An aerial photograph of Arctic Bay, Nunavut, Canada, taken at dusk. The sky is a mix of light blue and pink. The town is visible in the middle ground, with a few buildings and a small ice patch. A large, fenced-in area, likely a military or industrial site, is visible in the foreground. The water is dark blue, and the surrounding land is a lighter blue.

The Nanisivik Legacy in Arctic Bay

A Socio-Economic Impact Study

Prepared for:
Department of Sustainable Development
Government of Nunavut

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INTRODUCTION

Following over a quarter century of operations, the Nanisivik zinc mine is scheduled to close down its operations this year. With road access to the community of Arctic Bay, the Nanisivik mine closure is expected to have significant impacts on that community. In addition to the loss workers from Arctic Bay, the closure is expected to impact the Arctic Bay community's business sector and potentially its access to services such as jet service, favourable sealift arrangements, and other spin-offs from the mine's presence in the region.

A brief history of the Nanisivik development was provided in a 1981 report by Hickling-Partners Inc. that evaluated the benefits of the project to the public sector up to 1980. They noted that the mineral potential of the area was known as early as 1910, with discovery of the ore body that eventually led to the Nanisivik mine being made in 1957 by the Texas Gulf Sulphur Company. Exploration work to assess the quantity and grade of lead-zinc ore took place between 1958 and 1970. Negotiation to obtain a mineral export permit then began between the company and DIAND. Initially these negotiations were unsuccessful and Texas Gulf Sulphur allowed Mineral Resources International (MRI) out of Calgary to acquire an option on the property.

MRI continued the drilling program in 1972 and 1973, and undertook production feasibility studies. According to the Hickling-Partners historical summary, those studies indicated that using a completely private sector scenario, the project would be commercially viable as a temporary bunkhouse operation with a seven to eight year life span. An alternative feasibility scenario included government assistance to develop an open townsite community. Under this scenario, the identified reserves could support a project with a 12 to 13 year life span. The project quickly received approvals and financial support from the federal government to proceed with the townsite option. Construction at the site was well underway in 1974 and the mine and mill became operational in 1976.

The Nanisivik mine and townsite were initiated in the midst of expectations that it would provide significant social and economic benefits to north Baffin communities. It is fitting, then, at this time of closure of the mine that the Nanisivik legacy be assessed from a broad community development perspective. Such a perspective considers not only the "losses" that closure may bring, but also the strengths the community has developed during its experience with the mine. Dimensions of the positive legacy that may be anticipated for Arctic Bay include — amongst other things — the new skills acquired; job and business experience gained; improved economic independence; and, perhaps, increased confidence. These strengths may position the community to better achieve collective and individual goals.

Arctic Bay's history did not begin when Nanisivik started operations, nor will it end with the mine's departure. Nonetheless, the experience of the past three decades have influenced the community's evolution in important ways.

This report seeks to document and assess the legacy that Nanisivik has contributed to building the community of Arctic Bay. It will proceed from the point of view that the residents of Arctic Bay have played an active role in building this legacy and that they will continue to be active agents in shaping the “post-Nanisivik” future of their community.

PURPOSE, OBJECTIVES AND PERSPECTIVE

The purpose of this project is to document the experience of the community of Arctic Bay with the Nanisivik mine over the past 25 years. The knowledge gathered can assist the community in dealing with the closure by acknowledging and recording this important period in Arctic Bay’s history. It can also serve an important purpose in helping to understand the relationship between mine operations and Inuit family and community social and economic life. Such understanding is critical if future mining developments are to maximize their benefits to communities while minimising negative impacts.

More specifically, this study will aim to address the following purpose:

To assess the impact of the closing of the Nanisivik zinc mine on the community of Arctic Bay and to propose appropriate mitigation;

To document the mine’s legacy in the community; and, to demonstrate how this legacy can be used for the benefit of the community in the future.

Three key objectives will be achieved through the project:

To develop a first-hand account of the impacts that the Nanisivik mine has had on the residents of Arctic Bay, including community-based recommendations on how best to build on Nanisivik’s positive legacy and how best to ameliorate any negative impacts that the mine closure will have on residents.

To provide an analysis of the economic impacts to be anticipated from the Nanisivik mine site closure.

To recommend a course of action for the territorial government to pursue.

The perspective that will guide the overall approach to the proposed research is based on the premise that the capabilities of residents of Arctic Bay to achieve individual, family and community goals have been influenced by the Nanisivik legacy. In practical terms, this perspective means that the study will not focus narrowly on “losses” (e.g. of jobs, income, businesses, services) that may result from the mine closure. These aspects are important and will be assessed. However, their significance depends on the ability of the community to use its strengths — some of

which may have been developed in association with the Nanisivik experience — to move into the post-Nanisivik era of Arctic Bay's evolution.

METHODS USED TO GATHER KNOWLEDGE AND DATA

In carrying out this project, we carried out two streams of research in order to provide a good perspective on both the subjective and the objective aspects of the Nanisivik legacy.

Kitchen-table visits and workshops provided opportunities for community members to express their personal observations, experiences and ideas. Community radio was used to talk about the research as it progressed.

This qualitative research stream is complimented by qualitative research focused on identifying objective aspects of the legacy. This second research stream assesses elements such as the impact of the mine on employment; income, and local business.

Together, these streams will provide perspective on how the mine is perceived to have influenced the local economy, family organisation and other dimensions of Arctic Bay's socio-economic life.

STRUCTURE OF THE REPORT

The report is organised in five chapters. The first two chapters set out the qualitative and quantitative data, respectively. Chapter One is an attempt to reflect the voices of those I spoke with. The text set in italics is what people said, as closely as possible using the words that were spoken. It is noted, though, that many of the conversations were carried out in Inuktitut, through a translator. Many of these conversations were taped, so that I was able to go back over the tapes to verify meaning and intent. Some narrative is provided (text that is not in italics) in order to provide some context to what people said. The source of these comments are ascribed to individuals by a group identifier, so it is possible to track comments made by the same individual.

In Chapter Two, the quantitative data is presented. This data provides a summary of the economic impact of the Nanisivik mine and townsite for Arctic Bay. It also seeks to establish the relative importance of this data in the context of Arctic Bay's overall economy. Very little detailed economic profile data was available from any local or territorial source. Hence I have attempted to assemble data from a wide range of local and government sources. Some of the resulting numbers are very solid, others are based on people's best guesses. The data presented should be looked at both as a best attempt at describing the local economy, as well as a model for identifying what data should be gathered and maintained at the community level.

Both streams of data are analysed for meaning and significance in Chapter Three. I have also introduced in this chapter findings and observations that have been made in other reports dealing with Nanisivik in the past.

Chapter Four draws conclusions from the data and analysis, while recommendations are presented in Chapter Five.



CHAPTER ONE: VOICES OF EXPERIENCE

Conversations with residents of Arctic Bay provided opportunities for many people to share their insight and experience about the impact that Nanisivik has had on their community and about the changes they expect to see when the mine closes.

This chapter is intended to reflect the ideas and observations that were expressed during these conversations. Many people spoke about similar issues and things they have experienced or observed. An attempt is made here to bring together these common themes. Although some narration is included in order to add context to what was said, an effort has been made in this chapter to let the words — often spoken through an interpreter — speak for themselves as much as possible.

1.0 THE NANISIVIK ERA

EARLY DAYS

Inuit from Arctic Bay have been involved in the Nanisivik project from the early stages. Some were active in the exploration and staking period that took place between during the 1960s. There has, therefore been active Arctic Bay involvement at Nanisivik for as long as 40 years.



Qapik lived with her husband, Isaiah Attagutsiak, at the beach below Nanisivik.

During the early days, the surveying and exploration activities only took place during the spring and summer. However, my husband continued to work for the company throughout the year even after the southerners left, maintaining the buildings and equipment that was left behind for the following season. - elder woman 1

We didn't have any washing machines at that time so I had to wash the very dirty clothing of the workers by hand. I got very tired and I still feel the stress from all those years of washing. — that's the negative side. I washed for both Qallunat and Inuit — maybe six people

each season at that time. There were not even any washboards then. There was no payment for this work. - elder woman 1

I remember using dog teams to get around and we did lots of walking at the time. – elder man 2

We were living along the beach over there. We were staking out the area. Then men would walk and walk. Their seal boots got worn out from so much walking so we had to repair them every day. – elder woman 4



“Every day women had to work hard to repair the boots. These women never got paid for this work they did.”

