

# **COMMUNITIES AND** DIAMONDS



Socio-economic Impacta in the Communities of Echchokia, Ganetì, Whati, Wekweèti, Dettah, Neilo, Eutsellie and Vellowknife

## 2009 Annual Report

of the Government of the Northwest Territories Under the BHP Billiton, Diavik and De Beers Socio-economic Agreements



Prepared by: Health and Social Services Education, Culture and Employment Industry, Tourism and Investment NWT Bureau of Statistics NWT Housing Corporation

July 2010

## Communities and Diamonds

2009 Annual Report of the Government of the Northwest Territories Under the BHP Billiton, Diavik and De Beers Socio-economic Agreements

Socio-economic Impacts in the Communities of Behchokò, Gamètì, Whatì, Wekweètì, Detah, N'dilo, Łutselk'e, and Yellowknife



Prepared by:
Education, Culture and Employment
Finance
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Industry, Tourism and Investment
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NWT Bureau of Statistics
NWT Housing Corporation

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Kīspin ki nitawihtīn ē nīhīyawihk ōma ācimōwin, tipwāsinān.

UVANITTUAQ ILITCHURISUKUPKU INUVIALUKTUN, QUQUAQLUTA.

?ERIHTŁ'ÍS DËNE SÚŁINÉ YATI T'A HUTS'ELKËR XA BEYÁYATI THE?A ?AT'E, NUWE TS'ËN YÓŁTI.

EDI GONDI DEHGÁH GOT'ĮE ZHATIÉ K'ĘĘ́ EDATŁ'ÉH ENAHDDHĘ NIDE.

K'ÁHSHÓ GOT'ĮNE XƏDƏ K'É HEDERI 'PEDỊHTL'É YERINIWE NÍDÉ DÚLE.

JII GEENJIT GWICH'IN ZHIT GAVISHINDAI' NIINDHAN JI'. NIKHWETS'ÀT GINÒHKHII.

TŁĮCHO YATI K'ĘĘ. DI WEGODI NEWO DÈ, GOTS'O GONEDE.

 $^{\circ}$ ለ- $^{\circ$ 

Hapkua titiqqat pijumagupkit Inuinnaqtun, uvaptinnut hivajarlutit.

To request a translation, please contact Jacquelyn Miller at (867)920-3343.

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## I. Introduction

The Government of the Northwest Territories (GNWT) issues the Community and Diamonds Report (Report) once a year. The Report is required by each GNWT socio-economic agreement (SEA). The GNWT has SEAs with BHP¹, Diavik, and De Beers.

SEAs are follow-up programs to environmental assessments. Follow-up programs are used to check if predictions made during an assessment were right. In the Report, we look at what was predicted in the BHP Environmental Impact Statement and in the Diavik and De Beers Environmental Assessment Reports (EARs<sup>2</sup>). We then compare the trends we see in the communities around the mine to those trends predicted in the EAR for the mine.

## i. Method

Through its SEAs, the GNWT has set up an industrial monitoring program. This helps us understand and prepare for the effects of large projects.

The program uses both objective and subjective indicators. Information comes from administrative databases and from surveys. Where possible, the subjective indicators that we use are also used in territorial or national surveys. This lets us compare trends in the Local Study Area with national and territorial trends.

The program allows for 'control' by looking at different population groups. For example, Canadian rates are included for most indicators. We can see that changes occur at different rates for different groups. This helps to separate natural changes from those changes that seem to follow industrial development. For example, if an NWT trend matches a Canadian trend this would be considered a natural change, which reflects a general societal change.

When making a comparison between Canada and small communities it must be noted, though, that year-over-year changes are more noticeable with small populations than with bigger populations.

This Report looks at indicator *rates*. For example, the body of the Report looks at the number of property crimes taking place for each 1,000 people. This ensures that the trend is not going up only because the number of people living in communities is going up. The actual number of incidents is shown in the tables in Appendix C.

Population data is available for 1991 and from 1996 on. To allow a trend line to be shown between 1991 and 1996 on the graphs in this Report, a steady change in population from 1991 to 1996 was assumed.

<sup>&</sup>lt;sup>1</sup> In May 2001, BHP merged with Billiton Plc to become BHP Billiton. When referring to the SEA this Report uses BHP. When referring to events after May 2001 this Report uses BHP Billiton (BHPB).

<sup>&</sup>lt;sup>2</sup> 'EAR' is used to refer to both environmental impact statement and environmental assessment report.

We can also look at changes in a data series to understand events that affect the trends we see. Diamond mines started to be built in the NWT in 1996. This Report looks at the trends we are seeing since 1996, compared to the trends we were seeing before 1996.

Where the rates for an indicator go up and down over time, it is assumed that this shows that indicator's *natural variability*. The highest and lowest rates for an indicator before 1996 are assumed to show the range of natural variability. If an indicator shows a recent trend but the rate is no higher and no lower than the rates seen before 1996, no trend was generally found.

#### ii. Data

GNWT departments report data once a year where it is possible.

The NWT Bureau of Statistics carries out a Community Survey every five years. The most recent survey was in 2009. Bureau surveys try to record what issues are important to communities. Sometimes the Bureau carries out extra surveys, such as the 2005 Community Impact Survey.

Data on Yellowknife-area Métis is available for some indicators. The North Slave Métis Alliance found it hard to see what effect diamond mine development may be having on its community without such data. Where there is data, it is shown in the Appendix C tables.

Statistics Canada does a Canadian Population Census every five years. It conducted the last census in 2006. Statistics Canada participates in a number of other surveys that provide data for this Report. This includes surveys that collect information on employment and the economy as well as the Uniform Crime Reporting Survey (UCR), which provides police-reported information on criminal incidents.

#### iii. **Socio-Economic Agreement Indicators**

ВНР	DIAVIK	DE BEERS			
Community, Family & Individual Well-Being					
number of potential years of life lost					
number of injuries	age standardized injuries	age standardized injuries			
number of suicides					
number of	communicable diseases	communicable diseases			
communicable diseases	(sexually transmitted diseases <sup>3</sup> , tuberculosis)	(sexually transmitted infections, tuberculosis)			
number of teen births					
	single-parent families (also referred to as lone-parent families)	lone-parent families			
number of children in care <sup>4</sup>	children in care <sup>4</sup>	children in care <sup>4</sup>			
number of complaints of family violence	number of women and children referred to shelters	number of women and children referred to shelters			
number of alcohol- and drug-related crimes	police-reported crimes, according to the following categories:	police-reported crimes, according to the following categories:			
number of property crimes	violent, property, drug-related, other	violent, property, drug-related, other			
housing indicators					
Cultural Well-Being & 1	raditional Economy				
	ratio of home language use to mother tongue, by major age groups	ratio of home language use to mother tongue, by major age groups			
	percentage of workforce-aged group engaged in traditional activities	percent of workforce-aged group engaged in traditional activities			
average income of	average income	average income			
residents	proportion of high income earners	proportion of high income earners			
number of social assistance cases <sup>5</sup>	social assistance cases <sup>5</sup>	income support cases <sup>5</sup>			

Now called sexually-transmitted infections.
 Now called children receiving services.
 Now called income assistance cases.

