section is to identify the changes that will likely result from the proposed Snap Lake Diamond Project and to analyze the effects of these changes on individuals, families, and communities. The impact prediction and analysis comprises the third step of the Snap Lake SEIA process (as discussed in Section 5.1.5.2). Data gathered and analyzed during the issue identification and profiling steps served as the basis for the impact prediction and analysis. Possible linkages between direct, indirect, and induced impacts were systematically considered and verified (as described in Section 5.1.5.4). The socio-economic impact predictions and analyses are limited by a range of uncertainties, as identified in Section 5.1.5.3. To manage these uncertainties, linkages between causes and effects are based on assumptions and conditions explicitly stated throughout the analysis.

***The magnitude and nature of impacts will differ from community to community***

The magnitude and nature of impacts will differ from community to community. This will depend on such factors as the proportion of the community population hired by the mining project; the existing local social support services; the levels of education, skills, and past work experience among the community members; and individuals' values and abilities to adapt to change. The impact prediction and analysis is limited to the primary communities as a whole, because impacts to each community cannot be predicted (see also Section 5.1.5.3).

***Mining will have both positive and negative social and economic impacts***

Mining activities and mine employment will have both positive and negative social and economic impacts on individuals, families, and communities. These impacts will be experienced mostly in the primary communities.

***Potential positive impacts are related to employment, training, and education opportunities***

The potential positive impacts stem from increased employment, increased disposable income, provision of training and education opportunities, skills development, work experience, and opportunities for local economic development. These positive impacts will be realized through the full and effective implementation of the socio-economic impact management measures set out in Section 5.3.4.

***Potential negative impacts stem from the lack of familiarity with the wage economy***

The potential negative impacts stem from the lack of familiarity with some of the same characteristics of the wage economy, which, until recent times, have been foreign to the Aboriginal economy. As one sub-Chief stated, his people have only been exposed to western culture for three generations.

***Expansion of the wage economy may exacerbate certain pre-existing dysfunctional conditions***

Expansion of the wage economy into communities, through the development of the Snap Lake Diamond Project, may exacerbate certain pre-existing dysfunctional conditions in the communities. Members of the non-governmental women's organizations (Section 5.1.1.3.3), identified the need to address "pre-existing conditions" within communities, if the benefits of mining activities and mine employment are to reach the primary communities and people.

***Economic, social, and environmental sustainability are the three components of sustainability used in the analysis***

Throughout the assessment, the term "sustainability" is used. The term refers to community benefits and resource development taking into account economic, social, and environmental sustainability. The three components of sustainability below make a "multiple bottom line" for development and can be defined in the following manner:

- ***Economic sustainability:*** to create employment for the long term, as well as support for economic diversity so that the communities can manage in any down turn.

- ***Social sustainability:*** to strengthen individuals by reducing dysfunctional behaviour and developing skills that are transferable and can provide economic sustainability. It also includes the necessary support for families, communities and cultural preservation.
- ***Environmental sustainability:*** to develop projects that would use the physical environment without diminishing future use, with or without mitigation and rehabilitation.

*This section of the report provides an overview of predicted socio-economic impacts on individuals, families, and communities*

This section of the SEIA report is organized in two parts. First, an overview of the predicted socio-economic impacts on individuals, families, and communities is presented. Second, the linkages between the predicted impacts and their effects are discussed in detail.

### 5.3.3.2 Predicted Socio-economic Impacts

*Four primary socio-economic impacts are predicted*

In sum, the following social and economic impacts are predicted:

- increased employment levels;
- provision of training programs;
- expansion of the wage economy in the communities; and,
- behavioural and lifestyle changes, by individuals, families, and communities as a whole.

*Table 5.3-7 shows predicted direct, indirect, and induced impacts*

The predicted impacts in Table 5.3-7 are organized to show the direct impacts (*i.e.*, those resulting directly from wage employment at the mine), the indirect impacts (*i.e.*, those effects that are secondary but can be linked to employment at the mine), and the induced impacts (*i.e.*, broader societal effects in response to the direct and indirect impacts).

*Direct impacts may be predicted with a greater degree of certainty than indirect and induced impacts*

As explained in Section 5.1.5.4, the direct impacts may be predicted with a greater degree of certainty than the indirect and induced impacts. The possible induced impacts are divided into two categories (Table 5.3-7): impacts that will result if the needs created through the direct and indirect impacts are met, and impacts that will result if the needs are not met. Contrasting impact scenarios are described in Appendix V.5.

**Table 5.3-7 Predicted Direct, Indirect, and Induced Impacts**

	Direct Impacts	Indirect Impacts	Induced Impacts
<b>Individuals</b>	<ol style="list-style-type: none"> <li>employment involvement in the wage economy</li> <li>mining job training</li> <li>personal lifestyle changes due to rotational shift work</li> </ol>	<ul style="list-style-type: none"> <li>increased spending capacity and personal financial management options; this can have both positive and negative effects. (e.g., a positive effect may be improved provision of household needs; a negative effect may be increased spending on addictive substances.)</li> <li>increased need for financial management skills</li> <li>increased need for personal counselling</li> <li>increased demand for and participation in substance abuse programs</li> <li>need for cultural sensitivity training at the work place.</li> <li>increased interest in training/education upgrading by those not employed</li> </ul>	<p><b><i>When needs induced by impacts are met:</i></b></p> <ul style="list-style-type: none"> <li>provision of financial management skills development and training programs</li> <li>availability of personal counselling</li> <li>improved life skills and personal management</li> <li>improved material quality of life</li> <li>improved health (breaking addictions)</li> <li>improved self-esteem, well-being as result of being positive family/community role model</li> <li>positive experience with working at the mine, as needs and cultural values respected</li> </ul>
			<p><b><i>When needs induced by impacts are not met:</i></b></p> <ul style="list-style-type: none"> <li>decreased quality of life as result of poor financial management</li> <li>loss of self-esteem and sense of identity due to (non-aboriginal) cultural integration</li> <li>loss of self-esteem by not providing emotional support to family</li> <li>breakdown in personal relations due to division between “haves” and “have-nots”</li> </ul>
<b>Families</b>	<ol style="list-style-type: none"> <li>increased family income</li> <li>family lifestyle changes due to rotational shift work</li> </ol>	<ul style="list-style-type: none"> <li>increased spending capacity and financial management options; this can have both positive and negative effects</li> <li>need for family counselling and social support services (including child care, marital counselling, banking opportunities)</li> <li>need for (family) financial management skills development</li> </ul>	<p><b><i>When needs induced by impacts are met:</i></b></p> <ul style="list-style-type: none"> <li>availability of social support services and family counselling</li> <li>improved material quality of life, and provision of basic needs</li> <li>healthier families, as result of breaking addictions</li> <li>interest in training and education by family members not employed at the mine</li> <li>maintenance of stable, intact families</li> </ul>
			<p><b><i>When needs induced by impacts are not met:</i></b></p> <ul style="list-style-type: none"> <li>increased hardship for spouse and children, as a result of financial mismanagement</li> <li>increased family conflict, violence, and/or break-ups</li> </ul>

**Table 5.3-7 Predicted Direct, Indirect, and Induced Impacts (continued)**

	Direct Impacts	Indirect Impacts	Induced Impacts
<b>Communities</b>	<ol style="list-style-type: none"> <li>1. increased employment level</li> <li>2. absorption of qualified/skilled community members through mine employment</li> <li>3. effects on community social structures and/or relations due to rotational shift work</li> <li>4. participation agreement</li> </ol>	<ol style="list-style-type: none"> <li>1. potential for local economic development (<i>i.e.</i>, the expansion of existing services or the creation of new services to meet community and industry needs)</li> <li>2. need for developing additional capacity in communities</li> <li>3. division between haves and have-nots</li> <li>4. more community capacity through workers with greater skills and education gained through mine employment and training opportunities</li> </ol>	<p><b><i>When needs induced by impacts are met:</i></b></p> <ul style="list-style-type: none"> <li>• government/partnership funding and support of business skills training and development leading to local business/economic development and increased levels of employment</li> <li>• potential to retain resources/re-invest resources within the community</li> <li>• government/partnership funding of life skills training and job skills training leading to increased local social capacity and further increased potential for local economic development and activities</li> </ul>
			<p><b><i>When needs induced by impacts are not met:</i></b></p> <ul style="list-style-type: none"> <li>• lessened potential for economic development</li> <li>• brain-drain away from communities by skilled people</li> <li>• social disintegration, decreased community cohesiveness</li> </ul>
<b>Regional</b>	<ol style="list-style-type: none"> <li>1. increased employment level</li> <li>2. increased economic activity</li> <li>3. decreased demand for income support</li> <li>4. royalty payments</li> </ol>	<ol style="list-style-type: none"> <li>1. potential to diversify NWT economy</li> <li>2. potential for locating/stimulating economic activities in small communities</li> <li>3. increased employment and economic activity will help retain population in small communities.</li> </ol>	<p><b><i>When needs induced by impacts are met:</i></b></p> <ul style="list-style-type: none"> <li>• reallocation of resources from income support to social capacity building (training, social support services)</li> <li>• support of local economic development in smaller communities</li> <li>• retained population in the smaller communities</li> <li>• economically and socially sustainable small communities</li> <li>• improved social and economic equity within NWT</li> </ul>
			<p><b><i>When needs induced by impacts are not met:</i></b></p> <ul style="list-style-type: none"> <li>• reduced employment opportunities in small communities</li> <li>• out-migration to larger centres</li> <li>• drain of resources from small communities to the larger centres</li> <li>• socially dysfunctional small communities</li> <li>• increased social and economic inequity within the NWT</li> </ul>

***De Beers is committed to the implementation of the measures, but individuals and communities must also be committed***

It is assumed that such needs will indeed be fully met through the implementation of mitigation measures set out in Section 5.3.4. Induced impacts should therefore be positive. However, De Beers cannot solely, through its own commitment, achieve all of the management measures. A partnership between communities, governments, and others is required for some of the community measures. Implementation will also depend on the willingness and ability of individuals and communities. Even though De Beers is committed to implementing the impact management measures, the co-operation and commitment of others are also critical to successful mitigation.

### **5.3.3.3 Overview of Impacts on Individuals, Families, and Communities**

***The expansion of wage employment opportunities will be the primary cause of direct socio-economic impacts on individuals***

The Snap Lake Diamond Project will provide a number of job opportunities for residents in the nearby communities. The expansion of wage employment opportunities will be the primary cause of immediate socio-economic impacts on these individuals. The most immediate social and economic impacts will be felt by those individuals who are able and willing to accept employment at the project. These impacts are primarily associated with earning a salaried income, participating in a work rotation schedule, participating in job training programs, and, for Aboriginal workers, functioning in a pre-dominantly non-aboriginal work environment and culture.