Every day women had to work hard to repair the boots. These women never got paid for this work they did. Sewing, taking care of the children and washing the work clothing. – elder man 3

They used to land planes on the ice, before there was an airstrip in Arctic Bay. Back then we worried about how to get food in to Arctic Bay. - elder woman 3

Nanisivik mine back then wouldn't allow me to work on skins and so on — no shacks — and so when they offered for us to move up to Nanisivik I wouldn't have been allowed to have a shack to sew at. – elder woman 1

During the public meetings when the mine was being set up — at that time the mine was wanting people to work seven days a week. I said at least give us Sunday for a rest. They agreed and ever since that they gave Sunday off. – elder woman 1

The community indicated during meetings that we did not want alcohol — that's what we agreed on. After a while, though, the company decided to bring in alcohol. Since Nanisivik was not a real community, and not part of Arctic Bay, they said we could not regulate them. At Nanisivik many people, both from south and north, were drinking and getting fired. They could not control their drinking. – elder man 2

Nanisivik helped by providing employment — especially during the construction period. I lived at the beach while we were building the dock and the townsite. Isaiah hired me from Arctic Bay. I'd work one week on site, then we'd be flown back to Arctic Bay by twin otter. My wife was patient. She knew I'd return with money. While Attagutsiak was there, there were more people from Arctic Bay working. After, people from other places worked there. – former worker 6

I used to live at the beach with my parents. There was a small group of six families there because of the work. Women staying in the camp were often hungry. Only the employees were able to get food from the mine. They would sometimes go and bring some food down for their families. The men didn't have time to hunt since they spent all day staking the area for the mine. There were no boats to families from beach to out post camp. They were using dog teams at the time to take families back and forth from the camps to the beach. – spouse of worker

Changing Skills And Experience

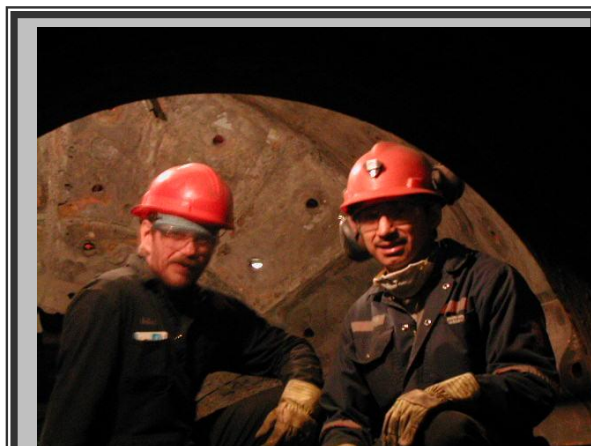
During the Nanisivik era, people in Arctic Bay learned new skills and gained new experiences as a result of employment at the mine, or through attendance at the Allurut School at Nanisivik. The following comments illustrate what people in Arctic Bay had to say about these new skills. In Chapter Three, we will assess how these new skills and experiences may contribute to Arctic Bay's capacity to achieve its development goals.

Skills And Experiences From Work

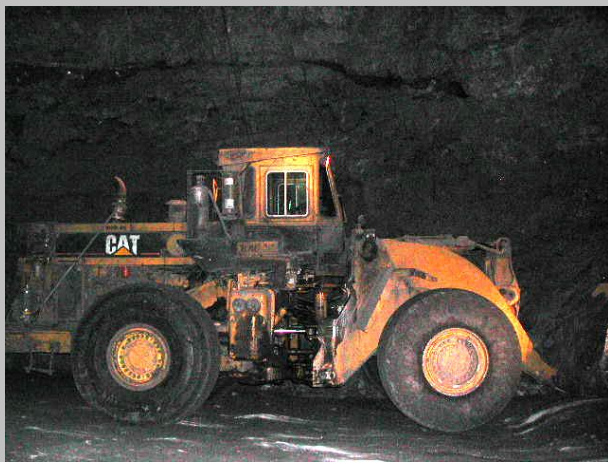
A range of skills have been gained or honed through work at Nanisivik. Some of these have been put to direct use in the hamlet. For example, people noted that Nanisivik workers got valuable “real work” experience at the mine in areas such as carpentry, heavy equipment operation, mechanic's helper, and truck driving:

Working at Nanisivik really helped me personally. The money of course. Also the skills I learned as mechanic's helper. Now the hamlet has a mechanic who also formerly worked at Nanisivik and that guy is now teaching his skills to another man. – former worker 5

My dad learned carpentry skills working for Pan Arctic. He then worked for Nanisivik and is now employed as a carpenter in Arctic Bay. – lived with parents at Nanisivik 5



Qayaq Naqitarvik (right) with a southern colleague at work in the mill at Nanisivik



Underground at Nanisivik: Heavy equipment used to load ore.

My father worked at Nanisivik for twelve years and learned carpentry skills. He carries these skills on today. When he earned money, he would help me out. – business person 4

People also gained experience related to working in a formal, industrial work setting. Some of these skills related to work habits, while others involved adapting to and coping with workplace stress:

Nanisivik helped by preparing people to live in a work routine — early rising to catch the bus. For young people this was difficult. For adults these early mornings are similar to

what hunters do and what women do. – elder man 3

There were workplace issues — getting used to working with Qallunat, disagreements or conflicts, especially with supervisors, if an Inuk employee doesn't agree. We had an employment co-ordinator, but never a mediator. – hamlet leader 2

Nanisivik may have had some influence in the area of entrepreneurial skills development. One person suggested that some former Nanisivik workers have considered becoming entrepreneurs:

Workers from Nanisivik have experience that can be used in the community of Arctic Bay. Some are thinking of business ideas. – lived with parents at Nanisivik 3

Some missed opportunities were also identified related to skills development, and to the lack of recognition of Inuit knowledge amongst southern workers:

Inuit could have trained Inuit if they had hired more Inuit. We missed that opportunity. Those skills would have been available to the community even after the mine closed. – elder man 3

The skills we know are useful. Even a big boss from the south — he needs help from our knowledge. Without our skills our environment will kill you. – elder man 3

Nanisivik's Allurut School



Many people noted the quality of education at the Allurut school in Nanisivik. Classes at the school were taught in English, leading Inuit students to develop good English language skills — something widely recognised as a benefit to these students. The presence of students from the south was suggested to have increased the level of expectation for performance right across the student body. The lower number of students per teacher was also noted, and some former students seemed to appreciate the greater level of teacher attention they received:

The Nanisivik School had no traditional program. So students there picked up better English skills than those who attended Arctic Bay school where they study Inuktitut. Also most students were Qallunat. It is the case that many positions in the Hamlet today require English skills, so many of those positions have been filled by people who attended Nanisivik school. – hamlet leader 1

Those who speak English are more capable of getting jobs, and earning money. In one way this skill is good — it allows them to communicate better. If there is something they don't agree with, or if they are not happy with a certain situation they can talk back and get their views across. – elder woman 1

Education standards were higher. Expectations were higher. 80% of the students were from the south. There were no Inuktitut classes, all English. Arctic Bay is 80 to 90% Inuktitut speaking in everyday life. It's a living language here. Half of the population is unilingual Inuktitut-speaking, not fluent in English. – lived with parents at Nanisivik 1

It was better growing up at Nanisivik. The school had fewer students for each teacher and it had English classes. We learned English sooner. I had to learn Inuktitut reading and writing later, though. There was also more respect for teachers and for one another. Students from Arctic Bay can read fluently in Inuktitut. But English skills are also important. – lived with parents at Nanisivik 5

Nanisivik school is really good — good discipline. Nanisivik school was more challenging than Arctic Bay. Those of us who grew up at Nanisivik have the ability to speak English. – lived with parents at Nanisivik 3

Bilingual parents push their children more to do well in school. Some elders do tell people to learn two languages. – professional 5

The children who attend school at Nanisivik speak English sooner. That is important. They have more confidence and comprehend better. – spouse 1 of worker

Loss Of Skills Due To Nanisivik?

The possibility that Nanisivik has taken people away from practicing traditional skills, or from teaching these skills to children was generally discussed. One person noted that as a child, living at Nanisivik reduced opportunities to get out on the land. Other people commented on the situation in Arctic Bay where change is seen as

taking place in the context of a larger shift toward a money economy. The impact of the school system was also considered to be a concern.

There was an impact on traditional life. We'd go hunting only once a year. But my father was an orphan, so my grandparents were not around. Our generation is mixing English with Inuktitut. We are losing some of the old words. – lived with parents at Nanisivik 5'

Most workers live in Arctic Bay and return each day. School has been in Arctic Bay for so long anyway. We are not together with our children anyway. When I was young, I learned how to hunt. The young girls learned how to make clothing. Today young people are at school all day. It is school, not work, that has changed this for us. – elder man 2

Big changes have taken place over the past 30 years, for example in the way we raise our daughters. In the past we passed on knowledge of how to make clothing — prepare skins and sewing skills. Today young people are more work-oriented, trying to make money. They need money now. No one is assisting me in doing these things [sewing], so I cannot pass on my skills. – elder woman 1

It's not the jobs that prevent people from learning hunting skills. It's the school system. The school prevents these hunting skills or these sewing skills to be passed on to the children, because the children need to go to school every day — that's mandatory. They have to be in school every day. So school has more of a negative side to it when compared to Nanisivik. Nanisivik only creates employment. It did not take away the children from learning the skills. - elder woman 1

It's not Nanisivik that prevents people from continuing their traditional role — like a man hunting for food, or a woman making clothing. That role has changed, even without Nanisivik. All other communities are like that — they are more job focused now. – elder man 1

Further, one elder noted that work is not incompatible with carrying on Inuit traditional activities:

Even Qallunat in Arctic Bay can hunt just as well as we do. People can work and hunt too. People will always be going out hunting here in Arctic Bay. When I was young, there were RCMP and missionaries and they would do good hunting. Today many Qallunat work a lot and have less time to hunt, but they still do it. They even go out by dog team. – elder man 2

Some concern was expressed that the opportunity to pass Inuit knowledge on from the generation that lived traditional lifestyles is quickly passing.