ВНР	DIAVIK	DE BEERS		
employment levels and participation	employment	employment		
	participation rate	employment participation rate		
high school completion	number of people 15 years and older with less than Grade 9	number of people 15 years and older with less than Grade 9		
	number of people 15 years and older with a high school diploma	number of people 15 years and older with a high school diploma		
	registered businesses, bankruptcies and start-ups	registered businesses, bankruptcies and start-ups		
Net Effect on Governme	ent			
	net effects on government of the project			
Sustainable Development				
	secondary industry data and initiatives			

## iv. Trends Tables

In each Observation section for each indicator, a Trends Table gives a picture of the effects of mine activity expected in the BHP Environmental Impact Statement, and the Diavik and De Beers Environmental Assessment Reports (EARs). This is shown on the left side of each table. The right side of each table sums up the trend observed by the GNWT for the Small Local Communities and Yellowknife. Down arrows ( $\P$ ) and up arrows ( $\P$ ) show the predicted or observed direction of change. These trends show the direction of change that has happened as a result of diamond mine development. To show this, it is necessary to compare how things were before diamond mining started in 1996 with how things have gone after. A dash (---) means there is no trend, no predictions were made, or the predictions that were made by the three companies were not consistent with each other.

## v. Spatial Boundaries

This report looks at indicators in Yellowknife and seven Small Local Communities<sup>6</sup>:

- Behchokò;
- Detah;
- Gamètì;
- · Łutselk'e;
- N'dilo;
- · Wekweètì; and
- Whatì.

These were part of the 'local study area' in the BHP, Diavik and De Beers environmental assessments. For comparison, we show data for Remaining NWT Communities and for Canada when possible. Rates in this Report are based on the NWT populations shown in Table 1 in Appendix C.

Nunavut's West Kitikmeot region was also part of the local study area in the BHP and Diavik assessments. That region is not included in this Report, as it is outside GNWT boundaries.

The next page shows a Map of the Northwest Territories.

<sup>&</sup>lt;sup>6</sup> Some community names have changed since 1990. Their names were formerly: Rae Edzo (Behchokò); Rae Lakes (Gamètì); Snowdrift (Łutselk'e); Snare Lake (Wekweètì); and Lac La Martre (Whatì).



Source: Industry, Tourism and Investment Administrative File.

## vi. History of Events

BHP, Diavik and De Beers predicted their projects may affect NWT communities. Other events can also have an effect. In addition, major changes in programs, such as changes in legislation, can affect the trends we see.

The chart below documents the timing of

- Major workforce shocks felt in the NWT,
- Major program changes, and
- A number of major social events.<sup>7</sup>

This is included as an aid to interpreting the trends in this Report.

These changes can have a strong effect on the trends shown by the data. Knowing when such changes happened may help make it clearer whether or not trends shown by the data are caused by diamond mine activity.

DATE	INDUSTRIAL, SOCIAL & POLITICAL EVENTS	
1997	The Royal Oak Mines Giant Mine lays off about 40 workers.	
	Miramar Con Mine lays off about 120 workers.	
1997 to 2003	Licences issued for oil and gas exploration. This started with the Sahtu in 1997, then Fort Liard and the Beaufort Delta. The size of rights issued increases as each new area is opened for exploration.	
January 1997	Ekati Mine construction begins.	
December 1997	Royal Oak Mines' Colomac Mine closes.	
January 1998	Lupin Mine (Nunavut) enters care and maintenance status, laying off about 500 workers.	
May 1998	Miramar Con Mine halts operations during a labour strike.	
October 1998	Ekati Mine begins commercial operations.	
October 1998	NWT Child and Family Services Act comes into effect.	
February 1999	BHP sorting and valuation facility opens in Yellowknife.	
April 1999	Territory of Nunavut established; NWT public sector becomes smaller.	

<sup>&</sup>lt;sup>7</sup> A fuller picture of events can be seen by also looking at the SEA reports on employment and spending that each company issues.

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DATE	INDUSTRIAL, SOCIAL & POLITICAL EVENTS	
June 1999	Sirius Diamonds opens a cutting and polishing facility in Yellowknife.	
July 1999	Miramar Con Mine labour strike ends and operations resume.	
2000	Giant Mine operations begin again on a smaller scale, with less than 100 employees.	
March 2000	Deton'Cho Diamonds opens a cutting and polishing facility in Yellowknife.	
April 2000	Lupin Mine operations begin again with a smaller workforce.	
December 2000	Diavik construction begins.	
	Arslanian Cutting Works opens a cutting and polishing facility in Yellowknife.	
2002	Tiffany and Co. begin construction of a cutting and polishing facility in Yellowknife.	
2003	Tiffany & Co. opens a cutting and polishing facility in Yellowknife under the name Laurelton Diamonds.	
January 2003	Diavik Mine starts production.	
April 2003	Federal Youth Criminal Justice Act comes into effect.	
7 pm 2000		
August 2003	Operations suspended at Lupin Mine (Nunavut), affecting about 305 employees.	
	Operations suspended at Lupin Mine (Nunavut), affecting about 305 employees.  Miramar closes Con Mine.	
August 2003		
August 2003 November 2003	Miramar closes Con Mine.	
August 2003  November 2003  April 2004	Miramar closes Con Mine.  NWT <i>Youth Justice Act</i> comes into effect.	
August 2003  November 2003  April 2004  February 2005	Miramar closes Con Mine.  NWT <i>Youth Justice Act</i> comes into effect.  De Beers begins construction of Snap Lake Diamond Mine	
August 2003  November 2003  April 2004  February 2005  April 2005	Miramar closes Con Mine.  NWT <i>Youth Justice Act</i> comes into effect.  De Beers begins construction of Snap Lake Diamond Mine  NWT <i>Protection Against Family Violence Act</i> comes into effect.	
August 2003  November 2003  April 2004  February 2005  April 2005  August 2005	Miramar closes Con Mine.  NWT Youth Justice Act comes into effect.  De Beers begins construction of Snap Lake Diamond Mine  NWT Protection Against Family Violence Act comes into effect.  Tłլcho Land Claim and Self-Government Agreement effective date.	
August 2003  November 2003  April 2004  February 2005  April 2005  August 2005  May 2006	Miramar closes Con Mine.  NWT Youth Justice Act comes into effect.  De Beers begins construction of Snap Lake Diamond Mine  NWT Protection Against Family Violence Act comes into effect.  Tłլcho Land Claim and Self-Government Agreement effective date.  Canada Dene Diamonds closes.	

DATE	INDUSTRIAL, SOCIAL & POLITICAL EVENTS
October 2008	Crossworks Manufacturing Ltd. opens a diamond processing factory in Yellowknife.
November 2008	GNWT Ministers of Education, Culture and Employment and Industry, Tourism and Investment, and representatives from BHP Billiton, Diavik Diamond Mines Inc. and De Beers Canada Inc. sign a Memorandum of Understanding to address Northern workforce attraction and retention issues.
Late 2008	Global credit crunch and economic downturn occurs. A number of projects and contracts are postponed or cancelled. Job losses increase.
Early 2009	Global economic downturn leads to reduced demand for diamonds. In response, Diavik and De Beers each plan two six-week temporary shutdowns during 2009, one in the summer and one in the winter.
September 2009	In response to improved market conditions, Diavik and De Beers each cancel their planned winter shutdown.
November 2009	Diavik announces plans to hire 150 new employees. Soon afterward, De Beers announces plans to hire 175 new employees.
December 2009	Arslanian Cutting Works and Polar Bear Diamond Factory temporarily close.