***Individual capacity to benefit from mining opportunities will differ***

The Project Description (Section 3) recognizes that Aboriginal people and northerners will be sought out and given priority. However, the nature and degree of impacts differ from one person to another, depending upon each individual's particular life circumstances.

***Education and gender may limit opportunities***

Social conditions, such as level of education and gender, limit the capacity of an individual to initially make use of the work opportunities with the project. Wage employment opportunities are available to individuals who have the appropriate levels of education and/or training. Some mine jobs require grade 12 in formal education and many jobs require grade 10 as a minimum. This educational requirement limits the pool of potential workers. Most people working in the mining industry are male. Across Canada, 85% of workers in the mining, quarrying, and oil well industries are male. Aggregate data for the NWT and Nunavut show that 88% of workers in these industries are male (Appendix V.2). Historically, the potential for women to benefit from work opportunities in mining has been lower than for men.

***Individual health and ability to work may limit opportunities***

An individual's health and ability to work will be a factor. For example, the Snap Lake Diamond Project has a zero tolerance policy<sup>12</sup> toward drug or alcohol use. Potential employees must pass a substance use test, which may further eliminate some people from employment.

***Individuals may choose not to work in mining***

In addition, an individual who is eligible to apply for employment with the mining project, may choose between accepting such employment and declining it. The person's choice will partly be informed by his or her perceptions of the benefits and costs that working at the mine will bring. Their decision on whether or not to work will be shaped through conversations with community members who are already working at one of the other mines in the region.

***The socio-economic impacts on individuals will be connected to impacts on families***

Since immediate and extended family play a key role in the lifestyle and culture of residents of the primary communities, the socio-economic impacts of the project on individuals will be intimately connected to impacts on families. The adjustments by individual mine workers to the impacts of the project will require corresponding adjustments by each worker's immediate and extended family. The impacts will vary greatly depending on each unique family: its history, relations, strengths, and weaknesses.

***Impacts on individuals, families, and communities are inter-related***

The social and economic impacts upon a community as a whole will depend on the impacts on individuals and families and, to a great extent, on their responses to these impacts. The way in which communities provide support and services to help residents cope with project impacts will eventually be reflected in the overall impacts on the whole community.

***If many individuals in a community experience few benefits, the communities will be less sustainable***

If many individuals and families in a community are generally experiencing less benefits than demands and stress, it is unlikely that the community will move towards social sustainability. In communities where employment opportunities remain limited to those created by the Snap Lake Diamond Project, community divisions and fractions may arise between "haves" and "have-nots", which may exacerbate other social problems in the community.

***Communities that are able to cope with changes and capture opportunities will become sustainable***

In contrast, if many individuals and families are able to cope well with the lifestyle and environmental changes brought about by the project, the entire community may begin to feel the positive impacts of increased employment levels, raised educational and skills levels, and improved local entrepreneurial climate. Where opportunities for the development of a

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<sup>12</sup> Zero tolerance refers to no alcohol or drugs at the work site and/or not being under the influence of alcohol or drugs when boarding the plane for transportation to the mine site.



diverse local economic base and social capacity are captured and acted upon, communities as a whole may become increasingly sustainable.

***The relationships between individual, family, and community impacts and responses are dynamic***

The relationships between individual, family, and community impacts and responses are neither linear nor static. An infinite amount of possible outcomes of the dynamic interactions between the various factors and responses over time may be envisaged. However, the experiences and case studies of communities in Canada that have been subject to similar projects can be used to predict the kinds of broad community development patterns that may result. Case studies can be used to assess the influence of pre-existing socio-economic conditions and the effectiveness of management measures.

***Many changes are occurring without this project and these non-project changes will continue***

As described in Section 5.1.5.3, socio-economic analyses impacts are complex because project impacts will be occurring in a dynamic environment. Social and cultural conditions are always emerging, therefore the effects of changes cannot be compared to a baseline or “natural state” of socio-economic conditions. Individual values and abilities will change over time due to the rapidly changing socio-economic conditions in the NWT. Local and regional changes (social, cultural, economic, political) are occurring in the absence of the proposed project and will continue to occur along with the incremental effect of the project.

### **5.3.3.4 Impacts of Mining Job Training and Education**

***Mine-specific training and other skills development will have impacts on individuals and on communities***

Individuals employed at the Snap Lake Diamond Project will need to first participate in preparatory and occupation-specific skills training. The opportunity for future wage employment may also motivate unqualified individuals to upgrade their educational level and general life skills to meet project standards for employment eligibility. Upgrading would also prepare individuals for other job opportunities that may result from the community wide transition to a wage economy. As such, both training specific to mining project employment and general education upgrading in preparation for such training will have impacts on individuals and on communities.

***Training, re-training, and education must meet the learner's needs***

The provision of training, re-training, and education has great potential to contribute positively to achieving long-term community sustainability, with a range of beneficial social, economic, and environmental spin-offs. Such benefits will only result, however, if training and education programs are planned and delivered in accordance with the particular needs of individuals and communities that are to participate in the programs. These needs may include the following:

- accessibility (financial and geographical) of training and education programs;
- contents and approach of training/education being culturally appropriate; and,
- training/re-training/education leading to employment soon after completion of training, or leading directly to other goals (e.g., improving personal finance management, acquiring qualification for other forms of training).

*Opportunities may be lost if needs are not met*

Where such needs are not adequately considered and demonstrated, training and education programs are likely to result in lost opportunities to address pre-existing conditions and achieve social and economic sustainability.

#### **5.3.3.4.1 Individuals**

*Enrollment in a training program will encourage motivation, increase self-esteem, mental well-being, and additional treatment if the community is supportive*

Where training, re-training and education programs are implemented (with consideration of the individual and community needs), individual participants may experience a range of positive impacts:

- The enrolment in a training program will encourage a sense of motivation to learn skills for the purpose of managing a new job and new responsibilities. Acquiring new skills may also increase individuals' self-esteem and mental well-being. This will be particularly true if there is general support for the project in the home community of the individual.
- In order to qualify for the mining occupational training programs, participants must demonstrate that they are not addicted. Job training programs may provide incentives to enrol in substance abuse and alcohol addiction treatment. This, in turn, may have long-lasting physical and mental health benefits to the individual being treated.

*Wage employment opportunities may motivate individuals to upgrade their educational levels and general life skills*

Even though they do not qualify for immediate employment, individuals may benefit from the opportunity made available for them to engage in wage employment in the future. This opportunity may motivate an individual to upgrade his or her educational level and general life skills to meet the project standards for employment eligibility. Provided that the educational and training services needed to do so are available, individuals who are able to access such programs may also enjoy the following positive impacts:

- raised basic educational level, which has social benefits beyond qualifying for employment at the mining project;

- a sense of purpose and motivation;
- a sense of pride and improved self-esteem, partly from learning new skills and new knowledge, and partly from acting as a role model to others in the community;
- improvements in life skills (e.g., personal finance management) to cope with impacts of future mine related employment; and,
- breaking addictions related to substance abuse and alcoholism.

*A training or education program which does not meet the actual needs of the participant could have negative consequences*

In contrast, if an individual commits to participating in a training or education program which ultimately does not meet the actual needs of the participant, or which provides training that is irrelevant for the reality of work opportunities, the educational experience could have negative consequences for that person:

- loss of self-esteem, resentment, and sense of hopelessness;
- personal financial loss;
- decision to leave the community to find work elsewhere; and,
- strained family and personal relations.

#### **5.3.3.4.2 Families**

*As an individual learns new life management skills, the whole family is likely to benefit*

The positive impacts described above on an individual participating in training programs or other education and life skills programs, may translate into the following beneficial impacts on that individual's immediate and extended family:

- As the participating individual learns new life management skills directly related to household and family matters, the whole family is likely to enjoy the improvement of, for example, financial management.
- If the participating individual has had to first undergo a substance abuse or alcoholism treatment program, family members are likely to enjoy the improved physical and emotional health of that individual.
- It is possible too, that individuals participating in training or educational programs will inspire other family members to improve their educational level or join in various skills development programs. This may make individuals and families feel that they are taking control over making improvements to their lives, based on working towards achieving certain shared goals.
- Children will benefit when their parents gain greater self-esteem and maintain a positive outlook on planning for the future. It is possible that

such role modelling, in the longer run, constitutes a key factor in building social sustainability, at the family and community levels.

*Without consideration of individual and community needs, impacts on families may be more negative than positive*

In contrast, where job skills training, re-training and education programs are implemented without consideration of the individual and community needs listed above, families may experience the following negative impacts:

- Where employment is not readily available after the training or education, families may have lost financial resources during the training or education period.
- If a family member participates in an educational or training program with the aim to gain employment in the community (assuming that the transition to a wage economy has spurred other forms of community-based employment), but where no such employment is actually gained, families may need to deal with the emotional stress associated with a family member remaining unemployed. This may cause considerable stress for the whole family.
- If no employment is found in the community, families may decide to move out of the community in search of employment. Alternatively, families may break up as the educated or skilled family members go elsewhere to seek employment.

#### **5.3.3.4.3 Communities**

*The provision of job training will raise the general skills level among community members*

The provision of job training in the primary communities will raise the general skills level among community members. This may lead to a range of possible positive impacts at the community level:

- Where training is directly tied to job opportunities, communities will experience raised levels of employment, resulting in a set of possible positive benefits (see discussion below on *Impacts of Transition to Wage Economy*).
- Over time, successful abuse and addiction programs will contribute to reducing the strain on a communities' resources (financial and support service), so that these resources can be invested in schools, community centres, community business development initiatives, for example.
- Social capacity and stability will gradually be built within the community, as residents will have the skills to assume jobs and responsibilities that are required to make their communities sustainable in the long run. This may include individuals becoming skilled in particular professions needed to serve the community, such as child care, family counselling, banking, community planning, cultural interpretation, managing small businesses,

*etc.* In the medium and long run, this will provide an essential prerequisite for any attempts to achieve economic diversity (and, as a result, community resilience against economic down turns).

- The achievement of a certain level of education and skills may, in the longer run, spur demands for further education and training programs in accordance with the changing community structure (provision of particular services, new business demands, *etc.*), further increasing local social capacity and sustainability.
- The provision of appropriate education, in combination with the creation of job opportunities, may lower the migration from communities to the larger centres, such as Yellowknife.

*If employment opportunities do not exist within the community itself, the most educated and skilled individuals may seek opportunities outside the community*

Residents who have acquired a higher level of education will wish to put their investments of time, resources, and efforts to use. If such opportunities do not exist within the community itself, the community as a whole will be negatively impacted:

- The most educated and skilled individuals of the community will seek opportunities elsewhere, resulting in a form of “brain-drain” for the community. As a result, there will be fewer qualified people who can contribute to community planning initiatives, be available for possible future work opportunities or develop new businesses and services. As a result, social stability and community cohesiveness will be reduced.
- If financial and human resources are spent in the community to provide basic education and skills training, but no support is provided to use these skills for local business initiatives or community activities, economic development at the community level will not occur. As a result, new jobs in the community will not be created and people will turn elsewhere to seek employment.