Those who are twenty years old or less have never seen traditional skills in practice. They have never seen how an igloo or sod house could be kept warm, for example. – elder

There are only a handful of elders who know the really traditional life. They need to stay alive long enough. The youth could record the stories. Elders can pass our knowledge on through the schools. - elder

Social and Cultural Change

The Nanisivik project was developed and operated over a thirty-year period from the 1970s to the first decade of the new millennium (the '2000s'). This period was a time of continuing dramatic social change for the Inuit of the north Baffin region. When speaking about the impact of Nanisivik on family and community social and cultural organisation, people from Arctic Bay situate the Nanisivik experience within the context of this on-going transition.

It was difficult to put comments about the social impacts of Nanisivik into a larger perspective. What is the relative importance of Nanisivik effects compared with other influences on social and cultural change and challenges in Arctic Bay? A few comments shed some light on how three Arctic Bay professionals view this:

In general, I don't see people who work at the mine crossing paths with me professionally. ... The costs of Nanisivik to Arctic Bay have been minimal. Lots of potential negative impacts were minimised by cultural separation. Arctic Bay and Nanisivik have been fairly separate. Arctic Bay is not a mining community. The mine had a built-in social barrier that may have limited interaction — few miners came into Arctic Bay, for example. – professional 1

Its not necessarily the families where people are working that suffer problems. – professional 2

I would not say that the mine is generating work for me. – professional 3

From conversations with people in Arctic Bay, several key themes emerged related to social change. These include changes to the integrity and structure of families; change in the structure of the household economy; and, change in the social opportunities available to people from Arctic Bay.

Family Structure And Integrity

Arctic Bay's social structure is based on strong extended family relationships and on healthy individuals who make up these families. In this section, insights about how Nanisivik has influenced this social structure are presented, starting with how individuals were affected, then considering effects on the immediate family.

Comments related to the impacts on families associated with ‘partying’ at Nanisivik are also presented in this section.

Impact on individual quality of life

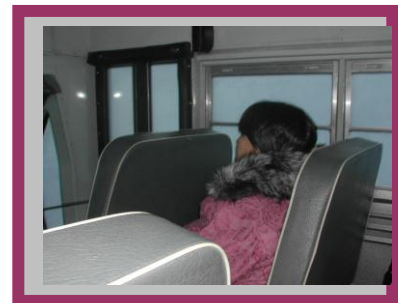
Nanisivik provided some jobs in a region where the role of money in the mixed economy is increasing and where income-earning opportunities are limited. These jobs, then provided benefits both in terms of income, as well as to the well-being that comes with having a productive role in society.

I have seen that people with work are under less stress than those who rely on social assistance. – professional 4

My partner is happier (but more tired) when he has work. He’s happy to be able to feed his family. For me, I don’t have to worry about the cost of groceries. – spouse 1 of worker

However, Nanisivik jobs involve a commitment to an intense work experience. Arctic Bay workers have to be on the bus early in the morning and are away from home all day. Workers are on the job Monday to Saturday. Miners also work shifts.

When I worked there in the 1990s I’d get up at 5:00 am, feed my one year old daughter and drop her off at the baby sitter in time for me to catch the 6:45 am bus. If you missed the bus, the taxi cost \$100. I paid between \$150 to 300 per week for baby sitter. – lived with parents at Nanisivik 3



After unionization things got harder. Before, workers left Arctic Bay at 6:45 am. Now they leave at 5:45 because the guys who live at Nanisivik voted for an earlier start and they are in the majority. – professional 4

The workers didn’t get tired right away, but you could tell after awhile the stress that they felt. – elder woman 1

I’ve always thought that more young people would be working if they didn’t start so early.

I’ve heard that young people would quit because they couldn’t get up so early. – hamlet leader 2

Impacts of work on marriages and family integrity

Increased individual well-being related to work was noted by one respondent to rub off on the family. Others noted the stresses that can result from daily absences. For some spouses, living at Nanisivik was a good experience while for others it was too isolating.

Before he had work, my husband was not sociable. Having a steady job helped him socially — he is friendlier, less depressed, easier to get along with in the family. He is a good father, able to balance work even when commuting back and forth. – spouse 1 of worker

For families where the spouse is working, I've seen there may be less interaction between husband and wife. Unlike work here in Arctic Bay, spouses working at Nanisivik can't drop by the house during the day. – elder woman 3

There is both a good side and a bad side to Nanisivik: A very negative side is that my daughter's marriage broke up and she left the community. So there are both sides, good and bad. – elder woman

Nanisivik was a good place to live. It was quiet. If you were not into alcohol, people didn't bother you — they don't just pop in to visit like they do here. It was good for the children. There were not too many kids and they had a place to play together — play ground, pool, gym. – lived with parents at Nanisivik 2

Our family lived with my parents at Nanisivik. My parents lived there — my mother stayed at home, my father worked. Our two children were too young for school. For my wife, it was too quiet at Nanisivik. – former worker 1

As a spouse, you'd wait all day for them to come back. Then they'd only stay up a few hours then go to sleep. – spouse 5 of worker

I wish there was more time for us to spend together — its too much work. – spouse 3 of worker

Miners worked shifts, with two weeks on days and two weeks on nights. Families of miners who worked shifts seem to have had to make significant adjustments.

Shift work is hard for the family: My husband works two weeks on day shift, then two weeks night shift. He likes the night shift, but the day shift is better for the family. – spouse 2 of worker

I hated it but it was normal. Night shift was easier for him, he slept more. – spouse 4 of worker

Night shifts were hard on families. – hamlet leader 2

A job is a job — if you don't like it, walk out. Our children were used to the routine of shift work. We would talk to them about why I had to work. in order to earn money to live. - former worker 7



Seemee and Qayaq off to work

Several parents commented on how working affected their children. In at least once case, separation from an older son during the day created problems:

I left mine work because of our kids. My spouse and I both worked, and we worried a lot about our older sons. - former worker 5

The kids miss him during the day — they are happy to see him when he gets home. He has a little time to spend with them at the end of the day. – spouse 3 of worker

Its like any normal job. The parents come home every night, so they get to see their families. No, there was no real impact [on the family left behind for the day]. – hamlet leader 3

The positive role model that a working parent can offer their children was also suggested by two people. In this context, the importance of children being able to see their parent actually working at the mine or in the mill was noted.

Work was good for the family. It rubbed off on dependants, who would say 'I should be working too.' – lived with parents at Nanisivik 5

I hope my children learned from my experience. Children learn by watching you do things. They may not decide to do the same thing you do, but they will see that people can do things. I have skidoos but no truck to take the family out to see the mine. The taxi was too expensive. My older sons did not get to see the mine. My younger one went out with the school and got to look in at the garage where I was working. – former worker 5



Impacts of Nanisivik alcohol and 'partying' on family integrity

Many people noted that Nanisivik presented a context where social norms that tended to protect marriages did not apply. This was particularly linked to use of alcohol. While miners are not said to have come into Arctic Bay, the lure of Nanisivik created significant challenges to family integrity. The possibility that children may have been significantly harmed as a result was also raised.

There were many different types of whites who passed through there. Some were respectful, some were self-centred. This mix has been the same over the years. There were those who did not respect married couples. They were not living as a community, but were there only to work. They would break up families. They were living without social rules and did not respect existing couples. There was no looking at the past. A man who is working at Nanisivik, his marriage breaks up. This hurts the children. I worry about them. – elder woman A

Guys at Nanisivik didn't care if Arctic Bay women were married or not. ... This abuse was abuse not only of women but of all Arctic Bay people. It was disrespect for the social structure of Arctic Bay, for the bonds of marriage between people. Alcohol was the driving force for all of this and the mine did nothing to put pressure on their employees. – man A

If a man at Nanisivik sleeps with a married woman from Arctic Bay, the woman's partner in Arctic Bay could threaten the guy at Nanisivik, take the situation into his own hands. He wouldn't just let it happen. He might also take it out on the woman, obviously. But when the southern guy leaves, the problem would be over. . – elder woman A

When a man beats his wife everyday, the kids see it. What does this do to these kids? – man A

I have noticed this [lack of respect for marriage bonds] happening. This can cause problems — divorces, separations in families — when this happens it causes problems, but when the other guy leaves it usually gets resolved. This does affect the children, though. They are never the same. They see what is going on but won't talk about it. It is our understanding that these problems must be resolved by talking openly, with the entire family. As long as the parents talk it out together and resolve the thing — with the entire family [children, grandparents, ...]. Cheating causes very bad problems for the family, It may seem like fun, but it will catch up to you. – elder man A

Recently the mine has been reducing the number of families living at Nanisivik. This has changed the make-up — its become more of a mining camp mentality. There have been more problems recently. – professional 1

The underlying cause of these problems was identified to be alcohol:

Alcohol and drugs are the things that cause these problems. Bootlegging and selling drugs — its happening even today. – elder man

If alcohol was not there, it would be less of a problem. Initial intention may not be criminal, but after alcohol, it leads to criminal acts. Alcohol is the one way to ruin a life. – elder woman

Some miners would get alcohol and then invite Arctic Bay people to come for a drink. Sometimes Inuit employees would bring alcohol into Arctic Bay and drink at their place. Bootlegging was also a problem.