#### **Summary of Observed Trends** II.

Down arrows  $(\Psi)$  and up arrows  $(\Lambda)$  show the predicted or observed direction of change since the start of the first diamond project in 1997. If there is no trend, if no predictions were made, or if there appears to be inconsistency in the predictions made, a dash (---) appears. Red arrows show damaging indicator trends. Green arrows show beneficial indicator trends.

INDICATOR	COMPANY PREDICTED TREND			GNWT OBSERVED TREND	
INDICATOR	внрв	Diavik	De Beers	Small Local Communities	Yellowknife
Community, Family & Individual V	Vell-Bein	g			
Potential Years of Life Lost	<b>1</b>	<b>^</b>	Ψ	₩	
Injuries	<b>^</b>	<b>^</b>	<b>4</b>	8	•
Suicides			<b>^</b>	<b></b> 9	9
Communicable Diseases		<b>^</b>	<b>^</b>	<b>^</b>	<b>^</b>
Teen Births			<b>^</b>	₩	•
Single-Parent Families	<b>1</b>		<b>^</b>	<b>^</b>	10
Children Receiving Services	<b>1</b>	<b>1</b>		<b>↑</b> <sup>11</sup>	<sup>11</sup>
Spousal Assault	<b>^</b>	<b>^</b>	<b>^</b>	12	
Total Police-Reported Crimes	<b>^</b>	<b>^</b>	<b>^</b>	<b>↑</b> <sup>13</sup>	<b>↑</b> <sup>13</sup>
Violent Crimes	<b>^</b>	<b>^</b>	<b>^</b>		<b>^</b>
Property Crimes	<b>^</b>	<b>^</b>	<b>^</b>	<b>↓</b>	•
Federal Statute <sup>14</sup> Crimes	<b>^</b>	<b>^</b>	<b>^</b>	<b>^</b>	<b>^</b>
Traffic Crime		<b>^</b>		<b>↓</b>	
Other <i>Criminal Code</i> Offences	<b>^</b>	<b>^</b>	<b>^</b>	<b>^</b>	<b>^</b>
Home Ownership	<b>^</b>	<b>^</b>	<b>^</b>		<b>^</b>
Crowding	Ψ	<b>4</b>	<b>4</b>	↓	•
Core Need	Ψ	Ψ	•	•	<b>^</b>

<sup>&</sup>lt;sup>8</sup> Because the way nurse reported injuries changed in 2000, data from before then cannot be compared with data afterward.

<sup>&</sup>lt;sup>9</sup> Due to the small number of suicides and small population size, it is hard to tell if there is a statistical trend.

<sup>&</sup>lt;sup>10</sup> The trend in Yellowknife follows the national trend and reflects general changes in society. This means the trend is not likely to be a result of diamond mine development.

<sup>&</sup>lt;sup>11</sup> Data for this indicator is only available from 2000/01 onward, due to a change in child welfare policy.

<sup>&</sup>lt;sup>12</sup> Reported spousal assault has decreased in the Small Local Communities, but this may be the result of a number of factors. Data depends on victims reporting their spouses and on cases of assault being recorded as involving spouses.

<sup>13</sup> Most of the increase has been in Other *Criminal Code* Offences.

<sup>&</sup>lt;sup>14</sup> Federal statute crimes include drug offences.

THREATOR	COMPANY PREDICTED TREND			GNWT OBSERVED TREND	
INDICATOR	внрв	Diavik	De Beers	Small Local Communities	Yellowknife
Cultural Well-Being and	<b>Fradition</b>	al Econon	ny		
Aboriginal Language Use (Youth)	•	Ψ	<b>\</b>	Ψ	
Trapping	Ψ	•		<b>^</b>	
Hunting and Fishing	Ψ	<b>↑</b>		<b>^</b>	Ψ
Non-Traditional Economy	1				
Average Income	<b>1</b>	<b>^</b>	<b>^</b>	<b>^</b>	<b>↑</b>
Wage Disparity	<b>1</b>	<b>^</b>	<b>^</b>	•	Ψ
Income Assistance Cases	•	•	•	Ψ	•
Employment Rate	<b>1</b>	<b>↑</b>	<b>^</b>	<b>↑</b>	Ψ
Unemployment Rate	Ψ	•	•	<b>↓</b>	
Participation Rate	<b>1</b>	<b>↑</b>	<b>^</b>	<b>^</b>	•
High School Completion	<b>1</b>	<b>↑</b>	<b>^</b>	<b>↑</b>	<b>↑</b>
Less than Grade 9	Ψ	•	•	<b>↓</b>	•
Business Activity	<b>1</b>	<b>↑</b>	<b>↑</b>		15
Net Effect on Government					
Net Government Cost	Net Government Cost		<b>^</b>		16
Sustainable Development					
Secondary Industry					•

<sup>&</sup>lt;sup>15</sup> No trend is noted, as data from before diamond mine development is not currently available. Without such data, it is not possible to conclude whether the current trend may be influenced by the presence of the diamond mines.

<sup>&</sup>lt;sup>16</sup> The direction of the trend cannot be stated with certainty. The calculation that would reveal whether there is a trend has many parts, and it is very hard to tell how much particular program costs are affected by development. Some effects can be traced directly to development, but other effects are less direct. Consensus on how to measure this indicator is still under development.

#### **Summary of Findings** III.

INDICATOR	OBSERVATIONS	FINDINGS				
Community, Far	Community, Family & Individual Well-Being					
Potential Years of Life Lost (PYLL)	PYLL has gone down overall in the Small Local Communities.	The drop in PYLL in the Small Local Communities may be due to better standards of living or better access to health services.				
Injuries	Injuries are going down in Yellowknife.	The downward trend in Yellowknife may be due to injury prevention efforts.				
Suicides	No trend is observed.	The small number of suicides makes it hard to define trends.				
Communicable Diseases	Sexually transmitted infections (STIs) <sup>17</sup> have gone up in the NWT, including in Yellowknife and the Small Local Communities. Youth aged 15-24 have been most affected. This Report does not note any trend for tuberculosis.	<ul> <li>The increase in STIs may be due to:</li> <li>Reduced supervision by parents because of work schedules;</li> <li>More alcohol and drug abuse because of higher incomes; and/or</li> <li>A general disregard for safe sex.</li> </ul>				
Teen Births	The teen birth rate has dropped across the NWT. The drop has been strongest in the Small Local Communities.	The decrease in teen births may be due to more planned parenting, delayed childbirth, more use of birth control, or the fact that more teens are pursuing education.				
Single-Parent Families	Single-parent families are increasing across the NWT. The increase has been strongest in the Small Local Communities.	The increase in Yellowknife reflects a general change seen in the broader Canadian society.  Increases in single-parent families coincide with diamond mine development. Factors could include rotation work schedules or one partner living out of the house in the hope of finding work.				
Children in Care	The rate of children receiving services has gone up in the Small Local Communities over the period for which data is available. <sup>18</sup>	The trend may be due to changes in staff, or more public and staff reporting.				

<sup>&</sup>lt;sup>17</sup> Reported STIs include chlamydia and gonorrhea.