### 5.3.3.5 Impacts of Rotational Schedule

*The two weeks on/two weeks off work rotation schedule may cause stress*

Employees at the Snap Lake Diamond Project will work on a two weeks on/two weeks off work rotation schedule during operations. This work schedule may expose employees to considerable stress-related impacts. These impacts are also likely to be directly felt by employees’ families who may need to cope with changes in lifestyle. Communities as a whole will be affected too, as generally their most educated and trained residents will be away from their homes for extended periods of time. The degree of impacts will be determined by a range of factors related to the quality and range of support services provided to employees and families in coping with the lifestyle changes.

### 5.3.3.5.1 *Individuals*

*Individuals will need to adjust to being away from their families and communities for extended periods of time*

Individuals will need to adjust to being away from their families and communities for two weeks at a time, and to manage their lives and time while off work. Workers may face difficulties particularly during the transition between work and home.

- Being away from their families, many individual workers will worry about their families' welfare and feel concerned about their relationships with spouses and children. Many of the workers will feel lonely and missing the emotional support otherwise provided to them.
- Being away from the community may also cause stress to the individual worker. They may feel cut off and isolated from the community social network and support that is found in all of the primary communities.
- Individuals will also need to adjust to being with their families and in their communities for two weeks at a time. While at home, family and community responsibilities might compete, and workers will need to make choices about how to best allocate their time and define their new roles vis-à-vis both the family and the community.
- The limited amount of time in the community may limit individuals' ability to pursue Aboriginal traditional activities, which impacts on individuals' lifestyle and the maintenance of a cultural identity.

*Some Aboriginal workers will need to adjust to both job responsibilities and the work culture*

In their employment with the Snap Lake Diamond Project, some Aboriginal workers will need to adjust not only to the job responsibilities but also to the work culture in which they will perform their responsibilities. This culture will be manifested on two interrelated levels: the culture associated with a general non-aboriginal environment and the culture associated with the specific work environment.

*The degree of cross-cultural training for all employees will greatly affect Aboriginal workers' ability to adjust*

Adjusting to these aspects of a new culture may pose challenges to each working individual and may be experienced as both positive and negative. To some extent, the degree of these impacts will be determined by the individual's ability to cope with the "culture shock". More importantly, however, it will rely on the degree of awareness and acknowledgement of cross-cultural issues at the workplace, as achieved by cross-cultural training for all employees.

- In a predominantly non-aboriginal environment, Aboriginal workers will face cross-cultural barriers related to language, styles of communication, and unspoken values and expectations in approaches to work and life. The challenges of overcoming such barriers and learning about and from a

different cultural system may be personally enriching. However, there is great risk that cultural learning from the other culture will only occur in one direction given that the non-aboriginal value system is the dominant culture at the work place. Western culture may dominate over Aboriginal culture.

- The individual worker will also have to adjust to a non-aboriginal approach to work. This may differ from Aboriginal approaches to work by way of operating in a hierarchical system, reporting to superiors, and relying on bosses to set parameters and directions. Such adjustments, again, may be an important source of stress to the individual employee.
- Lack of recognition and appreciation of Aboriginal culture may lead to frustration, resentment, and exacerbation of already existing social problems associated with the loss of cultural identity. It may also result in strained working relations between Aboriginal and non-aboriginal employees.

#### **5.3.3.5.2 Families**

***Employees' families will need to adjust to the demands of the work rotation schedule***

The life style changes associated with the two weeks on/two weeks off rotation work schedule will not only affect the individual worker. Employees' families will also need to adjust to the changed routines and the new roles and responsibilities of each family member that the rotation schedule demands.

- The spouse who is not working at the mine (usually the woman) will need to adjust to the working family member being away from the home for extended periods of time. She or he will likely also miss the emotional support otherwise provided. The times of transition, when the worker arrives back to the home and leaves the home, may be particularly emotionally stressful.
- The family as a whole will also be affected by the limited time available to engage in traditional activities with all family members present. This may complicate efforts to maintain cultural traditions and identity.
- When the working spouse is on duty, the non-working spouse will need to carry a greater share of family-related responsibilities, including child rearing, home maintenance, and caring for social and community relations. In effect, many women become single mothers with limited opportunities to pursue careers outside the home. The difficulty lies in determining and adjusting to these changing roles and responsibilities between the spouses. In healthy family situations, adjustment to these changes will take place without impacts on the family members' well-being.
- In family situations where conflict, violence or other domestic problems are already present such issues may be exacerbated by the demands of

the rotation schedule, resulting in increased social dysfunction and instability.

- It may also be difficult for the spouse who is not working at the mine to provide adequate support and understanding for the mine employee's responses to going between the Aboriginal culture (at home) and non-aboriginal culture (at work). Such differences in experiences and inability to relate to each other's changing situations may place additional stress on the family.

*There are several negative impacts associated with flights stopping over in Yellowknife*

Impacts of the rotation schedule on families will also be closely tied to the flight services between the mine and the communities. There are several negative impacts associated with flights stopping over in Yellowknife, rather than going straight back to the home communities.

- There is an increased risk of marital and family breakdown associated with stop-overs in Yellowknife as some employees (mostly male) engage in extra-marital affairs.
- Commuting through Yellowknife may also increase the risk of substance abuse and alcoholism.
- As workers commute through Yellowknife, they may spend their income in the city, rather than reinvesting it in their own communities.

### **5.3.3.5.3 Communities**

*Due to the rotational work schedule, communities may lose a portion of their population for two weeks at a time*

Just as individual mine project employees and their families will need to adjust to the lifestyle changes demanded by the rotational schedule, communities in their entirety will feel these impacts. Through the rotational work schedule, communities will lose a portion of their population for two weeks at a time (made larger by the portion of community members working on similar rotational schedules for the BHP and Diavik mine projects). In small, tight-knit communities, such loss may be substantial. Communities will need to adjust in several ways to the impacts of the rotational schedule:

- The primary community residents rely on an informally shaped support network, drawing on the support of their neighbours, extended families, and friends for everyday practical and social needs. Mine project employees, who will often be the more educated and skilled residents, may also have various formal and informal roles within the community. They may provide support to other community members with skills such as plumbing, writing/reading, translating from English, or in the capacity as mentor or community leader. The extended periods of absence of a person with particular roles or skills may, therefore, be an important loss



to the community and to the support network of which that employee is a part. This kind of loss is also not easily compensated for, as it is largely based on personal and cultural relationships.

- As individuals and families try to cope with the lifestyle changes imposed by the rotational work schedule, the social fabric (*i.e.*, relationships and support systems) of communities will be affected. Community members at large may suffer from the effects of friends, extended family, or neighbours resorting to substance abuse or alcoholism when dealing with emotional issues, living in high conflict or violent home situations, or neglecting community and family responsibilities. Social capacity or stability may decrease.
- If many individuals and families are coping poorly with the adjustments, the demands for rigorous and relevant support services will increase. Such support mechanisms may include marital/relationship counselling, child care services, conflict mediation services, anger management training, and other forms of social services. This increased demand for social services is an impact that communities as a whole will face and need to manage.
- The absence of a substantial part of the community population for extended periods of time may also result in less opportunity to engage in traditional activities. Such activities may include hunting trips, fishing, or going out on the land, all of which fill a function in strengthening the sense of community and cultural identity. Combined with some of the challenges that individual workers will face in adjusting to a non-aboriginal working culture, and in losing other forms of stability in their lives, the loss of a communally based structure to reinforce cultural values may place additional stress on individuals and communities. Such stress will further strain a community's capacity to move towards sustainability.

### 5.3.3.6 Impacts of Transition to Wage Economy<sup>13</sup>

#### 5.3.3.6.1 *Individuals*

*An individual entering the wage economy may experience positive or negative social and economic effects*

An individual entering the wage economy for the first time in his or her life may experience either positive or negative social and economic effects. The nature and degree of the impacts will depend on the social context of that individual, in terms of previous experience with managing personal finances, potential issues of substance abuse, and the presence of a family and community support network.

<sup>13</sup> A similar discussion and review of potential positive and negative aspects of the transition to the wage economy by communities in the West Kitikmeot and Slave Geological Province is provided in P.G. Sly *et al.* (May 30, 2001), 203-206.

***The community structure will largely determine the impacts on individuals in their transition to the wage economy***

The community structure as a whole will also largely determine the impacts on individuals in their transition to a wage economy, primarily in two ways. First, the availability and quality of social support services and skills training will have an impact on how the individual manages personal finances and lifestyle changes associated with earning a monetary income. Second, the degree of economic vibrancy in the home community will either broaden or limit individuals' range of choices for reinvesting their income into their community. This may, in turn, have impacts on personal well-being.

Some of the positive impacts that may result include the following:

- The availability of disposable income will provide substantial opportunities for individuals to improve their quality of life. Importantly, it may widen the scope of choice that individuals in the primary communities have for shaping their lifestyles.
- With a consistent monetary income, individuals will have a greater level of security in providing for basic material needs, such as food, housing, or clothing.
- Another potential positive impact on an individual employed at the mine, is the improvement in self-esteem that comes with being recognized and awarded for one's skills and performance of responsibilities. For some individuals, having a regular income will also contribute to the sense of pride in being able to provide for one's family.
- Where opportunities exist to spend part of the income in the employee's own community, the individual's community-based lifestyle may be maintained and enriched. As an example, where supplies for housing or equipment repair may be purchased within the community, the individual will not need to travel to Yellowknife during his/her off-work period. In turn, this may alleviate some of the personal stress associated with the work rotation schedule. It may also provide opportunities for the individual to strengthen local relationships within the community, by supporting local businesses.

***Having a regular income can pose challenges***

The availability of a regular income may also pose challenges to individuals who have not previously functioned in a wage economy.

- With little previous knowledge of personal finance management, and where opportunities to develop such skills are not available, an individual is at risk of spending the income unwisely, putting him/herself in debt; or foregoing potential financial benefits of banking.
- Where substance abuse or alcoholism has been or is part of an individual's living, direct access to money also facilitates the access to

alcohol or addictive substances. Access to monetary income may, in such cases, deteriorate an individual's living conditions. Given the zero tolerance policy this may, in turn, lead to the individual losing his or her employment with the mining project.

- Where few opportunities exist within the community to satisfy the individual's spending preferences, the "pull" on individuals to the larger centres will be strengthened. Stress associated with being away from the family and the communities will then be heightened.
- It is possible too that the wage earning individual will experience strained relationships with others in the community, triggered by the individual's improved material situation. Neighbours or friends may feel envious and reflect their envy by distancing themselves from the individual, asking for money related favours from the individual, or borrowing equipment without the owner's consent. Given the employee's need for strong support during his or her transition to the wage economy, as well as to the rotational work schedule, such strained relations may exacerbate personal emotional stress.