Without alcohol we could get along with each other, but with alcohol there were problems.

Some consequences of alcohol are that children get neglected because parents are drinking at Nanisivik or out there somewhere.. Alcohol had



Nanisivik Lounge

a big effect on our parents (the first generation living in Arctic Bay) It did affect families living at Nanisivik. Some would be drinking for the weekend. But they were in better control. The mine had a strictly enforced “no alcohol” policy in place[at work]. Government jobs at Nanisivik created more problems because no one was watching over them. Mine workers would have problems when friends from Arctic Bay came over and started drinking. Southern workers were not a role model — at parties they’d get just as drunk as anyone else. – professional 2

Alcohol was available and ruined some people’s lives. Some people have had a rough life because of the alcohol. There have been marriages that have broken up. – elder woman 4

They said there would be no alcohol, but there is alcohol. This continues to be a problem and it created social unrest. – elder man 3

Changing family structure

Two elders talked about change that is happening in family structure and household economies. These changes are related to the impact of living in a comparatively large community setting, in contrast to the former family-based camp settings, and to the impact of school:

Young people now, they will start a family, even though they have no skills or haven’t finished school. They are just relying on handouts from people to survive. In the past we would watch out as a family group for our young people, as they were growing, to see if they were ready/capable to get a spouse. We’d watch for them. Today, though, young people in the communities are mingling with each other. There is no limit to say that you’ve reached that certain point where you are ready to find your soul-mate. There are now no restrictions in terms of relationships. I feel they should have a job or some source of income before they start having children. They aren’t using the elders’ system today — asking advice from us. Our skills on raising children should be passed on. – elder woman 1

In the old days the family was in one place. Children, parents and elders all together. Elders would provide advice on raising children. Today, children are at school and not with their elders. Elders were the supervisors, enforcers. Today there are no supervisors for children. After school they go around breaking things. There needs to be someone or something in place to supervise the community, to monitor what’s going on. Until we have this, we are like people without arms. We are not giving the children direction. – elder woman 2

Impact Of Wages On The Household Economy

According to many of those who we spoke with, Arctic Bay has been undergoing a transition to a money based economy. This is a significant economic change that has social consequences. Has Nanisivik contributed to this transition, or has it simply happened at the same time? Comments related to this issue suggest that the shift to a money-based economy is independent from the mine.

The money is good — it's the way we live. It's the only thing. – former worker, now working in Arctic Bay

Money is the same as Food here. Nowadays we work very hard to get money. When I was young, we worked very hard to get food. It's the same thing. – elder

The way money is spent is not entirely outside the traditional forms of sharing between extended family members that has been so important to Inuit survival. Comments were made about how Nanisivik wages allowed extended family members to purchase goods:

Arctic Bay did affect Inuit who were not directly involved. Income allowed the whole family — the extended family — to buy boats and snow machines.

My brother works at Nanisivik now. When he is off work he goes hunting with me — he supplies the gas for both of us.

Relatives have benefited from income earned at the mine, because this money is shared. It does not stay just in the immediate family. I have a son working, for example. He buys me gas, aeroplane tickets.

In the context of the increasing importance of money, many people noted how the money earned at Nanisivik was used to help the family. Wives of workers tended to see that Nanisivik wages entered into the household economy, in some cases directly going into an account that was accessible to the wife.

Nanisivik has benefited us as a family. Before my husband had work, we were struggling to get by. It was very stressful and depressing. His job let us afford things — the basics plus other things. This was more up-lifting. Life was less depressing after work was available. – woman

My partner gives me the money — I decide how it is spent.

The money they earned was very beneficial to our family. We used it to buy clothing for the family, and food. – elder

The income from Nanisivik is good for Arctic Bay. It helps people buy skidoos, houses, trucks. I like that he [husband] works like he does, at a steady job. – young woman

Most of my earnings would go to the rent, groceries and power. There was not enough left over for major purchases. I don't have all the equipment needed for hunting — no snow machine. – former worker

New Opportunities To Socialise

Several people talked about how Nanisivik provided an opportunity for social activities that would not otherwise have been available to a small northern community like Arctic Bay. Particularly for those who lived at the Nanisivik townsite, the ability to get to know people from southern parts of Canada provided social and cultural learning opportunities.

A lot of good came out of Nanisivik: Getting to know people. Realising that not only Inuit eat seal meat. A woman from Newfoundland once came by to ask if I had any seal — I had never realised other people ate seal. Then she told me that the flippers are really good — Inuit don't eat the flippers! Now I know people from Newfoundland, Ontario. We socialised together, with families from the south. We'd have baby showers and picnics together. Our children went to school together.



Inside the Dome

Nanisivik offered an opportunity for affiliation with other people — a wide cross-section of people from across Canada. There were many social functions held there. People would go from Arctic Bay to the Dome restaurant; the pool; for Arctic Bay-Nanisivik hockey tournaments. Up until unionization, people from Arctic Bay had good access to the facilities. — hamlet worker 1

We had good communication between the two communities — social activities together, hockey tournaments.

This is the only community in Nunavut where you can go out on a day trip to visit someone you haven't seen for awhile.

Nanisivik provided a destination outside the community for family outings or for recreational opportunities. This ability to 'get out' seems to have been valued by many. Eating out at the Dome restaurant was specifically noted by elders and youth as a favoured activity. Recently, however, this seems to have become less accessible to Arctic Bay people.

We used to use the pool. The recreation program at Nanisivik was great. We'd go there on the weekend. They should move the playground equipment here.

Keep Nanisivik open — it is nice to be able to get out of town. There are some people who never get out. Spring is the only time to go out on the land. With Nanisivik we have someplace to go all year.

People would go from Arctic Bay to the Dome restaurant; the pool; for Arctic Bay-Nanisivik hockey tournaments. Up until unionization, people from Arctic Bay had good access to the facilities.

Many people expressed appreciation for Christmas fruit baskets and turkeys given out by the mine company to all households in Arctic Bay. Mention was also made of donations of gasoline to support hunting for community feasts:

The mine gave a box of fruit and a turkey for every Arctic Bay family at Christmas. Also they donated gasoline for hunting for a community feast.

We'll loose the Christmas boxes, turkeys, fruit that the mine gave to every household.

Nanisivik parties

Nanisivik also enhanced opportunities for socialising with southerners. These parties also, however, frequently involved access to alcohol. While parties at Nanisivik created problems, there was clearly some interest amongst people from Arctic Bay to participate. Personal or parental responsibility to avoid problems was suggested as well:

There was a good aspect to the parties as well. The New Years parties had prizes.

At Nanisivik they used to have dances. That gave guys a chance to blow off steam. That was better than drinking at home.

I'd personally go and haul my daughter back if she went out there! – a mother

One person noted that there were significant cultural differences between Nanisivik and Arctic Bay that had the effect of reducing the level of social and cultural interaction between the two community. Still, a shift from families to more single workers at Nanisivik was associated with an increase in trouble:

Arctic Bay was a traditional community, Nanisivik was strictly Qallunat, so there wasn't much influence. – professional 1

I see problems with drugs and alcohol getting worse — I also see young girls getting into trouble at Nanisivik parties. – professional 4

Access to alcohol

When speaking of Nanisivik many people volunteered concerns about the problem of alcohol. While Arctic Bay attempts to restrict alcohol through an Alcohol Committee that issues import permits, the Nanisivik mine site was an “open” community in terms of access to alcohol. Although the mine had policies designed to prevent the effects of alcohol at work, there was, according to people we spoke with from Arctic Bay, no control of alcohol use when off the job.

Part of me is happy that Nanisivik is going to be closed, because of its impact on alcohol. I've seen people trade polar bear skins, carvings, sewing for Nanisivik alcohol. There has been less illegal alcohol coming into Arctic Bay since the RCMP set up here. – professional 2

Alcohol and weekend parties at Nanisivik led to marital problems.

[Did people buy more alcohol because they had a better income?]: No. If people want it, they'll get it. Other needs become secondary.