<sup>18</sup> Children receiving services can only be tracked from 2000/01 onward, due to a significant change in child welfare policy in the late 1990s.

INDICATOR	OBSERVATIONS	FINDINGS
Family Violence	It is hard to tell if there is a trend for family violence on the basis of reported spousal assault rates.  The number of women and children using shelters has fallen. Family violence remains quite high in the NWT.	Any increase or decrease of reported spousal assault can mean very different things. An increase could mean better social awareness and support for victims. A decrease may mean that victims find it harder to come forward.  Shelter data does not capture some women who do not access the shelters. Reported spousal assault cases may not represent all incidents.  In the North, high unemployment, social isolation, alcohol consumption, younger couples, and more common-law unions may contribute to high levels of family violence.
Crime	Total crime rates are higher in Yellowknife and the Small Local Communities than they were before the mines were developed.	These increases in total crime rates are primarily due to increases in other <i>Criminal Code</i> offences, like mischief and disturbing the peace. Increases since 1996 could also be linked to:  • A change in RCMP reporting between 1999 and 2000;  • Resource development;  • An increase in organized crime;  • Yellowknife's position as a hub for NWT traffic; or  • More substance abuse.
•	The violent crime rate has gone up in Yellowknife.	Alcohol plays a large role in most of the NWT's violent crime. An increase in drug use may also lead to an increase in violent crime rates. Higher incomes from diamond mine employment may be related to more drug use.
	Property crime rates have been dropping.	This trend began before the diamond mines were developed.
	Since 1991, federal statute crime rates (largely drug offences) have gone up.	The increase in federal statute crime may be due to more pro-active police enforcement. There could also be more drug activity because of higher incomes due to mine-related jobs.
	The traffic crime rate has gone down overall in the Small Local Communities. It seems to be increasing recently.	Data does not show any major influence on traffic crimes from the mining industry.
	The rate of other <i>Criminal Code</i> offences has increased sharply in Yellowknife. No trend is noted in the Small Local Communities.	Most other <i>Criminal Code</i> crimes are related to alcohol. Part of the Yellowknife trend may be due to the change in RCMP reporting between 1999 and 2000. Other factors may include more income or inmigration linked to resource activity.

INDICATOR	OBSERVATIONS	FINDINGS		
Housing	Home ownership has grown in Yellowknife. Growth has slowed since 1996.	The trend in Yellowknife may be linked to an increase in housing prices. This may be a result of increased in- and intra-migration from development. Higher incomes do not seem to have increased the level of home ownership.		
	Crowding has gone down in the NWT. The biggest drop was in the Small Local Communities. Crowding is still high in these communities.	Crowding was expected to go down more than it has. Lack of suitable housing, in- and intramigration as well as a rise in house prices may be factors.		
	Core need went up in Yellowknife. It dropped sharply in the Small Local Communities.	The increase in core need in Yellowknife may be due to inflation. This may be a result of in- and intramigration from development. Higher income from the mining industry may explain the drop in core need in the Small Local Communities.		
	Vacancy rates have dropped in Yellowknife and Canada. The rate is lower in Yellowknife than in Canada.	Yellowknife's low vacancy rate could be linked to:  High cost of materials;  Labour shortages related to development; and  Higher housing prices as a result of in-and intra-migration.		
Cultural Well-Being & Traditional Economy				
Aboriginal Language Use (15-24 Years of Age)	Home language use to mother tongue has dropped across the NWT. The trend is unclear in Yellowknife, but may be starting to go up.	The possible increase in Yellowknife may be a result of more people moving there from other communities where Aboriginal language use is higher.		
Workforce-Aged Group Engaged in Traditional Activities	Trapping has increased in the Small Local Communities.  Hunting and fishing have declined in Yellowknife. They have increased in the Small Local Communities.	More trapping, hunting and fishing in the Small Local Communities could be due to more income and the rotational work schedule. GNWT efforts to make it easier for people to earn a living through traditional harvesting may also be having an impact.		
	In the Small Local Communities there has been a small increase in the percent of households consuming meat or fish harvested in the NWT.	There seems to be no link between the amount of country food consumed and the diamond mines.		

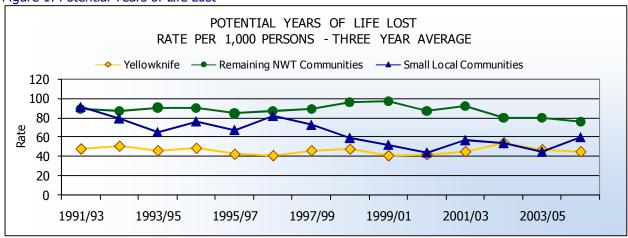
INDICATOR	OBSERVATIONS	FINDINGS	
Non-Traditional Economy			
Average Income	Average income has been rising for some time, but has risen sharply since 1997. The largest increases have been seen in Yellowknife and the Small Local Communities. Levels remain lowest in the Small Local Communities.	The upward trend in the Small Local Communities is most likely due to diamond mine development. The increase in Yellowknife has probably also been influenced by diamond mine development.	
Wage Disparity	The proportion of high and middle income earners has gone up across the NWT.	Diamond mine development does not seem to have led to more income inequalities.	
Income Assistance	The income assistance case rate has dropped across the NWT. The drop was small in Yellowknife. The drop was sharp in the Small Local Communities.	The drop in cases may be due to more employment, education, and income opportunities related to the mining industry.  In- and intra-migration of people without jobs to Yellowknife may have stopped the rate there from dropping more.	
Employment Rate	The employment rate in Yellowknife has gone down a little. It has gone up in the Small Local Communities.  More people are working more than 26 weeks per year across the NWT. In the Small Local Communities, the percent of people working this much went up by almost 40 percent.	Diamond mines have played a role in raising employment in the Small Local Communities.  Greater local access to culturally-fitting education and training has also helped increase many people's educational success and chances of finding jobs.	
Unemployment Rate	The unemployment rate has gone down in the Small Local Communities.	The decrease in the Small Local Communities is most likely due to job opportunities at the diamond mines.	
Participation Rate	The participation rate has gone down in Yellowknife. It has gone up in the Small Local Communities.	Mining seems to have increased the participation rate in the Small Local Communities.	
High School Completion	More people are completing high school. This trend was in place before the diamond mines developed.	The diamond mines seem to be having a good impact on high school completion.	

INDICATOR	OBSERVATIONS	FINDINGS		
Less than Grade 9	Fewer people in the NWT have less than grade 9 education.	A key reason for the decline may be grade extensions. Ongoing "stay in school" efforts are making a difference.		
Business Activity	In recent years, the number of listed businesses in Yellowknife has been dropping. There has been no change in the Small Local Communities.  Since 1999, major spending has been going up in the areas of housing, transportation, and warehousing.	There is no clear link between the recent decline in the number of Yellowknife businesses and diamond mine development.  Diamond mine activity may be having an effect on recent increased capital spending on housing, transportation and warehousing.  An increase in capital spending indicates an expanding economy.		
Net Effect on Government				
Net Government Cost	The cost of maintaining program and service levels is going up. Demand for government services is increasing. It is not possible to determine if there is a trend at this time.	Mining activity can lead to increased costs for government. Mining activity also increases government revenue.		
Sustainable Development				
Secondary Industry	During 2009, three diamond processing companies operated in the NWT. Two of them temporarily closed at the end of 2009. The number of people employed in by NWT diamond cutting and polishing firms dropped in 2009.	The cutting and polishing industry is impacted by a change of demand as result of the global economic crisis.		