#### **5.3.3.6.2 Families**

*The impacts on a family from the introduction of a consistent disposable income will largely depend on how the family chooses to allocate this income*

The socio-economic impacts on a family from the introduction of a consistent disposable income will largely depend on how the family chooses to allocate this income. These choices will, in turn, be largely dependent on the pre-existing conditions of that family, including the family's level of need for financial resources, family relations, level of education and training, and past experience with managing household finances. As discussed in the section above, it will also depend on the opportunities for spending or saving made available to families within and external to their community. Impacts on the family will also concern their loss of eligibility for welfare assistance and responsibilities to pay income tax.

*The family may experience positive impacts*

The transition to wage economy may have several positive impacts on the families' quality of life:

- The positive impacts of attaining a consistent disposable income described above for the individual may also be applied for the worker's family as a whole. As such, social and economic impacts concern the wider opportunity for lifestyle choices and increased security and provision of basic needs and comforts.
- These positive impacts may also alleviate certain stresses that many families in the primary communities are currently experiencing, and provide for greater stability. Examples include the ability to make long term economic plans, purchases, provision of support for other family

members (such as money for schooling or training), and purchasing equipment that improves the quality of life.

- The employed family member may also serve as a role model to the family's children, in terms of assuming responsibilities and ensuring future well-being.

***The challenges of managing monetary income concern the worker's family***

The challenges of managing monetary income very much concern the worker's family as a whole. In fact, the potential negative social and economic impacts of disposable income unwisely spent or invested are likely to be more severe when the working individual has a family.

- As the household income level is increased for families reliant on welfare, the family will no longer be eligible for welfare assistance. If the income is not spent on providing for the family's basic needs, family members may be subject to greater impoverishment, but with decreased possibilities to access social assistance/services.
- The financial dependency upon the mine project employee's income may also cause or exacerbate already existing family problems. For example, where the employee is male (which is the case for a majority of workers), and where family violence and high conflict are present, women may be in the particularly vulnerable situation of being financially dependent upon an abusive spouse. The impact on women in such situations may be severe. Such impacts are likely to be worsened where family and women's support services are not readily available in the communities.
- Similarly, in families with frequent conflict between spouses, decisions concerning the use of income may exacerbate conflict. Children may also be directly affected as victims of family violence and conflict. Beyond the immediate harm inflicted on children in such situations, the presence of family violence and conflict may have long-lasting and severe consequences on the individual, family, and community levels.

### **5.3.3.6.3 Communities**

***Communities will need to respond to individuals' and families' changing needs and demands***

As a considerable proportion of residents (both the wage earning employees and their families) of the small primary communities are becoming integrated into the wage economy, communities as a whole will necessarily undergo a similar transition. Communities will need to respond to the changing needs and demands that come with the increased employment levels and individuals' increased purchasing power. The kinds of community responses to these needs and demands will determine the overall impacts on communities in their transition to a wage economy.

***Potential for developing a more favourable climate for local economic development may be created***

Importantly, the increase in employment levels will create collective purchasing power among community members. The impact on the community as a whole is the potential for developing a more favourable climate for local economic development. The process of developing local economic diversity and sustainability must, however, occur in two directions. Unless local businesses and investment opportunities are created, locally earned income will necessarily be spent outside of the home community.

Communities' capacity to respond to this potential for creating social and economic sustainability will be determined by a set of enabling conditions, internal and external to the community itself. Such conditions include:

- the already existing level of skills and capacity in the community;
- technical, educational, and financial support for local economic development;
- family support and individual counselling services in place; and,
- access to financial support from external sources (such as partnership arrangements or grants through the territorial and federal governments) to support education and skills training programs and social services.

***Communities may enjoy the positive impacts of the transition to the wage economy***

Where these enabling conditions are present, communities may enjoy the positive impacts of the transition to a wage economy. Those positive impacts could include the following:

- With sufficient purchasing demand in the community, in combination with adequate small business skills development, local entrepreneurship may be encouraged and sustained. As small businesses are created, employment levels in the communities will increase further.
- The improved opportunities for employment within the communities may stimulate the overall motivation among community members to upgrade their educational and skills levels, so that they may participate in the various local entrepreneurial initiatives. There will be a strong need for business management training, such as financial management, accounting, marketing, and business strategy, as well as more basic education and life skills training programs. Assuming that education and training programs will be provided that meet this sense of motivation, communities will raise their literacy, basic education, and job skills levels, all of which is vital to the social and economic sustainability of communities.

- Increased job opportunities will also provide incentives for educated and skilled community members to remain in their community and, as such, counter the tendency for migration out of the community.
- Local economic development, by which community residents rely on a range of different businesses and activities to generate income, will lessen communities' dependency on a single industry (mining), and strengthen their resistance against economic down-turns and fluctuations.
- In the long run, the increase in the general level of employment may contribute to the development of communities where residents are more self-sufficient, have access to adequate services, feel safe in their neighbourhoods and homes, and are better able to realize their individual and collective potential. Such communities would have achieved a greater level of economic sustainability.

***Opportunities for creating socially and economically sustainable communities will otherwise be missed***

When the enabling conditions listed above are weak or absent, it is likely that the opportunities for creating socially and economically sustainable communities will be missed. The needs and demands spurred by the transition by individuals and families to the wage economy will not be met. The transition to a wage economy will instead create negative strains on communities, both economically and socially.

- If adequate education and training is not provided to stimulate local economic development, employment opportunities will continue to be limited to those community members who can qualify for employment with the mining project. This may create several kinds of divisions within the community. First, it will largely discriminate against women, elderly and children in terms of the provision of education, and professional and life skills. Second, communities will be divided between those who earn a wage income and those who do not earn an income and/or continue to rely on social welfare assistance. The creation and maintenance of such social divisions will limit possibilities to create socially and economically sustainable communities.
- If education and training programs are indeed provided for the purpose of stimulating local economic development, but are offered in the absence of support services (such as child care services) for those wishing to participate in training programs or seeking employment outside the home, fewer residents will be able to attend such programs.
- Where training and education programs are offered, but are offered in the absence of available financial resources for residents to actually start up local initiatives and put their skills to use, residents may choose to move elsewhere to seek employment.

- Where mine project employees are not able to make purchases in their own community, they will necessarily spend their income in other localities. In effect, the potential for establishing local economic activity is lessened, and future opportunities for community-based employment may be foregone.

## 5.3.4 Impact Management Measures

### 5.3.4.1 Introduction

*The impact measures are meant to address the predicted impacts upon individuals, families and communities*

The following section identifies impact management measures for the predicted direct and indirect impacts of the Snap Lake Diamond Project. These impact measures are meant to address the predicted impacts of the project upon individuals, families, and communities<sup>14</sup>. The measures proposed are partly based on experience in other projects, and partly on discussions with government officials. They reflect the concerns and issues raised in the community visits and through personal meetings with people in the primary communities. The previous Sections 5.3.1.1, 5.3.1.2, and 5.3.1.3 detail the communities' concerns about mine employment and activities.

*Success in implementing these mitigation measures will depend on government and community partnerships*

Many of the mitigation measures cannot be done by the proponent acting alone. While De Beers is committed to doing its utmost to develop and implement these mitigation measures, success will depend on government and community partnerships. Commitments and contributions from the federal and territorial governments, and cooperation from communities, Aboriginal organizations, and other mining companies are required to maximize the benefits of the proposed measures.

#### 5.3.4.1.1 An Integrated and Adaptive Approach

*The impact management measures must be integrated*

Although there are 13 separate impact measures, the impact management measures are integrated and intended to complement one another. They will be more effective and successful when designed and implemented through an integrated approach.

*Continuous and ongoing monitoring, based on community and individual needs, is required*

Full and effective implementation of the proposed impact management measures will require *adaptive* implementation, based on continuous and ongoing monitoring of impacts as they unfold (discussed in Section 5.3.6). This means proactive and preventative implementation in response to indications of negative impacts or trends. Finally, full and effective

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<sup>14</sup> Impact mitigation measures presented here are focused on the primary communities.

implementation requires that impact management measures are based on particular community and individual needs.

#### **5.3.4.1.2 Partnerships**

***Governments and communities advocate partnerships***

Partnerships are strongly advocated by communities, the GNWT, and the federal government as a means of effective use of resources. Partnerships provide collaboration and cooperation of all stakeholders, and a coordinated strategy for non-renewable resource development.

***The Northwest Territories government is committed to working in partnership with Aboriginal groups, industry, other governments, and business***

Through many documents, the GNWT has advocated for, and committed to, working in partnership with Aboriginal groups, industry, other governments, and business in order to improve the living standards and quality of life for northern residents. In *“Towards a Better Tomorrow”*, the GNWT has committed to work in partnership with Aboriginal groups and industry to ensure that income and employment from resource development projects are realized by Aboriginal and northern residents (GNWT 2000b). In the GNWT’s *“2000-2003 Business Plans”*, working in partnership to share the benefits of non-renewable resource development is identified as a top priority.

***The federal government has strongly recommended a partnership approach between Aboriginal communities and industry***

The federal government has also strongly recommended a partnership approach between Aboriginal communities and industry. The federal government advocates the use of partnerships in documents such as the Aboriginal Communities and Non-Renewable Resource Development report by the National Round Table on Environment and the Economy (NRTEE 2001), the Department of Indian and Northern Affairs Canada (INAC) *“Sustainable Development Strategy”*, and in *“Gathering Strength – Canada’s Aboriginal Action Plan”*.

***The National Round Table on Environment and the Economy recommends partnerships***

The NRTEE maintains that partnerships between Aboriginal leaders, the government, and industry must be the driving force behind implementing its recommendations. The NRTEE argues that partnerships that maximize benefits and minimize risks for Aboriginal communities must facilitate communication, coordinate initiatives, and ensure accountability.

***Partnership is an integral component to the implementation of De Beers’ impact management measures***

The notion of partnership is also an integral component to the implementation of De Beers’ impact management measures. De Beers recognizes that partnerships between territorial and federal governments, industry, communities, and learning institutions is a proven approach to implement many of the impact management measures. It is an approach that has proven effective with other mining operations elsewhere in Canada. For example, the partnership in northern Saskatchewan between the mining companies Cameco



and Cogema, provincial and federal governments, communities, and Northlands College in the form of a five-year multi-party training plan has been successful in achieving employment and training objectives.

***De Beers will seek to develop partnerships between the company, the communities, and governments***

Recognizing the importance of social and economic sustainability to the communities. De Beers will seek ways to optimize social and economic benefits to individuals, their families, and their communities from this development so that benefits will last long after the mine has closed. To do so, De Beers will play its role in seeking to develop partnerships between the company, the communities, and governments.