Once a year the mine held a Christmas Party. It was very stressful for us. It was a drinking party. - woman

The only negative impact was the alcohol. Occasionally at the New Years parties alcohol created problems. Arctic Bay is restricted, but people would bring it in illegally from Nanisivik. – another woman

While some blame the availability of alcohol on the mine, there is also a sense that individuals can learn to manage alcohol better. Some people have learned to overcome the problems associated with alcohol:

People who are hired should follow company policy and should not abuse alcohol. It leads to self-destruction and breaks up marriages. The community's social life is affected. Both whites and local people need to be careful. Southern workers need local workers, so they should be careful in offering alcohol. Locals should be careful in accepting it. –elder
The problem was alcohol. I was not a good drinker. But I put that behind me. – former worker

There have been some successes as well. Some people have stopped drinking, either on their own, or with support from friends, or with counselling support. The key thing is when they realise that alcohol isn't helping them or when they see the effect on their children. - professional

Individuals are learning from experience — passing on experience to their families and are able to advise young ones how to behave toward alcohol.

Further, although the effect of alcohol was pointed out by nearly all of those we spoke with, it was also noted that Nanisivik was not the only source of alcohol:

Arctic Bay is not really a dry community. You can get a permit to import alcohol. However, you could buy it from Nanisivik faster. It would cost more though — \$100 for a 40oz. – hamlet worker 4

Economic Impacts

In addition to comments on the mainly social impacts that Nanisivik wages had on household economies that were discussed above, the mine is also said to have had impacts on the Arctic Bay labour market, the traditional economy sector, and the business sector. Observations about the impacts that Nanisivik infrastructure has had on Arctic Bay — cost of transportation, development of Arctic Bay infrastructure and so on — are presented here as well.

Impact On The Labour Market

A key research question related to employment was whether people who wanted work were able to find work at Nanisivik. Responses from Arctic Bay suggest that although some people feel they were able to get work at the mine when they wanted it, many others found that jobs were not available to them. Other observations suggest that the worker profile desired by the mine changed over the life of the project. There is a clear perception amongst people in Arctic Bay that the mine did not make every effort to ensure work would be available to Inuit from the community.

I don't agree [that the mine did what they could to hire local people]. Maybe that's what they see, but from here, if you apply and you don't get a response, you will feel they are not doing enough. They should have initiated training programs. Don't require school levels to get in, but do it on-the-job.

Nanisivik was strictly focussed on business. They never really made accommodations for the local workforce, the way Pan Arctic had.

The agreement said there would be 60% Inuit employment. That never happened. I worked during the surveying and townsite construction period. After that, I got a job with the hamlet. I applied for work at Nanisivik later on. I was told I'd receive an answer but never got a response. I used to go up to Nanisivik on my own to look for work. I'd be told all the openings were full and that they would let me know. I never got a response. Lack of education was probably why I was not re-hired. So, people need to be more educated. There are people who are very good workers but who don't speak English. We don't have high school education. – elder man

The mine never met the employment target. There was someone hired to help hire people – help people with applications etc — but he was only there one year. Nanisivik never had an Inuk in management. Most permanent jobs are filled by people from the south. Most of the summer students hired at the mine were children of employees. There have been lots of complaints over the years where the mine was supposed to hire 65% Inuit workers, which the mine never lived up to during the life of the mine. Lots of people here fill out applications for jobs at the mine. They'll fax them to the mine but never hear back from them. – hamlet worker 4

At the beginning, people with physical skills were hired to provide labour. In the past ten years, it has been mostly people with better education who got

hired. People with physical skills, but who don't have education have been less able to get work in the recent past. For a period of time, in the early 1980s, we had a good liaison person who was a long-time resident of Arctic Bay.

They are now mostly hiring young people for casual work. Most of the casual jobs are for guys, not women.

Promotion into supervisory positions was generally unsuccessful. Related partly to education. If they were promoted — and a few were — people would tend to drop out or seek other work.

My partner worked steady for several years. Then the mine wanted to shift him to a 12 hour shift and he would have had to move to Nanisivik. They would not have let him bring us along.

Some people perceived that work at Nanisivik was available, and that at least some could find work when they wanted it. Comments suggesting that available work opportunities were not always taken advantage of were also heard.

Nanisivik was important as a way to earn money, but there was not much opportunity. Some people would not be hired when they tried. For me, though, they always gave me work when I called them up. I'd decide to work when I needed money to support my family.

Anyone can get money by working at the mine. Those who are less fortunate can go and work and get equipment, like a boat, that they wouldn't have been able to get otherwise. – elder woman

Opportunities for jobs and income weren't exploited as much as possible.

They had the choice to move to Nanisivik. Bill Hughes was the employment counsellor — they had the choice and from Nanisivik it was not so early. – elder

The Mine is a long way off from here. The bus leaves early in the morning. If you miss it by even a few minutes, you miss the day. If the mine was closer, more would have kept their jobs. – father of a worker

Impact On The Traditional Economy Sector

The important link between employment at Nanisivik and the traditional hunting economy was made repeatedly during conversations with Arctic Bay residents. Of particular interest was an account of Isaiah Attagutsiak's role during the early days of the project:

Isaiah was the first person hired. He was then responsible to hire other local people. He would hire the most desperate people, that are most in need, without equipment like a skidoo or a boat. He would hire them for awhile until they would get a boat and then he would hire another person to replace them, so that they could get hunting equipment. The people who were orphans in

Arctic Bay, who normally would not have anything for themselves, they were able to get money out of it and get their own equipment. – elder woman 1



Koonoo Oyukaluk worked at Nanisivik during the early days. He now hunts.

When Arctic Bay was starting to form people were hungry most of the time. I left Arctic Bay to go to Pond Inlet in the 1960s. After I returned in 1982, I saw that people were less hungry. People who worked at Nanisivik could buy gasoline and snow machines. They could hunt more caribou and that would be shared with the whole community. Today, caribou is still shared, but the caribou are not so much in the region right now. Nanisivik did affect Inuit who were not directly involved. Income allowed the whole family — the extended family — to buy boats and snow machines. – elder woman 2

Balancing work and hunting was a challenge. When pelt prices were good, some would quit work.

At that time [during the early days], it had a big impact for the entire community. It seemed like we were making lots of money — maybe 10 of us earning \$6 per day. I used money I earned to buy a canoe and rifles. – elder man 2

Nanisivik has been one of the few ways for people to earn some money over the winter, say, so they can go out on the land later in the year. – business person 4

Even though there were both negatives and positives, we will miss it. The hunters will have no way to earn income to support their hunting. – elder woman 4

In the earlier days, when we used dog teams there were fewer rifles. Nanisivik allowed for the purchase of hunting equipment which was shared with other people. –elder woman 2

People used the money earned very well — buying boats and outboard motors. At that time [during the early days] there was no store in Arctic Bay. People used their money wisely to buy harvesting tools. There are more things now to waste money on. Illegal things for example. Some are not wise in spending money. Things are more available now than in the past. The real benefit is for those who are careful with their spending. Mine work is very good for them- spouse 5 of worker

When I get paid, then I go out hunting. That when I can buy the gas. Right now it takes 35 gallons to go where the caribou are. At ~\$20 for 5 gallons [equals \$140]. – former worker 5

Women who were unemployed were able to get money by sewing things for sale to people at Nanisivik.

Not everyone focused on the ability of Nanisivik wages to purchase harvest tools however:

Money goes to rent instead of hunting tools. Some ignore their rent payments and they build up a big debt. They don't pay rent through payroll deductions — they should. Perhaps that could be arranged. We used to get a reasonable net pay. Now the rent increase deters some people from working. – woman

Impact On The Business Sector

Comments about the impact of Nanisivik on the Arctic Bay business community indicate a that this impact was limited.

The mine helped the co-op at that time. They bought lots of things back at that time, and that helped the store.

Nanisivik has had relatively little impact on the local business community. Things could have been different. The mine should have been more visible in the community so opportunities would be known. Would need government assistance too.

Over six years I have seen only a few [tourism customers] from Nanisivik. – local outfitter

Our sewing group hasn't really benefited — we had no connection to the mine. Besides, we did not have enough time to do more work. We make things for local demand and for HTO sports hunts. – woman

Impact On Infrastructure And Services

Nanisivik has had some influence on Arctic Bay's infrastructure development and on local services, according to those we spoke with.

Transportation

Of particular interest to many people has been the impact on regional transportation — jet service and frequent cargo ships. These services are seen to be directly dependant on the mine for their on-going viability. They have reduced the cost of transportation, while increasing convenience.

Cheap transportation costs benefited everyone. The income earned benefited families and the money was spent in Arctic Bay.



We used to have to travel to Resolute by plane to get out. Its much easier with jet service. It also means we have fresh produce. Also, we can order more equipment on the ships that come in for the mine. It is also important for medical travel. Other benefits are more directly for the workers at the mine.

With the mine bringing in cargo, we were able to ship things for a lower rate than it would have been.

We've been spoiled. Whenever I need something I can get it quickly through Nanisivik. We are a lot richer because of Nanisivik. More money here, say, than Grise Fiord or Pond Inlet. More snow machines. The freight is cheaper. – former worker

Store merchandise is cheapest here vis-à-vis other communities — prices will go up when the mine closes.