## IV. Socio-Economic Indicator Graphs

## i. Community, Family and Individual Well-Being

Figure 1: Potential Years of Life Lost



Source: Statistics Canada Vital Statistics and NWT Bureau of Statistics.

Potential years of life lost (PYLL) is a measure of whether early death is occurring. The PYLL for an entire population is the sum of all the years of life lost by those who died before reaching the age of 75, the age of average life expectancy. Early death can often be avoided.

Figure 2: Doctor Diagnosed Injuries and Poisonings DOCTOR DIAGNOSED INJURIES & POISONINGS AGE STANDARDIZED RATES PER 1,000 Yellowknife - Remaining NWT Communities Small Local Communities 350 300 250 200 150 100 50 0 1994/95 1996/97 1998/99 2000/01 2002/03 2004/05 2006/07 2008/09

Source: NWT Department of Health and Social Services Medicare and NWT Bureau of Statistics.

Injuries and poisonings are reported by both doctors and nurses. Graphs for each type of reporting are shown. It is easier for residents of some communities to visit nurses, whereas in other communities residents visit doctors.

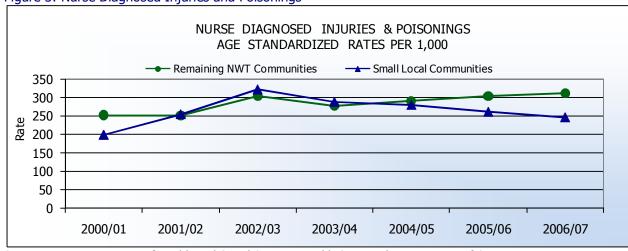


Figure 3: Nurse Diagnosed Injuries and Poisonings

Source: NWT Department of Health and Social Services Health Suite and NWT Bureau of Statistics.

Outside Yellowknife, nurses diagnose most injuries and poisonings. It is not possible to compare the more recent data and to see a clear trend, because the way nurses record injuries changed in 2000.

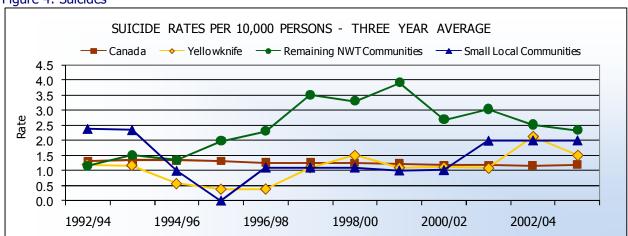


Figure 4: Suicides

Source: Statistics Canada Vital Statistics and NWT Bureau of Statistics.

It is not possible to statistically conclude whether there is a trend because of the small number of suicides and small population size (for more detail, see Appendix B, Section 1.3).

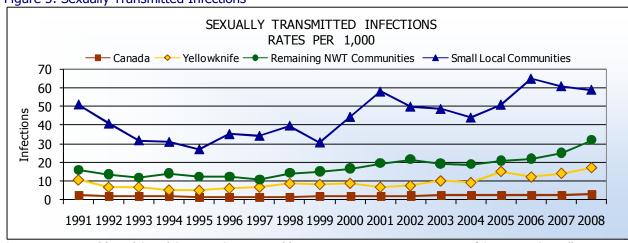


Figure 5: Sexually Transmitted Infections

Source: NWT Health and Social Services Communicable Disease Registry; NWT Bureau of Statistics; Sexually Transmitted Diseases in Canada: 1996 Surveillance Report; and Public Health Agency of Canada.

Rates of sexually transmitted infections (STIs)<sup>19</sup> are high and have been increasing across the NWT. This is especially true for youth aged 15-24.

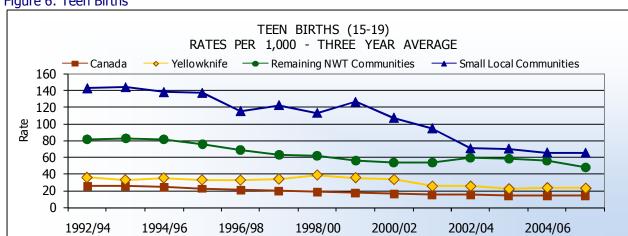


Figure 6: Teen Births

Source: Statistics Canada Vital Statistics and NWT Bureau of Statistics.

The teen birth rate has dropped across the NWT. The biggest drop has been in Small Local Communities. Rates have also been falling in Canada.

<sup>19</sup> Reported STIs include Chlamydia and Gonorrhea.

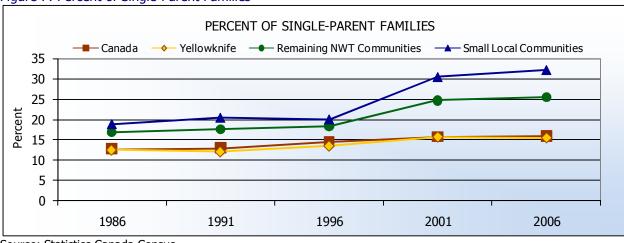


Figure 7: Percent of Single-Parent Families

Source: Statistics Canada Census.

The percent of single-parent families has gone up across Canada and the NWT. In the NWT, the biggest increase was in the Small Local Communities. Rates in Yellowknife reflect general changes in the broader Canadian society.

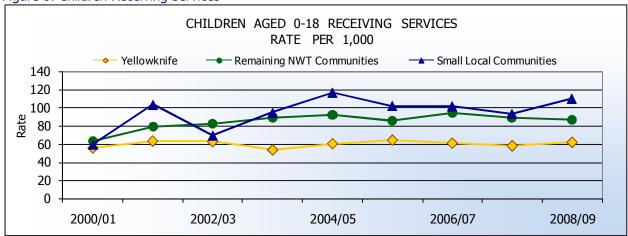


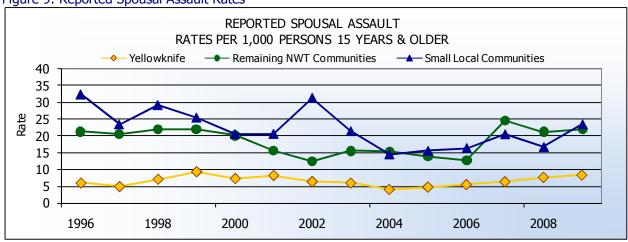
Figure 8: Children Receiving Services

Source: NWT Health and Social Services Child and Family Information System and NWT Bureau of Statistics.

Since 2000/01, rates of children receiving services have gone up in the Small Local Communities. In Yellowknife, there has not been any clear change in the rate. It is not possible to conclude whether diamond mining activity has affected this indicator, as data is not available from before the mines developed. This is because NWT child welfare policy changed in the late 1990s (for more detail, see Appendix B, Section 2.3).

### **Family Violence**

Figure 9: Reported Spousal Assault Rates



Source: RCMP UCR Statistics System.

It is unclear whether family violence has actually gone down in Small Local Communities. Some victims may be too scared to report violence or may not report because there is no RCMP detachment in their community. There are also challenges in counting family violence incidents. There is no specific offence of spousal assault under the Criminal Code. Police report on those violent offences where the victim and offender are known to be spouses. This information is not available in all cases.