***By seeking partnerships with communities and the federal and territorial governments, De Beers can be a catalyst for sustainable social and economic development***

Provision of social services, educational programs, and local business support in communities is primarily the responsibility of the federal and territorial governments. However, improved social capacity and local economic development in the communities will benefit De Beers in the immediate and long terms. It will provide a more stable workforce for the Snap Lake Diamond Project, ensure the availability of skilled Aboriginal and northern labour throughout the life of the project, and foster cooperative and fruitful relations between the company and the primary communities. By seeking partnerships with the communities and the federal and territorial governments, De Beers can be a catalyst for sustainable social and economic development in the primary communities.

***Some measures require commitment and cooperation from government and community agencies***

Some of the defined measures (*e.g.*, provision of employment, mine training) are solely the responsibility of De Beers. Other measures (*e.g.*, substance abuse treatment) require commitment and cooperation from government, community agencies, and individuals. De Beers is committed to playing a substantial role in facilitating all of the measures described, within the purview of what a proponent can do and what a partner with government departments and communities can do.

***Impact management measures are organized into three categories***

Each impact management measure is discussed in the following sections. The measures are organized into three categories: recruitment, training, and employment; health and wellness; and economic development. Table 5.3-8 provides a list of impact management measures by category and a summary of the key issues and concerns that each measure addresses.

***De Beers will continue to work closely with communities and the GNWT***

De Beers has begun to work collaboratively with the primary communities to further develop and provide greater detail to the impact management measures. Over the next months, De Beers will continue to work closely with communities and the GNWT to design, coordinate, and plan the implementation of the impact management measures.

**Table 5.3-8 Key Issues and Concerns Addressed by the Socio-economic Impact Management Measures**

Key Issue and Concerns (as expressed by community members, and/or representatives from the public sector, the private sector, and non-government organizations) <sup>1</sup>	Socio-economic Impact Management Measures (in response to the key issues and concerns and the related predicted impacts) <sup>2,3</sup>
<b>1. Recruitment, Training and Employment</b>	
<ul style="list-style-type: none"> <li>optimize the employment of Aboriginals and northerners</li> <li>ensure that the Aboriginal and northern workforce progresses in the workplace</li> <li>ensure that the Aboriginal and northern workforce grows</li> <li>equitable and fair distribution of employment and training opportunities</li> </ul>	1. Recruitment and employment strategies
<ul style="list-style-type: none"> <li>upgrade literacy skills, to prepare for further training and/or employment opportunities</li> <li>improve qualifications for employment</li> </ul>	2. Literacy training
<ul style="list-style-type: none"> <li>allow employees to take advantage of progressive career advancement opportunities and further education</li> <li>life and employee skills development</li> </ul>	3. On-site learning centre
<ul style="list-style-type: none"> <li>low skill levels in communities</li> <li>long-term approach to address community capacity issues</li> <li>training to address skilled employment for Aboriginal workers</li> <li>equitable and fair distribution of employment and training opportunities</li> </ul>	4. Employment training programs
<b>2. Health and Wellness</b>	
<ul style="list-style-type: none"> <li>pre-existing social condition of substance abuse problems</li> <li>workers that will need assistance in meeting any zero tolerance regulations</li> <li>healthier and more stable individuals, communities and workforce</li> </ul>	5. Substance abuse prevention and treatment
<ul style="list-style-type: none"> <li>need to identify and meet employee and community social service needs as a result of adjustments to the transition to wage economy and rotational schedule (in the face of increased risk for social dysfunction)</li> <li>need for personal counselling, as a result of adjustments to the work rotation schedule and non-aboriginal work culture</li> </ul>	6. Community liaison personnel
<ul style="list-style-type: none"> <li>family issues</li> <li>marital problems due to separation</li> </ul>	7. Family support services

**Table 5.3-8 Key Issues and Concerns Addressed by the Socio-economic Impact Management Measures (continued)**

Key Issue and Concerns (as expressed by community members, and/or representatives from the public sector, the private sector, and non-government organizations) <sup>1</sup>	Socio-economic Impact Management Measures (in response to the key issues and concerns and the related predicted impacts) <sup>2,3</sup>
<ul style="list-style-type: none"> <li>• lack of personal and family money management experience and skills</li> <li>• potential for decreased quality of life for all family members as result of poor financial management</li> </ul>	8. Money management training
<ul style="list-style-type: none"> <li>• marital separation issues</li> <li>• family separation issues</li> <li>• potential that money not spent in the local communities, with the result of reduced opportunity for initiating local economic activity</li> <li>• minimize access to addictive substances; and associated dysfunctional behaviour</li> </ul>	9. Transportation to the site
<ul style="list-style-type: none"> <li>• recognition of and respect for Aboriginal cultures</li> <li>• making wage economy activities more culturally sensitive</li> </ul>	10. Cultural awareness programs
<ul style="list-style-type: none"> <li>• needs within the communities to maintain and strengthen cultural values and sense of identity, as a result of accelerated integration into the wage economy</li> <li>• recognize traditional knowledge and its value for cultural strengthening</li> <li>• the promotion of Dene and Métis cultures through economic advancement</li> <li>• recognition and respect for Aboriginal traditional land use areas</li> </ul>	11. Aboriginal traditional practice support
<b>3. Economic Development</b>	
<ul style="list-style-type: none"> <li>• potential for developing community based sustainable economic initiatives</li> <li>• need for increased social capital (skills and education)</li> <li>• business opportunities</li> </ul>	12. Business development support
<ul style="list-style-type: none"> <li>• employment for community members</li> <li>• economic benefits to existing and new Aboriginal and northern businesses</li> </ul>	13. Contracts and contact lists

<sup>1</sup> Key Issues and concerns of the primary communities are discussed in detail in Section 5.3.1.2. Issues and concerns expressed by representatives from the private sector, the public sector and non-governmental women's organizations are presented in Section 5.3.1.3. Note also that not all issues and concerns identified in these sections are included here, as they are not addressed by socio-economic impact management measures.

<sup>2</sup> Predicted direct, indirect and induced impacts are listed in Table 5.3-7.

<sup>3</sup> The socio-economic impact management measures are discussed in greater detail in Section 5.3.4.

### 5.3.4.2 Recruitment, Training, and Employment

*De Beers is committed to developing a long-term strategic approach to the recruitment, training, employment, and advancement of Aboriginal and northern individuals*

To increase the proportion of mine employment opportunities awarded to the Aboriginal and northern workforce, De Beers will develop a long-term strategic approach to the recruitment, training, employment, and advancement of Aboriginal and northern individuals. The strategy is based on the impact management measures in Table 5.3-8 that complement each other, and seek to meet the training and employment needs of individuals with varying levels of skills and work experience. The strategy is an ongoing process, aimed at ensuring continuous skills upgrading and employment. The following impact management measures comprise the approach to recruitment, training, and employment:

- hiring priorities;
- recruitment and employment strategies;
- literacy training;
- on-site learning centre; and,
- employment training programs.

#### 5.3.4.2.1 Hiring Priorities

*Priorities in hiring will put local people first*

De Beers will adopt a preferential hiring policy for Aboriginal and northern employees so that they can directly benefit from the project through employment. De Beers is committed to recruiting and hiring as many Aboriginals and northerners as possible during both the construction and operation phases. Priorities in hiring will be as follows:

- first: Aboriginals born or residing in one of the primary communities;
- second: residents of the NWT;
- third: individuals willing to relocate to the NWT; and,
- fourth: others from across Canada.

#### 5.3.4.2.2 Recruitment and Employment Strategies

*The recruitment and employment strategy aims to match Aboriginal and northern workforce skills with mine employment opportunities*

De Beers is committed to a proactive recruitment and employment strategy. The aim of the strategy is two-fold:

- to determine Aboriginal and northern workforce skills through a needs assessment and match them with the employment opportunities; and,

- to provide progressive employment for mine employees through training and career planning. The strategy will be on-going throughout the life of the mine, and based on annually updated five-year plans. The strategy will be carried out in collaboration with the primary communities.

### **Workforce Skills and Training Needs Assessment**

*Assessments will identify the education and skills levels among the Aboriginal and northern workforce*

Periodic assessments will be carried out both in the communities and at the mine site to identify the education and skills levels among the Aboriginal and northern workforce, particularly in the primary communities. Assessments of workforce needs for the mining operation will be carried out concurrently. (A preliminary description of the positions to be filled is provided in Appendix V.3.) One purpose of the assessment will be to identify the existing education and skills levels among the Aboriginal and northern workforce, so that work can be offered to new recruits and opportunities for advancement can be offered to existing employees.

*Assessment will also identify gaps in Aboriginal and northerners skills and education*

The second purpose of the assessment is to identify gaps in skills and education of Aboriginal and northerners that need to be addressed, so that future labour demands and the requirement of the preferential hiring policy can be fulfilled. The assessment will be conducted in collaboration with the primary communities.

### **Training and Recruitment Plans**

*De Beers will work with communities and the Government of the Northwest Territories to prepare employment training plans*

Based on the skills and education gaps identified in the workforce needs assessments, De Beers will work with communities and the GNWT to prepare employment training plans that address these gaps and identify an implementation schedule. Five year training plans will be developed annually.

*Through continuous skills development, Aboriginal and northern employees may advance in their mining career*

Training plans will also be focussed on the workforce. The intent is to ensure continuous skills development so that Aboriginal and northern employees may advance in their mining career and progressively assume greater work responsibilities. As employees advance within the company, entrance level work opportunities will be made available to new hires, ensuring that the Aboriginal and northern workforce grows.

*De Beers is committed to working with each Aboriginal and northern employee to develop a personalized career plan*

De Beers is committed to working with each Aboriginal and northern employee in the development of a personalized career plan that includes a course of action and a timeline for achieving the employee's objectives. If the employee's objective involves upgrading education levels, De Beers will provide counsel to that employee on the appropriate educational requirements required for the employee to achieve their desired goal.

Where the employee is able to meet the educational requirements for entrance in the desired programs, De Beers will work with that employee to assist with securing the financial and other support needed to enable that employee to take advantage of the opportunity. In this manner, the greatest extent of mine employment opportunities to Aboriginal and northern workforce will be provided.

***Aboriginal students will be hired***

In addition, a recruitment program will be developed to attract Aboriginal students as part of De Beers' hiring policies for summer students.

### **5.3.4.2.3 Literacy Programs**

***Improved literacy levels generally contribute to overall health and social well being of individuals and communities***

De Beers acknowledges that literacy is fundamental to the individuals' and communities' capacity to adapt to the wage economy, including wages from both mining and non-mining opportunities. Literacy skills are a prerequisite for participating in life skills development, job training, or educational programs. As such, improved literacy levels generally contribute to the overall health and social well being of individuals and communities.

***De Beers' approach to long-term literacy training reflects community and government concerns***

De Beers' approach to long-term literacy training reflects the concerns expressed by members from the primary communities with regards to the needs for life and employment skills development. It also reflects the GNWT's approach to skills upgrading as laid out in *People: Our Focus For the Future* (GNWT 1994).