In addition to the benefits of lower cost and better service, the jet and port facility was identified by one person as contributing to tourism potential in the region, by providing important services to cruise ships. The shipping activity associated with the mine also brought in Canada Coast Guard personnel.

Cruise ships start in Greenland — people fly to Greenland, cruise to Nanisivik then fly south on the jet and a new group flies in. Probably a total of 400 people passing through here each summer, but not much impact in Arctic Bay. Last year there were none. Ice conditions are finicky up here, so I don't know if cruises will prove viable over the long term.

Hamlet safety

Over the past quarter century, Arctic Bay has been unique amongst Baffin communities in having road access to back-up power and other emergency services. This situation was noted during the community research.

Nanisivik has provided an important safety valve for Arctic Bay — they have trained disaster response people and back-up power sources. The GN only has one back-up generator that it can mobilize. Sanikiluaq was lucky that its generator went out when it was the warm season. Here in minus 40 weather, you'll have 4 hours before everything is frozen up. – hamlet worker 1

Housing

Surplus housing at Nanisivik was moved to Arctic Bay at a substantial cost.

We moved 11 GNWT units from Nanisivik here (along the road and across the water) and used the process to train people in the trades.

Access to capital projects

Some concerns were expressed that Arctic Bay infrastructure development may have been suppressed due to the proximity of Nanisivik infrastructure. Other comments simply pointed out that Arctic Bay infrastructure needs are substantial and that lack of infrastructure can be a real barrier to achieving development goals.

We have no infrastructure for business development — incubator mall, tourism centre. We expect that the closing of Nanisivik will galvanize government attention and bring some of our projects forward on the agenda.

Fifteen years ago we didn't get accepted in the community pool program. Because Nanisivik had a pool we were not eligible. [Reference to a program that established portable pools inside municipal buildings when they were not required for water truck storage in the summer].

Arctic Bay is as nice or better than Pond Inlet — they have the facilities like a fabulous visitor centre. We have the jet. Arctic Bay was marginalized because it's a smaller community. I don't see that it got short-shrift because of Nanisivik.

Government treats people unequally. Arctic Bay gets nothing while Igloolik and Pond Inlet get nice things. They focus on the large communities. Small community have nothing at all from government.

2.0 IMPACTS OF CLOSING NANISIVIK

The closure of Nanisivik mine raised considerably less comment than its operation has. People spoke of the uncertainty surrounding the shut down; the loss of income and business; and, the impact of loss of transportation services related to Nanisivik.

A PERIOD OF UNCERTAINTY

Much of the impact is subject to various factors that are uncertain. People mentioned possible alternative uses of the townsite that could provide work and ensure that key infrastructure such as the airport and the port facility remained open. Reference to a diamond exploration project in the region was also made. Other people showed a perspective that suggested Arctic Bay's future is not seriously tied to the mine:

I'm not sorry its going — I'm not glad its going. I do think there will be an effect. - lived with parents at Nanisivik 3

When the mine shuts, it will be hard for the first couple of years. As if we've lost someone important. But people will get over it. It will become a memory. No lasting effect, except for whatever takes over the site. – former worker

We have not made plans yet for when the work ends. – spouse of worker

Much of the impact of closing the mine won't be determined until we know what the plans are for the future of the Nanisivik infrastructure and site. – hamlet leader

In terms of the impact of closure — its too soon to tell. It depends what, if anything, will be done with the Nanisivik townsite. Also there are diamonds being explored at Brodeur Peninsula. We'll know in a couple years if this will lead to mining. - business person 2

LOSS OF INCOME AND WORK

People recognise that loss of income will be a significant impact following the mine's shut-down. This will involve not only workers and their families, but also extended family who may now receive income or goods from workers. Local businesses will also be affected, including carvers who have sold their art to southern workers at Nanisivik.

When the mine closes people will suffer because there will be less money to earn. – elder

When the mine closes, their first priority will be to find a job. Even if its not in the community, they'll look for a job, anywhere they can. – father of a worker

Elders who rely on income from family members will have less to distribute. Adult workers who earn money give some to elders who distribute to other family members. Plus, for an elder who owns a house — they get money from adult children who are working to help pay the bills. – woman

When I think about it closing, I feel lost — I will have no place to sell my carvings. Right now I plan to spend time making carvings to sell to the mine guys before they go. After that, I plan to start making large carvings to send to galleries in Toronto. – former worker

The layoffs will lead to an increase in clients for us. Some will get benefits. The number of jobs in Arctic Bay is only increasing slowly. - professional

Guys who are working there now will experience a big impact. They'll be back to hunting and welfare.

One comment noted that turnover has meant individuals have experienced job loss before, suggesting a level of psychological and economic resilience to loss of income and loss of work. Another person told of how his family came together to help him after he left his job at Nanisivik.

Loss of jobs is going to affect people and their families since there is no alternative work here. People have always lost their jobs — turnover — so it may not have that big an impact. They also have options. But families have depended for a long time on their parents' income from the mine. – professional 2

My father and relatives really helped. People with few relatives will have more problems when they loose their jobs. – former worker 5

In addition to loss of income, loss of a significant number of jobs will be a serious blow to Arctic Bay, according to one person. Loss of productive work may lead to other impacts, as another person noted:

I expect that when people loose mine jobs, they may suffer from feelings of inadequacy. - business person 2

When the mine closes, 12 to 15 people will be out of work. That will hurt. - former worker 5

Loss of income combined with increasing costs are impacts that are widely anticipated when Nanisivik closes. This raises some concern amongst Arctic Bay's social agencies:

We do think about the impact of closure on our work — decreasing income and increasing costs are known to kick-start trouble. Still our situation may be a little unique, since many people have alternatives. – professional B

Several people spoke about the lack of jobs in Arctic Bay and how people who have developed good skills at Nanisivik will now have difficulty applying them in the

community. It is felt that when the mine closes, some people may need to leave Arctic Bay if they are going to use their skills:

Its closure will affect them [mine workers]. They'll have to look somewhere else and may have to leave Arctic Bay in order to maintain their job experience. For those who are half way to getting their job experience/skills, they will have to do something to complete this. - business person 4

When the mine closes my husband may look for some other mine work — he has heard about something around Rankin. - spouse of worker x

POTENTIAL LOSS OF INFRASTRUCTURE AND SERVICES

Many people link the closure of the mine with a threat to the First Air jet service. Some note that even if the Nanisivik airport remains open, there may not be sufficient business generated without the mine to make jet service feasible. Others, however, expect that this will be possible and that jet service can continue.

Loss of jet service

Most people we spoke with noted the importance of the jet service that has been associated with the Nanisivik mine. Many believe that jet service may be suspended when the mine shuts down, because of the amount of business the mine generates for First Air. This concern is expressed regardless of what decision is made about the Nanisivik airport.

Loss of jet service will affect groups [hunters, tourists] coming in. It may also increase air costs. This will also affect other people in Arctic Bay because freight costs will increase. – business person A

We are going to miss the fresh food when the jet is gone. Vegetables, fresh bread won't travel well on the short-hop flights.

The impact will be the loss of jet service and an expected doubling of freight costs. That will be of concern since anything that doesn't come up on the sea lift in the summer has to be flown in. Also, you can't get fresh food in decent condition through food mail now and it will be even worse with prop planes. - business person B

The loss of jet service will impact people going to the hospital.

The closure will mean loss of the jet. This has been our lifeline in getting people out for medical reasons. We have already lost Kenn Borek service to other northern communities. We used to have the Pond Inlet doctor come in using that service. The doctor was stable over a long period. Now we get whoever happens to be in Iqaluit — it seems to be a different doctor every time, so there is little continuity in patient care. Used to have a flight 4 days a week (when Canadian North was here in the mid-1990s). If we end up on the milk run, then we'll need more medivacs. - professional A

With both mines shutting, the jet service won't stick around. That'll increase freight costs and grocery bills.

The mine probably accounts for half of the freight flown in. Other important clients are Canada Post; the school; Co-op; Northern; Nunavut Power Corp.; the hamlet; local businesses and food mail. The mine also probably accounts for half the passengers. Baffin Health Board is likely the second biggest customer. It is possible that jet service could continue without the mine. If Nanisivik airport is closed, there will be major capital costs to improve the runway and build a terminal building. Its probably more cost-effective to upgrade the Nanisivik runway and pay the on-going operating costs of the road to Arctic Bay. – business person x

Shipping

People also noted the impact that will occur when the frequency of cargo ships is reduced following mine shut-down. As previously noted in Section 1.0, the potential that the port itself might close was connected to the importance of the port — and the jet service — to the development of cruise ship tourism.

With closure of the mine, there will be fewer ships — maybe only one government and one Northern ship. Now there are maybe ten per year.

The ship that brought in supplies helped people bring in equipment — trucks, boats, snow machines. Arctic Bay will still be able to bring in boats, but the freight rate will be higher.