NWT SHELTER ADMISSIONS FOR WOMEN & CHILDREN Children Women 450 400 350 300 Admissions 250 200 150 100 50 0 1999/00 2000/01 2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09

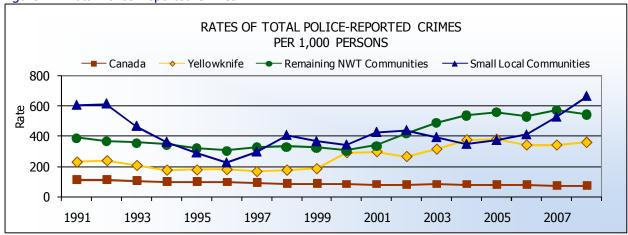
Figure 10: Admission of Women and Children to NWT Shelters

Source: NWT Health and Social Services Family Violence Shelter Reports.

Data is only available from 1999/00 onward. Overall, the trend appears to be going down.

#### **Crime**

Figure 11: Total Police-Reported Crimes



Source: RCMP UCR Statistics System, Statistics Canada.

The crime rate has gone up across the NWT. Part of the increase in Yellowknife may be from a change in reporting in 2000. The same change in reporting happened in all other NWT communities between 2000 and 2002. Most of the increase has been in other *Criminal Code* offences.<sup>20</sup> In contrast, crime rates in Canada have been decreasing slowly (for more detail, see Appendix B, Section 3.1).

Figure 12: Police-Reported Violent Crimes

Source: RCMP UCR Statistics System, Statistics Canada.

The rate of violent crime in Yellowknife has gone up. The rate in Small Local Communities is rising and is approaching the previous high in 1991, although it is still within the range seen before the diamond mines were developed.

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<sup>&</sup>lt;sup>20</sup> A change in RCMP reporting between 1999 and 2000 has meant that offences that used to be recorded as territorial offences, mostly *Liquor Act* offences, began to be reported as other *Criminal Code* offences.

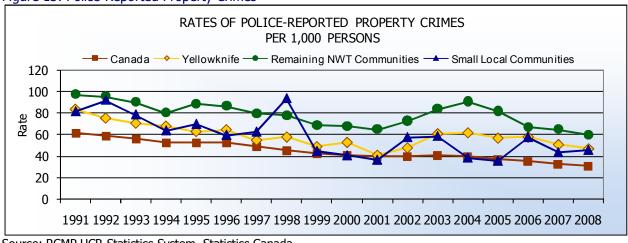


Figure 13: Police-Reported Property Crimes

Source: RCMP UCR Statistics System, Statistics Canada.

Rates of property crime have been dropping in Canada and across the NWT. Greater changes, in both directions, have been seen in the Small Local Communities. Where there is a larger population, year-over-year changes are less pronounced.

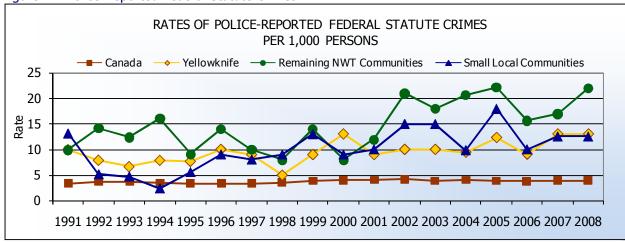


Figure 14: Police-Reported Federal Statute Crimes

Source: RCMP UCR Statistics System, Statistics Canada.

Federal statute crimes include drug-related offences. Overall rates have increased across the NWT. Sharp year-over-year changes in the data are more visible with a smaller population (for more detail, see Appendix B, Section 3.4).

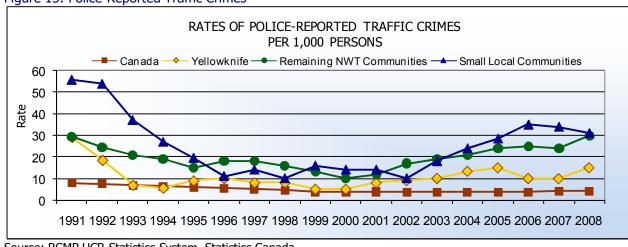


Figure 15: Police-Reported Traffic Crimes

Source: RCMP UCR Statistics System, Statistics Canada.

Rates of traffic crime have gone down overall in Small Local Communities, even though vehicle use and resource activity has gone up. Rates appear to be picking up recently. The trend in Yellowknife is unclear.

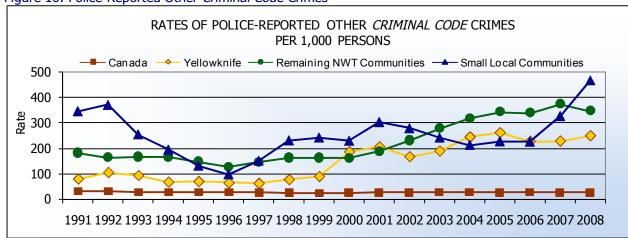


Figure 16: Police-Reported Other Criminal Code Crimes

Source: RCMP UCR Statistics System, Statistics Canada.

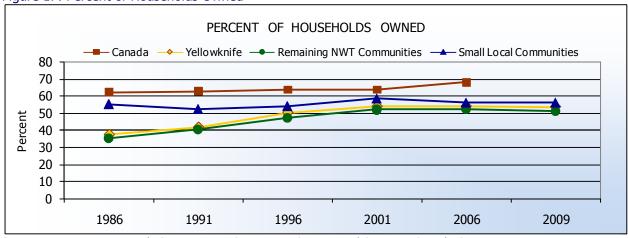
Between 1999 and 2000, there was a sharp jump in other *Criminal Code* offences in Yellowknife.<sup>21</sup> A change in RCMP reporting took place at that time. A similar change in reporting happened between 2000 and 2002 in the rest of the NWT. Rates have gone up in the Small Local Communities. Rates across the NWT for other *Criminal Code* offences are higher than in Canada.

<sup>.</sup> 

<sup>&</sup>lt;sup>21</sup> Offences that used to be recorded as territorial offences, mostly *Liquor Act* offences, became reported as other *Criminal Code* offences (see Appendix B, section 3.1 for more detail).

### **Housing**

Figure 17: Percent of Households Owned



Source: NWT Housing Needs Survey; NWT Community Survey; and Statistics Canada Census.

Homeownership has increased across the NWT. The increase has been smaller in the Small Local Communities. In Yellowknife, the trend has slowed since 2001. Home ownership is higher in Canada, and continued to rise when growth in the NWT slowed.

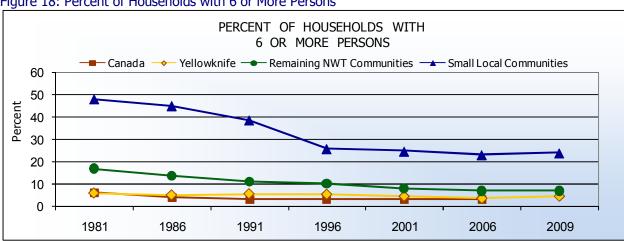


Figure 18: Percent of Households with 6 or More Persons

Source: NWT Housing Needs Survey; NWT Community Survey; and Statistics Canada Census.