***De Beers is committed to ensuring the provision of literacy programs on-site and in the primary communities***

De Beers is committed to ensuring the provision of literacy programs both on-site to its employees, and in the primary communities. In both cases, De Beers will work with community agencies to ensure that literacy programs will be directly linked to other kinds of upgrading, education, and training programs, so that participants may further improve their qualifications towards employment.

***All De Beers employees will be eligible for on-site literacy programs***

De Beers will provide on-site literacy programs for employees. All employees will be eligible to enrol in the program. While participation will be voluntary, incentives (*e.g.*, time away from work) may be provided for employees to participate. Literacy programs on-site will be linked to the company's recruitment and employment strategy to permit employees to take advantage of career advancement opportunities. De Beers will fully fund the on-site literacy training program.

***Community-based literacy programs will be provided through partnerships***

De Beers, through its community liaison personnel, will assist communities and existing local learning institutions to encourage community members (including on-site employees) to upgrade their literacy levels. Literacy

programs can be provided through community-based programs (as offered by, for example, Aurora College), preferably as one component of broader life-skills or employment training programs. In this manner, community members will be able to upgrade their literacy skills in order to be better prepared for further training and/or employment opportunities. De Beers will work with the NWT and federal governments to encourage continued and adequately funded and delivered mechanisms for community based literacy programs in the primary communities.

#### **5.3.4.2.4 On-site Learning Centre**

*De Beers will establish a learning centre at the Snap Lake site*

De Beers will establish a learning centre at the Snap Lake Diamond Project to encourage and facilitate employees to further their educational background and skills development. The learning centre will be equipped with computer and internet facilities. Literacy programs, upgrading, and distance education courses will be offered through the centre. De Beers will provide educational materials and on-site instructors. The centre will also be associated with a recognized learning institution. The learning centre will also be open to site employees for self-directed studies and skills training.

#### **5.3.4.2.5 Employment Training Programs**

*De Beers, working with other partners, will seek to implement long-term employment training programs*

De Beers will work in partnership with communities, the GNWT, the federal government, local learning institutions, and potentially other mining companies to implement long-term employment training programs. These programs will focus on both upgrading and mine employment training. They will be offered to employees on site, and, as appropriate and feasible, to others in the communities.

#### **Pre-employment Upgrading**

*The pre-employment upgrading aims to increase the number of Aboriginal and northern individuals qualified to enrol in mine employment training programs*

De Beers will work in partnership with the appropriate agencies to provide pre-employment educational upgrading in the primary communities. The aim of the pre-employment upgrading is to increase the number of Aboriginal and northern individuals in the primary communities qualified to enrol in mine employment training programs. Pre-employment upgrading will be open to all community members and will be instructed by a third party. Educational upgrading may include math, reading, and writing skills (which would be complemented by literacy programs, as described above).

### **Mining Job Apprenticeships**

***De Beers will actively support the existing Government of the Northwest Territories apprenticeship training program***

De Beers will actively support the existing GNWT apprenticeship training program, by encouraging and facilitating participation of primary community members who have indicated an interest in mine employment. De Beers will also work in partnership with the GNWT, the federal government, and communities to develop a learning guide in preparation for the entrance exam to the *GNWT apprenticeship training* program. De Beers will provide ten apprentice positions for Aboriginals or northerners who meet the requirements of the *NWT Apprenticeship Trade and Occupations Act*.

***De Beers will set up a trades training program***

Within three years of production, De Beers will set up a trades training program and will provide 10 positions for Aboriginal or northerners. The program will be for individuals who do not qualify for the apprentice program but will become eligible for the apprentice program through successful completion of the De Beers program.

### **Mine Employment Training**

***De Beers will provide training specific to mine employment in the communities and on-site***

De Beers will provide training specific to mine employment in the communities and on-site. Mine employment training will prepare newly recruited employees for their specific mine job position and responsibilities. Mine employment training also encompasses upgrading and advancement training of employees who may assume new work responsibilities at the mine. Employees will need to demonstrate eligibility criteria to participate in mine employment training programs. The following kinds of mine employment programs will be provided:

- A mine employment orientation program will be mandatory for all new employees. The program will be offered primarily in the communities.
- An underground mining training program will have a practical orientation and will be provided on-site. Within the first three years of production, a De Beers underground miner training program will be set up and 20 positions will be made available to Aboriginals or northerners.
- Other training programs specific to mine jobs will be offered to newly hired employees and already existing employees. Most job specific training programs will be offered on-site.



### 5.3.4.3 Health and Wellness

*De Beers is committed to working with others to minimize any potential negative impacts of the project on individuals' and families' health and wellness*

De Beers recognizes that the health and wellness of individuals and families is fundamental to the social, economic, and cultural sustainability of communities. The Snap Lake Diamond Project may exacerbate existing social dysfunctional conditions in the primary communities. In order to ensure a healthy and stable workforce, De Beers is committed to working with others to minimize any potential negative impacts on individuals' and families' health and wellness. The following impact management measures seek to address issues of individual, family, and cultural wellness:

- substance abuse prevention and treatment;
- community liaison personnel;
- family support services;
- money management training;
- transportation to the site;
- cultural awareness programs; and,
- Aboriginal traditional practice support.

#### 5.3.4.3.1 Substance Abuse Prevention and Treatment

*Only those who have no substance abuse problems, or those who are able to overcome their substance abuse problems, may be included in the labour pool*

Given the emphasis on maximizing Aboriginal and northern employment, the size of the labour pool is a critical issue in fulfilling labour demands at both the Snap Lake Diamond Project and the other mining projects in the NWT. Because of the “zero tolerance” policy on site in mining operations, only those who have no substance abuse problems, or those who are successfully able to overcome and manage their substance abuse problems, will be considered for inclusion in the labour pool.

*De Beers is committed to take a proactive approach to addressing substance abuse problems*

De Beers recognizes that communities have identified alcohol and substance abuse as a main barrier to professional and personal development. De Beers also recognizes that substance abuse among the Aboriginal population in the NWT is far greater than for the average Canadian (GNWT Bureau of Statistics 1996). As such, De Beers is committed to working with others to take a proactive and long-term approach to addressing substance abuse problems in the primary communities.

***De Beers will seek partnerships with communities and the territorial and federal governments to implement effective substance abuse programs***

In order to deal with substance abuse issues, De Beers will support initiatives and resources in the primary communities, as well as any strategic plans for addressing alcohol and substance abuse problems in the NWT. De Beers will also seek partnerships with communities, the GNWT, and the government of Canada to ensure that effective and recognized substance abuse programs are made available for community members and project employees.

***Substance abuse programs may consist of prevention and awareness, and addiction treatment***

Substance abuse programs consist of two components: prevention and awareness, and addiction treatment. Both components of the programs should be offered to communities and employees on an on-going and voluntary basis, through partnership arrangements between De Beers, the GNWT, and the communities.

***It is recognized that addiction treatment is both a government and community responsibility***

De Beers will work in partnership with government and community agencies in terms of awareness and prevention. De Beers will assist in dissemination of materials and in provision of speakers to schools and communities. With respect to addiction treatment, it is recognized that this is both a government and community responsibility. However, to encourage and support individuals after completion of the government or community offered addiction treatment component of the program, De Beers will offer participants the opportunity to immediately enrol in further pre-employment or employment training.

### **Substance Abuse Prevention and Awareness**

***Ongoing prevention and awareness programs will be carried out on-site and in the communities***

Ongoing prevention and awareness programs will be carried out on-site and in the communities. Potential activities include raising awareness in schools and workplaces, community meetings and/or workshops, and the distribution of written information (e.g., posters, pamphlets). De Beers will seek collaboration/partnerships with social service agencies in the primary communities and, where available, already trained alcohol and substance abuse community counsellors.

### **Addiction Treatment Program**

***Possible steps in an addiction treatment and post-treatment training program are outlined***

Although the program would have to be developed in collaboration with government and the community, a possible approach to adding a post-treatment program to the addiction treatment program is as follows:

- a) Individuals volunteer to attend a recognized addiction treatment program.

- b) Upon successful completion of the recognized addiction treatment program, and verification that the substance abuse problem has been overcome, the individuals would move directly into a pre-employment training program, as part of the employment training program (as described in impact management measure 5.3.4.2 above).
- c) Upon completion of the upgrading education program, participants would go into De Beers' general mining orientation program.
- d) Upon completion of activity (c), each individual would meet with De Beers human resources personnel to discuss whether or not they have an interest in working in mining and to assess their suitability for mine employment. Those interested in working in mining and who fulfil employment criteria, would then undergo the training offered by the company.

*Those who do not qualify for mine employment will be provided opportunities to continue upgrading their skills and qualifications*

Those individuals who do not qualify for mine employment or do not wish to work in mining, will be referred to other community or government provided opportunities to continue upgrading their skills and qualifications. For example, individuals who wish to pursue activities other than mining employment will receive counselling about other training and education opportunities. Those who have interests in learning a trade and apprenticing could receive counselling for entry into such programs. Others would be directed to more appropriate education and training programs, which would provide them with basic skills to pursue the kind of wage economy activities that they felt were most appropriate.

#### **5.3.4.3.2 Community Liaison Personnel**

*Community liaison personnel will serve as a communications link between De Beers, employees, and the primary communities*

De Beers will employ at least two full-time community liaison personnel. These people will serve as a communications link between De Beers, employees, and the primary communities. Based in Yellowknife, these people will visit each of the primary communities and the mine project site regularly. Employees' and the communities' concerns will be communicated to De Beers on a regular basis, and issues can be addressed proactively. Concerns may be related to the work and on-site living conditions, cross-cultural adjustments, recruitment strategies, *etc.* The community liaison personnel will be responsible for the following:

- communicating updated information to primary communities and employees about De Beers' project activities and company employment and training policies;
- identifying employees' and community members' issues and concerns regarding mine employment and well-being, as such concerns emerge throughout the construction, operation, and closure phases;

- communicating employees' and community members' issues and concerns to appropriate personnel within De Beers;
- communicating back to employees and community members De Beers' responses to issues and concerns;
- assisting employees and community members in accessing the appropriate community and social services, training programs, and information resources, to address issues and concerns expressed; and,
- updating the local community human resource coordinator and collaborating with other community members to address community or company issues.

#### **5.3.4.3.3 Family Support Services**

*Family support services will contribute to healthier individuals, a more stable workforce, more intact families, and a greater degree of social capacity*

De Beers recognizes that mine employment in the primary communities will place additional stresses on individuals and families, as it relates to adjustments to the wage economy and the rotational work schedule. Individual employees and their families will need adequate support services to help cope with these stresses and adjustments. Specifically, community members have identified a need for family and relationship counselling, stress management, anger management, support services for women and single mothers, child care services, and parenting training. The provision of such services in the communities will contribute to healthier individuals, a more stable workforce, more intact families, and a greater degree of social capacity.