People could order equipment by sealift. In the past it took a whole year, with Nanisivik equipment came sooner because the cargo ships came earlier. – elder

Loss of mine cargo ships will mean less sea lift. Fewer Canadian Coast Guard people passing through too (they accompany the cargo ships). Nanisivik gets the first sealift for mine supply. Then there are three ore ships, two/three more cargo sealifts. Arctic Bay gets two cargo plus an oil shipment. Arctic Bay people have used the mine sealifts to get things in. –professional 1

Schools

Will closing the Nanisivik school lead to increased crowding in classes at the Arctic Bay school, as students transfer back to Arctic Bay? This is not anticipated, given the small number of students currently at Nanisivik.

The impact of closing the Nanisivik school will be minor at this point. There are now only 2 or 3 families with children who may return to this school. It won't have a significant impact on student – teacher ratios. Currently, we have between 16 and 22 students per teacher, with a high of 29 students for one Grade 9 teacher. – professional x

Housing

When Arctic Bay people currently living at Nanisivik return to Arctic Bay, they will need housing. This is expected to put some additional strain on an already tight public housing situation, however the number of families involved is small.

I expect three families at Nanisivik will want to move to Arctic Bay and will need a house. They'll be on high priority. Arctic Bay is already 60 to 65 housing units short. - hamlet worker A

Moving back to Arctic Bay from Nanisivik may be a problem for some families who owe significant back-rent to the Housing Authority. – professional 4

3.0 LOOKING TO THE FUTURE

Many people offered insight and suggestions about what has been learned through the Nanisivik experience, and how this knowledge might be used to improve future relationships between mines and Nunavut communities. Some also commented on how Arctic Bay might seek to develop new economic sectors to replace lost Nanisivik income.

Learning From Experience

A wide variety of wisdom was shared about the Nanisivik experience as it relates to Arctic Bay. Many of these have to do with the relationship between the mining company, under changing ownership, and the community. In addition, comment was heard about the decision to build infrastructure at Nanisivik rather than in Arctic Bay, and about the benefits that may have arose from support for spouses.

Arctic Bay has been growing and evolving. The mine, on the other hand, didn't change. – lived with parents at Nanisivik 3

Other communities need to set out an agreement with the company that would stay in place regardless of who the managers were from time to time. That's what we did wrong here. The Agreement was only followed by some managers.

In future agreements, we need to be involved in negotiating the agreement and in its subsequent enforcement. These agreements should be geared toward improving the community and skills. We don't want to repeat past mistakes. There should be training on the job. The Agreement needs to be assessed and evaluated. Efforts could be made to involve more women e.g. office administration. We never came close to the 60% target.

Mining companies need to be more concerned about safety. There should be zero fatalities. There have been some deaths of Qallunat and some serious accidents involving Arctic Bay people.

Way back in the mid 1970s, Brian Pearson — then MLA — argued that the Nanisivik infrastructure should be build at Arctic Bay, not Nanisivik. Then it would have been available to benefit people today. – business person 2

I wish there was a support group for spouses. – spouse of worker

One person provided a neat summary of how local outfitters use a range of local human resources to meet labour needs as well as to develop future skills. This approach might be used as a model for industrial human resources development as well, perhaps:

We hire local elders as well as young people. We use three groups of people: elders with knowledge; youth to help out; and youth who want to learn traditional skills. This ensures we are able to maintain a high level of knowledge and the ability to look after people out on the land. - business person x

Several comments suggested that the level of communication between the mine and the community could have been improved:

If there is another mining situation, I would want to ensure that we have a seat on the Board of the company. That would ensure that our voice is heard right at the top level. The problem with the Nanisivik agreement was that it seemed to get lost during the various changes in mine ownership. - hamlet leader 1

I don't know of any public meetings to resolve these sorts of issues. Maybe the hamlet met with them. – hamlet leader

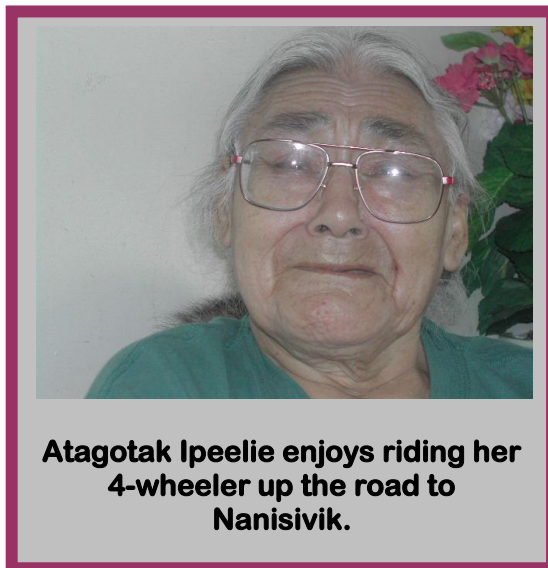
We should have had more access and input to the company, so we could suggest how they could relate to Arctic Bay. The company should have restricted or controlled alcohol. People from Arctic Bay got their alcohol from Nanisivik. –

I am happy for this opportunity to talk about this. I sometimes feel like I should talk to the mine manager — the best way to iron out these wrinkles is by talking. – elder woman 2

Commemorating The Legacy

When asked if there should be something done to mark the closing of Nanisivik, a variety of suggestions were offered. People generally feel that commemorating this experience, and the people who were involved, is important for their community.

We should have a celebration at the Dome to recognise the long-time workers and do some celebration, traditional events. The Mine could give out plaques to employees who worked there over the years. –former worker



Atagotak Ipeelie enjoys riding her 4-wheeler up the road to Nanisivik.

There should be a mention of the names of people who worked there in the early days. It is important for us.

I would support the idea of a celebration to recognise workers and Nanisivik as well. To thank them for their contribution over the years — gasoline, bringing in boats for us, Christmas meals. Nanisivik also helped to clean out boulders two years ago on a part of the trail to Pond Inlet. -

When I heard all the buildings will be removed — I will miss this — we need to leave the buildings there, empty, to remind us of the place. At least there should be a memorial. Advise future companies that they must plan the construction so that buildings can be used after the operation shuts down. This should be planned in advance. – elder woman 2

Options For The Future Of Arctic Bay's Economy

Recognising the impact that will be felt due to lost Nanisivik income, a number of comments were made suggesting ways in which Arctic Bay might develop new economic opportunities. Some people, however, also suggested that economic development is not going to be easy:

Our culture is unique. People around the world are becoming interested in us and our wildlife. Just look at the 'Discovery Channel.' Tours will be important. Young people need to prepare to take on the tours that will be travelling here. - hamlet leader 2



The new mine owner got out of the [Midnight Sun] marathon, so we took it over. When the mine sponsored it over 100 people took part each year, but there was little benefit for Arctic Bay. In 2000 we ran it ourselves. We hoped to provide some cultural entertainment for the runners and they were very keen. But in July everyone is camping over at Victor Bay. People don't understand this interest people have in Inuit culture. - business person x

We need to find good opportunities for the young people who are graduating from the high school. They need to be able to use their skills. What can government do to create opportunities in small communities? We need the facilities — government

needs to make these available. Business mall, recreational facilities – hamlet leader 2

I don't see what will replace it — I don't see tourists coming down here to Arctic Bay. - spouse 2 of worker



There are significant barriers for small business start-ups here. e.g. setting up stores or restaurants require approvals from Department of Health — you need the appropriate spaces, separate kitchens and so on. These spaces are not available, and require money.- hamlet worker 3

Arctic Bay is the muktaaq capital of the world. The Japanese in British Columbia are willing to buy narwhal meat, but you can't legally sell it to them. – business person 3

Use Of The Nanisivik Site

Several comments were volunteered about the future of the Nanisivik townsite.

When we found out they would be closed, we don't want to see things in the town moved away. It should remain, so the town can be used for other purposes. There is talk of a diamond mine that will be set up in the next few years. There is also the park — Simirlik Park — nearby. Nanisivik could be a departure point for this park. There should be things set up to do over at Nanisivik. Even though there are now lots of dangerous equipment there, we know from experience with Pan Arctic Oil that these things will be buried. The site will be safe for other uses. This would help to maintain the jet service. We want these things not for ourselves, but for our grandchildren. – elder man 2

If something goes in at Nanisivik there could be other issues. Some alternatives could create problems like those around Fort Smith — lots of single people, away from the social order of home. If it's a training centre, there would be more interaction with Arctic Bay. – professional 1

CHAPTER TWO: WHAT THE NUMBERS TELL US

This Chapter begins by presenting a brief profile of Arctic Bay in terms of available social and economic data. This is followed by looking at the contribution of Nanisivik to Arctic Bay income, and then putting this contribution into the context of total income.

1.0 SOCIO-ECONOMIC PROFILE OF ARCTIC BAY

Arctic Bay, like other Nunavut communities has undergone rapid population growth. Over the Nanisivik era (including exploratory period) the population has increased from 49 people (1961) to 716 people (1999).