Crowding is defined as more than one person per room, or households with six or more people. Crowding has decreased across the NWT, but remains higher than in Canada. In Yellowknife, crowding has come down slightly, and has closely followed the general trend in the broader Canadian society. It has gone down in the Small Local Communities, but is higher than elsewhere in the NWT.

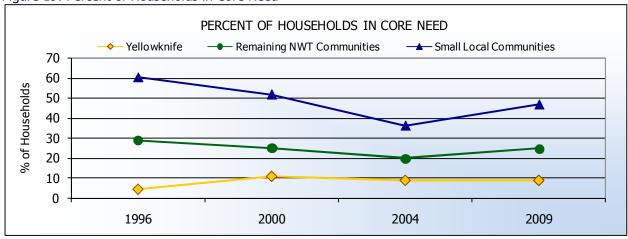


Figure 19: Percent of Households in Core Need

Source: NWT Housing Needs Survey and NWT Community Survey.

A household is in core need if its housing is inadequate, unsuitable or unaffordable. Housing may be inadequate if it is in need of major repair; unsuitable if it does not have the right number of rooms and facilities for those living in it; and unaffordable if the household pays more than 30 percent of its income to live there.

#### ii. **Cultural Well-Being and Traditional Economy**

PERCENT OF ABORIGINAL PERSONS AGE 15 - 24 WHO CAN SPEAK AN ABORIGINAL LANGUAGE Yellowknife Remaining NWT Communities Small Local Communities 100 80 60 40 20 0 1989 1994 1999 2004 2006

Figure 20: Percent of Aboriginal Youth Who Can Speak an Aboriginal Language

Source: NWT Labour Force Survey and NWT Community Survey.

The percent of Aboriginal youth who speak an Aboriginal language has gone down in the NWT. It is highest in the Small Local Communities. Aboriginal language use has remained steady in Yellowknife.

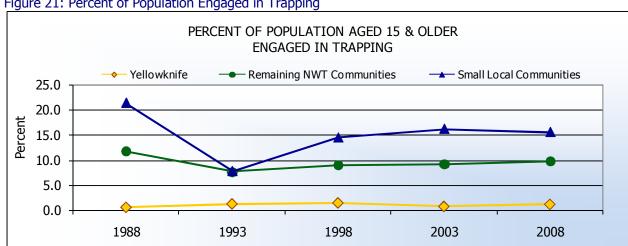


Figure 21: Percent of Population Engaged in Trapping

Source: NWT Labour Force Survey and NWT Community Survey.

The percent of the NWT population trapping was higher in the past, but it has been recovering since 1993. The percent of the population trapping is highest in the Small Local Communities and lowest in Yellowknife.

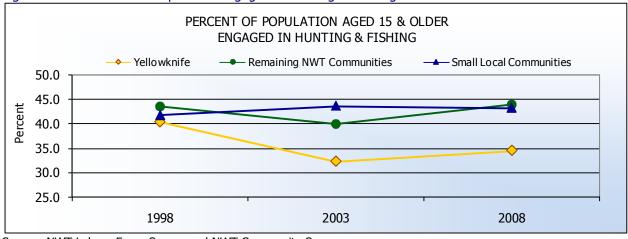


Figure 22: Percent of the Population Engaged in Hunting or Fishing

Source: NWT Labour Force Survey and NWT Community Survey.

The percentage of the population hunting and fishing has decreased in Yellowknife since 1998. It has gone up in the Small Local Communities and after an initial decrease, also in the Remaining NWT Communities.

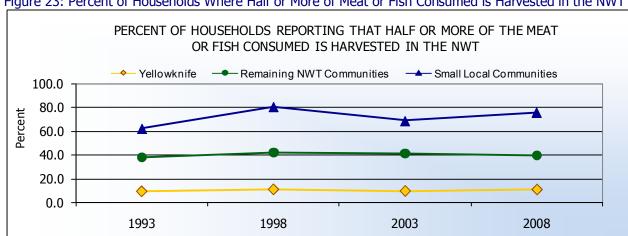


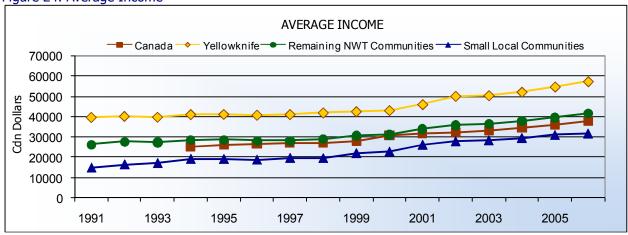
Figure 23: Percent of Households Where Half or More of Meat or Fish Consumed is Harvested in the NWT

Source: NWT Labour Force Survey and NWT Community Survey.

There seems to be no link between trends in the country foods eaten and the diamond mines.

#### **Non-Traditional Economy** iii.

Figure 24: Average Income



Source: Statistics Canada.

Average income has been increasing in Canada and the NWT. In the NWT, it is highest in Yellowknife and lowest in the Small Local Communities. Average income has gone up faster in the NWT than in Canada. The biggest increases in the NWT have been in Yellowknife and the Small Local Communities.

PROPORTION OF HIGH AND MIDDLE INCOME EARNERS Yellowknife — Remaining NWT Communities 85 80 75 70 65 60 55 50 45 40 1994 1996 1998 2000 2002 2004 2006

Figure 25: Proportion of High and Middle Income Earners

Source: Statistics Canada.

The proportion of high and middle income earners is a way of measuring how income is distributed in communities. A big gap between those with good incomes and those without is known as 'wage disparity.' The graph above shows that the number of high and middle income earners has increased and that there are fewer people in the low income category.

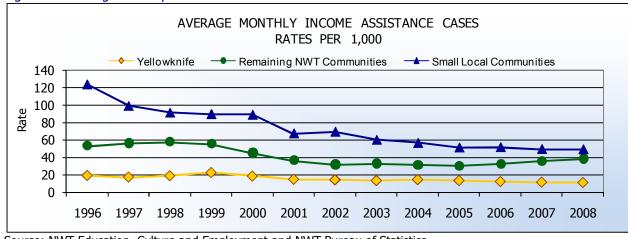


Figure 26: Average Monthly Income Assistance

Source: NWT Education, Culture and Employment and NWT Bureau of Statistics.

Rates of income assistance have been dropping across the NWT. The rate is lowest in Yellowknife. The rate is highest in the Small Local Communities, but it is very close to the rate in the Remaining NWT Communities. The Small Local Communities have seen a dramatic decrease in the rate of income assistance.

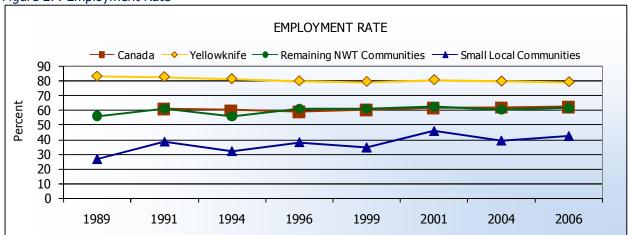


Figure 27: Employment Rate

Source: Statistics Canada Census; NWT Labour Force Survey; and NWT Community Survey.