*De Beers will seek partnerships to ensure the provision of ongoing family support services*

De Beers will seek partnerships with community social service agencies, the GNWT, and the federal government to provide ongoing family counselling services in the primary communities for mine employees, employee spouses, and their families. While on-site, employees will be informed about the existing support services available in the communities, to encourage full use of such services while off-site.

#### **5.3.4.3.4 Money Management Training**

*De Beers recognizes money management skills are needed to optimize the potential positive effects of increased levels of income*

Employment will directly lead to substantial increases in individuals' and families' levels of income and disposable income. Given that many employees may have had limited experience in personal financial management, De Beers recognizes that skills development in money management is needed to optimize the potential positive effects of increased levels of income among employees. Where opportunities for development of money management skills are not provided, the sharp rise in disposable income among employees may exacerbate social dysfunction among both individuals and families, and in communities as a whole.

*Through a third party, De Beers will provide money management training in each of the primary communities for employees and their spouses*

De Beers will provide money management training in each of the primary communities for employees and their spouses. Training will be mandatory within the first six months for all newly hired employees. Workshops (requiring two to three evenings) will be provided in the communities, during employees' off-site rotation. The training will focus on family financing and savings strategies. In addition, employees and their families will be able to access money management assistance services through a toll-free telephone line.

*Remote banking services will be sought*

De Beers will also seek collaboration with recognized financial institutions to establish internet and telephone based banking services in the primary communities.

#### **5.3.4.3.5      *Transportation to the Site***

*Stopovers in Yellowknife cause negative impacts on families*

Community members raised concerns regarding the social impacts of stop-over flights in Yellowknife during transportation of employees between the mine site and communities. It has been communicated to De Beers that stop-overs in Yellowknife encourage prolonged absence from families, increased substance abuse, and deterioration in family relations.

*Whenever feasible, De Beers will provide direct flights between the project site and the primary communities*

Consistent with De Beer's commitment to social sustainability, De Beers will provide direct flights between the project site and the primary communities whenever feasible. Such flights will not be scheduled to land and/or stop in Yellowknife. Employees will be flown to and from their communities when they are transported to and from the mine site.

#### **5.3.4.3.6      *Cultural Awareness Programs***

*De Beers is committed to ensuring a harmonious and culturally sensitive work environment*

The Snap Lake labour force will be comprised of Aboriginal and non-aboriginal employees. De Beers is committed to ensuring a harmonious and culturally sensitive work environment. A number of different activities will be conducted to ensure a healthy work environment for all.

- De Beers will arrange to provide cross-cultural training to all onsite staff. Training will deal with understanding and recognizing different cultural values in the workplace, racism, and cross-cultural communication.
- In collaboration with the community liaison personnel, De Beers will organize Community Appreciation Days. Non-aboriginal site employees will have the opportunity to participate in community activities together with Aboriginal community members, to be arranged in the primary communities.

- In collaboration with community liaison personnel, De Beers will develop a cultural exchange program to provide non-aboriginal site employees with the opportunity to spend 2-3 days with Aboriginal employees while participating in traditional land activities.
- De Beers will arrange mine site visits for mine employees' spouses and families.
- When commercially available, De Beers will ensure that traditional foods are provided onsite.

#### **5.3.4.3.7 Aboriginal Traditional Practice Support**

*The expansion of mine employment to the communities will possibly impact cultural activities*

De Beers recognizes that Aboriginal culture and lifestyle is fundamental to the social, cultural, and environmental sustainability of the primary communities. The expansion of mine employment to the communities will inevitably have an impact on lifestyles and, possibly, the extent and nature by which cultural activities are practiced.

*De Beers will actively support the promotion of traditional cultural practices in the primary communities*

De Beers will actively support the promotion of traditional cultural practices in the primary communities. De Beers may assist with funding support to existing or emerging community-based programs or agencies with the mandate to strengthen Aboriginal culture in the primary communities. In addition, De Beers will work with community and government educational agencies to promote attaining Aboriginal culturally appropriate resources for local schools.

#### **5.3.4.4 Economic Development**

*De Beers is committed to supporting mine related economic activities*

The construction and operation of the Snap Lake Diamond Project will provide potential for development of economic activities and related increased employment opportunities in the primary communities and the NWT. To encourage local economic activity, De Beers is committed to implementing two impact management measures to support local economic development:

- business development support; and,
- contract and contact lists.

##### **5.3.4.4.1 Business Development Support**

*De Beers will support local business related to the mine initiatives in the primary communities*

De Beers will commit to assist local business initiatives in the primary communities that are directly related to the mine. De Beers will hire a

manager of business development to assist and build relationships with NWT businesses.

*De Beers will facilitate the provision of business expertise to the communities*

Upon request, De Beers will provide business expertise to the communities, as appropriate and available. This may include making a person available to sit as a board member on community based corporations. This person could serve as a resource person or mentor, and provide expertise and advice to communities on business-related matters.

*De Beers will also provide support to business initiatives*

De Beers will provide support either with direct input or as a facilitator to mine-related business initiatives that have been identified as priorities by the communities.

#### **5.3.4.4.2 Contracts and Contact Lists**

*De Beers will provide primary communities with a list of all potential contractors that could be employed during construction and operation*

De Beers is committed to ensuring that as many contracts as possible are carried out by or in partnership with Aboriginal and northern companies. In order to facilitate economic activities (e.g., joint ventures, sub-contracts) connected to the mine project, De Beers, through its manager of business development, will provide primary communities with a list of all potential contractors that could be employed during construction and operation. All contractors considered by De Beers will be required to disclose their policies and practices for providing preferential contracting opportunities to Aboriginals and northerners. A preliminary business directory is provided in Appendix V.4. This directory will be updated.

*De Beers will provide primary communities with its list of contract services and needs*

De Beers will provide its list of contract services and needs to the primary communities so that the communities may have a reasonable chance to successfully bid or partner with a potential bidder. In acknowledgement of the greater amount of time it may take for primary communities to organize and assemble resources to participate in the bidding process, this list of all goods and services will be provided to primary communities in advance of its release to the general public. To make contracts attainable for small Aboriginal and northern businesses, attempts will be made to split large contract opportunities into smaller contracts.

### **5.3.5 Evaluation of Residual Impacts**

*Residual impact criteria are identified in the Terms of Reference*

The Snap Lake Diamond Project Terms of Reference, Section 5.1.1, mandates De Beers to evaluate residual impacts (the impacts that are predicted to occur with the implementation of the impact management measures) according to a set of specified criteria. These criteria are:

- magnitude;
- geographic extent;
- timing;
- duration;
- frequency;
- irreversibility of impacts;
- ecological resilience; and,
- probability of occurrence and confidence level.

***The applicability of some criteria to socio-economics is limited***

However, applying some of these criteria to the predicted residual impacts of the Snap Lake Diamond Project is more difficult for socio-economic than biophysical impacts.

### **Magnitude**

***Up to 500 employment opportunities will be provided***

Overall, the direct impact of up to 500 employment opportunities provided for northern residents and Aboriginal communities will be substantial and positive.

***The direction of residual socio-economic impacts will be positive and the magnitude substantial***

With all impact management measures being implemented in full, the direction of residual socio-economic impacts will be positive. Given De Beers' commitment to fully implement the impact management measures, the confidence level in this prediction is high. Given that the impact management measures will be tailored to offset potential negative impacts, and to enhance the positive impacts, the magnitude of the residual impacts is expected to be substantial when all primary communities are considered together, although the impacts may vary by community.

***The magnitude of direct impacts for each of the primary communities cannot be predicted***

As discussed in Section 5.1.5.3, an individuals' and an individual communities' responses to the direct impacts cannot be predicted with great certainty. The magnitude of direct impacts for each of the primary communities will depend upon the available labour force desirous of working for the Snap Lake Diamond Project at the time of project implementation and the identified skills levels within each of the communities. In addition to the distribution and magnitude of the direct impacts among the communities, the residual impact will depend on such factors as individuals' values, choices, and abilities at a particular time, as well as individual communities' capacities to adapt to further changes.



### Geographic Extent

*The geographic extent of the residual impacts is limited to the study area as a whole*

Because it is not possible to predict the distribution of the direct impacts separately among each of the primary communities, determining the geographic extent of the residual impacts is limited to the study area as a whole. The study area is not a geographic area (*i.e.*, a land base). In keeping with the focus on people in this section, the socio-economic impact is primarily assessed for communities, primarily the primary communities (shown in Figure 5.1-1). However, the economic analysis takes a broader view that includes the NWT and Canada.

### Timing and Duration

*Residual impacts are expected to occur throughout the life of the mine project*

Residual impacts are expected to occur throughout the life of the mine project. The duration of the impacts will vary, however, with each individual's and community's particular responses to the direct impacts over time. For example, some communities may need a high degree of job-specific training programs at the outset of the project, while other communities may have a high degree of need for upgrading and skills development programs to begin, and greater needs for job-specific training after some 5-10 years of project operation. Some communities may need longer-term and ongoing training, while others may require shorter programs. Communities and individuals' needs will vary over time, as social and economic conditions change. Residual impacts upon the implementation of the management measures will vary in accordance to these needs.

### Frequency

*Criteria of frequency does not apply*

None of the predicted socio-economic impacts identified may be defined as isolated events. It is therefore not appropriate to consider residual impacts in terms of their frequency.

### Ecological Resilience

*Criteria of ecological resilience does not apply*

The residual impact criteria of ecological resilience is not applicable to the SEIA.

### Irreversibility of Impacts

*Positive residual impacts will be enduring and irreversible*

Given that the implementation of impact management measures will be based on the ongoing monitoring of impacts, and that contingency measures will be put in place in the event of unforeseen negative impacts, it is expected that the positive residual impacts will be enduring. Some, such as higher education and training achieved, will be irreversible.

## 5.3.6 Monitoring

*Effective and continuous monitoring of impacts during the life of the mine is needed*

Effective and continuous monitoring is needed during the life of the mine due to the level of uncertainty associated with predicting and analyzing the socio-economic indirect and induced impacts of the Snap Lake Diamond Project (as discussed in Section 5.1.5.3). Given that the direction (positive or negative) and the magnitude of the predicted impacts are directly tied to the implementation of the impact management measures (Section 5.3.4) monitoring must be closely linked to these measures.

*De Beers is committed to a socio-economic monitoring program to measure socio-economic effects in communities and assess the management measures*

De Beers is committed to socio-economic monitoring that will monitor the effectiveness of project related mitigation within their control. De Beers will monitor socio-economic indicators that pertain to the areas of socio-economic effects discussed earlier in this section and the delivery of impact management measures. The final monitoring requirements will be identified during the EA review and other regulatory processes and set out in the MVEIRB's recommendation and the final permits and licences. As discussed further in Section 14, the design of the monitoring plans will be undertaken collaboratively with Aboriginal communities, governments, and other stakeholders.