The employment rate is the percent of people of working age who are employed. It has gone up in the NWT. It has seen the biggest increase in the Small Local Communities, but is still lower there than in the rest of the NWT and Canada. It is highest in Yellowknife. The percent of working-aged people who work for more than six months each year has gone up in the NWT.

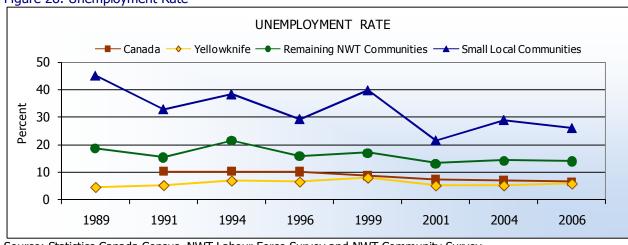


Figure 28: Unemployment Rate

Source: Statistics Canada Census, NWT Labour Force Survey and NWT Community Survey.

The unemployment rate shows the percent of persons of working age looking for work but Rates have dropped in Canada and the NWT. unable to find work. The Small Local Communities have seen a large drop. The rate in Yellowknife appears to have gone up. Unemployment rates can go up due to more people deciding to look for work who were previously not looking for work. This can be a result of improved economic conditions in a community or it can be due to more people moving to that community to find work.

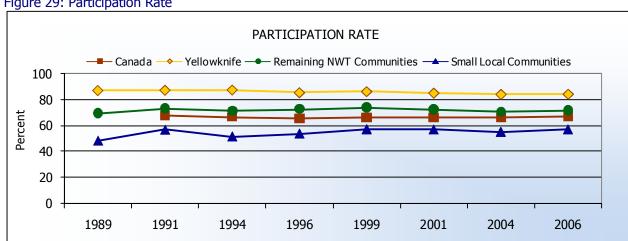


Figure 29: Participation Rate

Source: Statistics Canada Census; NWT Labour Force Survey; and NWT Community Survey.

The participation rate is the percent of persons of working age who are working or looking for work. It has gone up in the Small Local Communities, but is still lower than in Canada. The participation rate remains higher in Yellowknife than in the Remaining NWT Communities. The participation rates in Yellowknife and the Remaining NWT Communities are both higher than in Canada.

#### **Education**

1989

PERCENT OF POPULATION WITH HIGH SCHOOL OR GREATER Canada Yellowknife Remaining NWT Communities Small Local Communities 100 80 Percent 60 40 20 0

Figure 30: Percent of the Population with High School or Greater

Source: Statistics Canada Census; NWT Labour Force Survey; and NWT Community Survey.

1994

High school completion rates have been going up across Canada and the NWT. They are highest in Yellowknife and lowest in the Small Local Communities.

1999

2001

2004

2006

1996

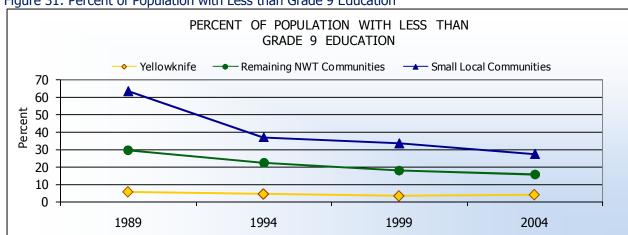


Figure 31: Percent of Population with Less than Grade 9 Education

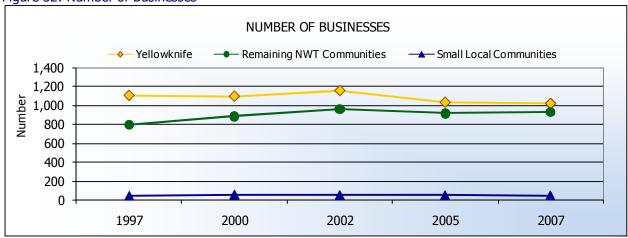
1991

Source: NWT Labour Force Survey and NWT Community Survey.

The percent of population with less than a grade nine education has gone down across the NWT. The biggest drop has been seen in the Small Local Communities. Rates remain highest in the Small Local Communities.

#### **Business**

Figure 32: Number of Businesses



Source: NWT Industry, Tourism and Investment.

The number of businesses in Yellowknife has gone down. The number of businesses in the Small Local Communities has not changed and remains low.

TOTAL CAPITAL EXPENDITURES OVER 50 MILLION Transportation & Warehousing Housing 160.0 140.0 120.0 100.0 80.0 60.0 40.0 20.0 0.0 2005 2006 2009 1999 2000 2001 2002 2003 2004 2007 2008

Figure 33: Private & Public Investment, Total Capital Expenditures

Source: Statistics Canada.

Outside of the public sector and not including mining, oil and gas, there are two major areas of capital spending in the NWT. One is transportation and warehousing. The other is spending on housing. Data only exists for the NWT from 1999 onward. Since then, spending has gone up in both sectors. It has come down sharply in transportation and warehousing since 2007. Capital investment in housing has been dropping since 2004.

## V. Glossary of Words Used

#### **Capital Expenditures**

Funds spent by a company on physical assets such as property, industrial buildings or equipment.

#### **Communicable Disease**

Any disease that can be transmitted from one person to another. The most common cause is through bodily contact or through germs in the air.

#### **Employment Rate**

The percent of persons aged 15 and older who are employed.

#### **Labour Force**

Those people 15 years and older who are working or who are actively looking for work, temporarily laid off and expected to return to work, or who have made arrangements to start a new job.

#### Overcrowding

Overcrowding is defined as having six or more residents in one house.

#### **Participation Rate**

The percent of people, 15 years of age and over, who are in the labour force.

#### **Potential Years of Life Lost (PYLL)**

PYLL is calculated by assuming that an average life lasts 75 years, and by subtracting from 75 the age at which a person dies. For example, a person who died at age 65 would have a PYLL of 10 (75-65 = 10). A person who died at age 20 would have a PYLL of 55. The PYLL for an entire population is the sum of all the years of life lost by those who died before reaching the age of 75.

#### **Single-parent Families**

Single-parent families consist of a parent living in a home with no spouse or common-law partner present, and with at least one child who has never been married.

## Socio-economic<sup>22</sup>

'Socio-economic' impacts include social, economic, and fiscal impacts. Social impacts can be divided into two types: demographic and socio-cultural.

#### Social impacts —

**Demographic impacts** — changes in population numbers and characteristics (sex ratio, age structure, migration rates and related service demands).

**Socio-cultural impacts** — changes in social structures, organizations and relationships, and in cultural and value systems such as language or beliefs.

**Economic impacts** — changes in employment, income and business activity.

**Fiscal impacts** — the economic consequences of development for government organizations.

## Unemployed<sup>23</sup>

Refers to persons who, during the week prior to the survey; (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 in the next four weeks.

#### **Unemployment Rate**

The percent of the labour force that were unemployed during the reference period.

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<sup>&</sup>lt;sup>22</sup> From "UNEP EIA Training Resource Manual — EIA: Issues, Trends and Practice". R. Bisset, Annex page 8: www.ea.gov.au/assessments/eianet/unepmanual/bisset/annex.html.

<sup>&</sup>lt;sup>23</sup> From "1999 Labour Force Survey" - Northwest Territories Bureau of Statistics.

The Government of the Northwest Territories takes no responsibility for financial losses suffered as a result of reliance on the information in this report.



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