*When impact management measures require a cooperative approach, all parties need to agree on the monitoring method*

De Beers will work with affected communities and government agencies to reduce overlaps and to ensure that De Beers' management measures are complementary to those measures being implemented by the other partners. This will be particularly important where De Beers' impact management measures are conditional upon, overlap with, or are complementary to, management measures being implemented by government agencies or Aboriginal communities. In this case, monitoring will prove most effective if the parties can work cooperatively to agree on the following:

- monitoring protocols;
- linkages and integration with existing monitoring programs and processes;
- the means of sharing monitoring results with each other and with the public;
- levels and frequency of monitoring;
- divisions of responsibility;
- response mechanisms; and,
- reporting to the public.

## 5.4 SUMMARY AND CONCLUSION

*The project will have many direct and indirect positive impacts in primary communities*

The Snap Lake Diamond Project will have both direct and indirect positive impacts in the primary communities, on an individual, family, and community basis. These direct positive impacts will include increased employment, mining job training, and increased family income. There will be about 500 operational jobs during the 22-year mine life, and many spin off indirect and induced jobs. The total number of person years of work from direct and indirect employment is 38,440 with over \$3.26 billion dollars impact to the GDP.

*The magnitude of negative impacts will depend on the effectiveness of impact management measures implementation*

Where there are pre-existing dysfunctional social conditions in communities that could be exacerbated by wage employment, there is a potential for negative impacts to occur. The magnitude of these impacts will be influenced by the degree to which impact management measures are implemented effectively.

*The socio-economic impacts of the project will be positive and substantial*

Based on the forgoing analysis, and assuming the effective design and implementation of the impact management measures, the socio-economic impacts of the project will be positive and substantial. The success and effectiveness of the impact management measures will be directly correlated to the increase in positive impacts and the decrease in negative impacts.

*The project will contribute to social and economic sustainability in the primary communities*

Not only will the direct and indirect effects contribute to an improved quality of life for many individuals and families, but the project can contribute to social and economic sustainability in the primary communities. If implemented, the impact management measures (*e.g.*, programs addressing substance abuse, family support, and money management issues) will provide the necessary support for families and communities. In addition, impact management measures aimed at the creation of long-term employment, as well as support for economic diversity in communities, will also encourage and facilitate economic stability.

*Partnership between communities, territorial and federal governments, and learning institutions is critical*

Partnership approach between De Beers, the primary communities, the territorial and federal governments, and learning institutions is critical to the implementation of the impact management measures. Such a partnership approach is an integral component to the implementation of De Beers' impact management measures. Further, with De Beers and the Snap Lake Diamond Project being a catalyst for the development of partnerships, many more positive effects can be achieved through cooperation with the communities and governments.

***The project will  
enhance  
sustainability***

This project and the proposed impact management measures, fully implemented, will substantially contribute to the social and economic sustainability in the primary communities and the NWT overall.

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## 5.6 UNITS, ACRONYMS, AND GLOSSARY

### UNITS

km	kilometre
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### ACRONYMS

CMHC	Canadian Mortgage and Housing Corporation
CPI	consumer price index
De Beers	De Beers Canada Mining Inc.
EA	environmental assessment
FAE	fetal alcohol effect
FAS	fetal alcohol syndrome
FTE	full time equivalencies
GDP	gross domestic product
GNWT	Government of the Northwest Territories
IER	Institute of Environmental Research
INAC	Indian and Northern Affairs Canada
IO	input-output
K	thousand
MVEIRB	Mackenzie Valley Environmental Impact Review Board
N/A	not available
NRTEE	National Round Table on Environment and the Economy
NSMA	North Slave Métis Alliance
NWT	North West Territories
RCMP	Royal Canadian Mounted Police

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SEIA	socio-economic impact assessment
tech	technical
TOR	Terms of Reference

## GLOSSARY

1/1 rotation	employment rotation consisting of 1 week working at the mine site and 1 week off
2/2 rotation	employment rotation consisting of 2 weeks working at the mine site and 2 weeks off
3/1 rotation	employment rotation consisting of 3 weeks working at the mine site and 1 week off
adaptive implementation	implementation method that incorporates change resulting from new research and reclamation approaches that have been developed; is an iterative and ongoing process
agreement in principle	embodies a partnership that is focused on outlining general principles as well as attaining specific goals
constant comparison	process for ensuring reliable qualitative analysis; data are analyzed by grouping recurring themes into categories; as additional data are gathered, these categories may be continually changed and refined, until a point of saturation is reached; at this point, new data do not change the established categories, or add value to the contents of each category
consumer price index	an indicator of the changes in consumer prices experienced by Canadians; it is obtained by comparing, through time, the cost of a fixed basket of commodities purchased by consumers in a particular year
demographic data	descriptive data that can be used to provide a picture of the population at a specific point in time ( <i>i.e.</i> , data on age, sex, employment levels)
Dene	the people
direction	describes an impact or effect as being neutral or negative; the direction reflects the change, if any, from baseline

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duration	defined as the length of time that an impact will occur; duration and timing have been combined within the definition of duration used in this EA; duration is defined by the timing of the phases of the project
ecological resilience	the rate of ecosystem recovery following a disturbance or the capacity of an ecosystem to absorb disturbances
economic stability	the creation of employment for the long term as well as support for economic diversity so that the communities can manage in any down turn
employed	persons who during the reference week (when the data were collected); (i) did any work at all, excluding housework, maintenance around the home, and volunteer work; or (ii) were absent from their job or business because of vacation, illness, on strike or locked out, etc.
employment catchment communities	the northern workforce may be drawn in part from these communities; <i>e.g.</i> , Fort Resolution, Hay River, Hay River Reserve (located in Hay River), Fort Smith, Fort Providence, and Enterprise, which are located further away from the project site
employment rate	the percentage of persons 15 years of age and over who were employed during the reference week (when the data were collected)
environmental consequence	the overall effect on the environment when the magnitude, geographic extent, duration, and irreversibility of the project's impact are considered together
environmental sustainability	to develop projects that would make use of the physical environment in such a manner as to not diminish future use with or without the mitigation and rehabilitation.
environmental uncertainty	referring to both the natural environment and the working environment in which management decisions will be made.
extra territorial labour	persons from outside of the NWT who are working in that territory
fiscal capacity	refers to the ability to manage taxation, public revenues, or public debt
formula financing grant	annual cash transfer from the federal government to the GNWT; the grant is an unconditional transfer, meaning that the GNWT can spend the grant based on its own priorities; the basic structure of the territorial formula financing grant is designed to represent the difference between the GNWT's expenditure needs and its ability to raise revenue (fiscal capacity); the grant is represented as follows: Grant = GNWT expenditure needs - revenue raising capacity



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framework agreement	used as the basis for negotiating a lands, resources, and self-government agreement
frequency	refers to how often an effect will occur
geographic extent	refers to the geographic location where the impact is predicted to occur; a local geographic extent is assigned if the effect is restricted to the LSA; a regional geographical extent is assigned if the effect extends beyond the LSA into some part of the RSA
gross expenditure base (GEB)	used as a proxy for GNWT expenditure needs; the GEB is the GNWT expenditure needs identified when the formula grant was established (1982-1983) and is multiplied annually by: the lesser of growth in provincial-local government spending or the growth in the Canadian economy; and, the population growth rate in the NWT relative to the Canadian population growth rate; any program transfers to the GNWT are added to the GEB in the year they are transferred
indirect impact (also secondary impact)	the result of the response by the people and communities affected by a direct impact of the development project ( <i>e.g.</i> , increased spending capacity, need for banking services)
induced impact	represents the increased production required to meet the augmented household demand for commodities; the higher demand for commodities is generated by the increased labour income (net of taxes and savings) associated with the higher production levels
induced labour	labour that is possible due to a spin-off associated with indirect labour
institutional strengthening	strengthening and promotion of an established organization or corporation
labour force	persons who were either employed or unemployed during the reference week (when the data were collected)
level of confidence	directly related to the degree of certainty in the impact prediction
magnitude	a measure of the intensity or severity of an impact; it is a measure of the degree of change in a measurement or analysis endpoint
non-renewable resource	a resource that is not capable of being replaced by natural ecological cycles
participation rate	the percentage of persons 15 years of age and over who are in the labour force
primary study area	consists of primary study communities

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primary study communities	communities that De Beers has determined are likely to experience the greatest impacts, due to their proximity to the project site and expected contribution to the project workforce <i>e.g.</i> , Lutsel K'e, N'Dilo, Dettah, Gameti, Wha Ti, Rae/Edzo, Wekweti, and Yellowknife (including the North Slave Métis Alliance population).
probability of occurrence	the likelihood that the environmental consequence indicated in the impact prediction will occur if the project goes ahead
profiling	the description of the impacted communities and the NWT based on socio-economic data; including in-depth information about communities' and stakeholder groups' key concerns related to the project development
renewable resource	a resource that is capable of being replaced by natural ecological cycles or sound management practices
reversibility	refers to changes that occur after the impact ceases allowing the environment to return to a capability or condition equivalent to the baseline
secondary impact (also indirect impact)	the result of the response by the people and communities affected by a direct impact of the development project ( <i>e.g.</i> , increased spending capacity, need for banking services)
social stability	strengthening individuals and families by reducing dysfunctional behaviour; developing individual skills that are transferable and can lead to providing economic sustainability; strengthening cultural preservation
traditional knowledge	information obtained more often through observations during extensive time spent in one geographic location than through information obtained formally by the scientific method, <i>e.g.</i> , Aboriginal traditional knowledge
triangulation methods	process for ensuring reliable qualitative analysis; categories and themes that emerge from the qualitative data are compared against other case studies, professionals' judgment, and brought back to the original first-hand sources ( <i>e.g.</i> , interview participants) to verify the validity of the findings
uncertainty about related decisions	referring to the various strategic, political and socio-economic developments that will shape the impacts of the particular project, and which may be both local and global in scope
uncertainty about values	referring to individuals' and organizations' values that will shape both management decisions as well as the perception of particular impacts

uncertainty regarding impact magnitude and distribution	referring to the differences in magnitude of impact that will be felt by different individuals and communities, depending on existing and evolving socio-economic conditions
uncertainty regarding mitigation effectiveness	referring to the degree by which impacts may or may not be effectively mitigated, depending on factors such as level of commitment, funding, and adequacy of implementation
unemployed	persons who during the reference week (when the data were collected); (i) were without work, had actively looked for work in the previous four weeks and were available for work; or (ii) had been on temporary lay-off and expected to return to their job; or (iii) had definite arrangements to start a new job within the next four weeks
unemployment rate	the percentage of the labour force who were unemployed during the reference week (when the data were collected)
value-added production	adding value to a resource by increasing the services or quality of goods produced <i>e.g.</i> , selling furniture instead of raw timber
wage economy	when goods or services rendered to another are exchanged for money
zero tolerance	refers to no alcohol or drugs at the work site and/or not being under the influence of alcohol or drugs when boarding the plane for transportation to the mine site