Table 1 Population of Arctic Bay — 2001 back to 1961

1999	1996	1991	1986	1981	1976	1971	1966	1961
716	639	543	477	375	388	123	123	49

Source: Census data presented in NWT Bureau of Statistics Community Profiles. 1999 data is from the Nunavut Bureau of Statistics web site.

This increase in population has played a key role in the availability of jobs for those who want them. Table 2, below, presents labour force data for Arctic Bay. The table shows a rapid increase in the number of people interested in wage employment. For example, the number of people in the labour force increased from 170 to 260 between 1989 and 1999, an increase of 90 people, or 53%. During this period the participation rate increased by only 5%, from 60% to 63%. Therefore, growing population accounts for most of the increase in labour force, not increased participation in the labour force. At any rate, the labour force increased more rapidly than the available jobs, leading to a dramatic increase in unemployment rates.

Table 2 Labour Force and Employment in Arctic Bay

	1999	1994	1991	1989	1986	1984
Labour force	260	213	154	170	146	118
Employed	188	144	124	130	121	93
Unemployment	28%	32%	19%	24%	17%	22%
Participation rate	63%	69%	57%	60%	- - -	53%

Source: GN Bureau of Statistics 1999 Labour Force Survey (1989 and 1999), NWT Bureau of Statistics Community Profiles (1986, 1991, 1994), NWT Bureau of Statistics Labour Force Survey (1984) quoted in DIAND "Profiles of Baffin Communities Affected by Closure of the Nanisivik Mine, 1986).

Note: 'Labour force' refers to 'that section of the population wanting and looking for wage employment. The 'participation rate' refers to the population percentage 15 years of age and over who are in the labour force.

An average participation rate for Baffin communities can be calculated from the 1999 participation rates available in the 1999 Labour Force Survey, yielding a rate of 66.8%. Arctic Bay's current participation rate of 63% does not, therefore, stand out as particularly unique from other communities.

Estimates of the numbers of businesses in Baffin communities were carried out by two GNWT departments, one in 1994 and the other in 1996. This data provided an estimated growth rate for Baffin communities of 18% per year. The aggregated rate of business growth in Baffin communities with 1996 populations under one thousand was 9% (increasing from 76 to 90 businesses). The average rate for these communities was 11%, ranging from a low of 0% (Resolute and Hall Beach) to a high of 30% and 20% (Sanikiluaq and Qikiqtarjuaq, respectively). The rate of business growth in Arctic Bay was amongst the lowest of all Baffin communities, including other small hamlets, at only 3%. There were 14 Arctic Bay businesses listed in 1994 and 15 two years later in 1996.

Table 3 Number of Community Businesses and Services

	1996	1994	Annual growth rate
Arctic Bay	15	14	3%
All small hamlets	90	76	9%
All Baffin communities	390	286	18%

Source: NWT Statistics Bureau Community Profiles

The level of use of Social Assistance/Income Support is an indicator of interest when looking at the well-being of a community. Current levels of Income Support case loads as a proportion of the total population seem to be comparable between Arctic Bay and other Baffin communities. Data from the GNWT Community Profiles, though, suggest that in 1995/96, a much smaller proportion of the Arctic Bay population received social assistance at some time during the year. Unfortunately the available data may not be comparable over time, so one cannot confidently draw any conclusions from this.

Table 4 Population collecting social assistance (1995/96)

	% of Population collecting any social assistance		
	Dec 2001	Dec 1999	1995/96
Arctic Bay	12.9	16.1	13.2

Average for small hamlets	12.6	13.2	22.2
Average for all Baffin communities	11.4	11.3	21.9

Source: GN Income Support (2001 and 1999) and NWT Statistics Bureau Community Profiles

Note: The 2001 and 1999 data is not comparable with the 1995/96 data. It is for the month of December only. It is un-audited and “should be viewed with considerable caution.”

Levels of school education in Arctic Bay are typical of smaller communities in the north. As the following table shows, nearly one third of the population of people aged 25 and over have not completed grade nine. These people have sought their knowledge outside the school system. Clearly, knowledge acquired through traditional forms is very appropriate to many of the challenges facing people in Arctic Bay. However, to access and gain promotion in many of the jobs created by formal industry such as Nanisivik, higher levels of formal schooling are required. From this perspective, the low rate of university completion amongst Arctic Bay residents — just over 10% in 1996 — would suggest limited opportunities are available for career advancement.

Table 5 Education levels for Arctic Bay in 1996

Highest level of schooling for population age 25 and over	Arctic Bay	NWT and Nunavut
% with less than grade nine	32.6%	21.5%
% with a high school certificate or higher	52.2	65.3
% with trades or non-university certificate or diploma or higher	34.8	47.3
% who have completed university	10.9	15.1

Source: Statistics Canada Census 1996 Statistical Profile

Some indication that formal education may be increasing can be found by looking at trends in schooling over time. High school graduation in Arctic Bay, for example, has begun to increase in recent years. Prior to the mid-1990s, Arctic Bay did not have a high school program. Students from Arctic Bay wishing to attend high school had to move to Iqaluit to achieve this. As the data in the following table indicate, this was a significant barrier to education. While this data does not indicate the quality of a high school education in Arctic Bay, completion of high school is a major first step to educational advancement.

Table 6 High School Graduation for Arctic Bay, from 2001 back to 1990

2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
6	11	4	5	3	0	0	3	0	1	0	0

Source: GN Department of Education

Much of the socio-economic data that is of interest in developing a profile for Arctic Bay is not available in a community-by-community format. Of particular interest would be data from the 1996 NWT Alcohol and Drug Survey. That survey involved interviews with a people from communities across Nunavut, including questions on incidence of heavy drinking, and frequency of alcohol consumption. In Nunavut, 58% of people 15 years and older consumed alcohol in the previous 12 months, while 24% said they drink more than five drinks when they drink.

A second survey of interest is the National Population Health Survey conducted in 1994/95 and 1996/97. Areas where data was collected included alcohol consumption behaviour, and mental & emotional health attributes. This data is not, however, available on a community-by-community basis.

2.0 NANISIVIK'S CONTRIBUTION TO ARCTIC BAY'S ECONOMY

The impact of the Nanisivik mine in Arctic Bay must be seen within the context of the above community profile. This section will set out data that can be used to assess, first, how important Nanisivik has been to Arctic Bay's economy. Secondly, it will help to address the question of what Arctic Bay's economy will look like once the mine closes.

Nanisivik has had both a direct impact and an indirect impact on the economy of Arctic Bay. The direct contribution has come in the form of wages paid to workers, and money paid to businesses for goods and services. The value of Employment Insurance (EI) transfers made to Nanisivik workers following job termination is also considered as a direct impact of the mine.

Indirect impacts of Nanisivik to Arctic Bay's economy includes business activity and wages that have been generated by the increased income available in the community due to direct effects of the mine, decreased costs related to improved transportation infrastructure and services and so on. Both these contributions are discussed below.

DIRECT CONTRIBUTION

The major direct economic impact of Nanisivik were the wages paid to employees. The table below shows the numbers of northern resident employees at the mine during various years from the late 1970s to the present time. The numbers and relative proportion of northern workers has declined by over one half between the late 1970s/early 1980s and the last three years. The cause of this decline has not been identified in the course of this study.

Table 7 Employment at Nanisivik

	2001	2000	1999	1980	1979	1978
Total	179	185	190	203	207	213
Southern	162	165	170	156	158	163
Northern	17	20	20	47	49	50
% Northern	9%	11%	11%	23%	24%	23%

Note: Numbers indicate the number of employees (excluding temporary employees) at the end of the year.

Source: 1978 to 1980 data is from Hickling-Partners. 1999 to 2001 data is from Nanisivik mine payroll data.

The total wages paid to northern residents have declined from 1976 to the present. During the late 1970s, wages paid to northerners ranged between \$2 million and nearly \$3 million (adjusted for inflation to be comparable to 2001 dollars¹). In recent years, these wage payments have declined to between \$1.2 and \$1.3 million.

Table 8 Wages paid by Nanisivik to northern residents
(\$ millions, \$ million adjusted for inflation)

2001	2000	1999	1980	1979	1978	1977	1976
1.18	1.19	1.23	1.16	1.18	0.71	0.76	0.47
<i>1.18</i>	<i>1.23</i>	<i>1.30</i>	<i>2.67</i>	<i>2.98</i>	<i>1.95</i>	<i>2.28</i>	<i>1.49</i>

Source: 1976 to 1980 data from Hickling-Partners Inc.; 1999 to 2001 data from Nanisivik mine payroll records. Dollar amounts in first row are not adjusted for inflation. The amounts shown in italics on the second row have been adjusted for inflation to 2001 dollars, based on Canada's Consumer Price Index.

Most of the wages from Nanisivik in recent years have been paid to people from Arctic Bay, as illustrated in the following table. For example, in 1999, \$1.01 million of a total \$1.23 million to northerners—or 78%—was paid to Arctic Bay workers. This increased to 82% in 2000 and to 86% in 2001.

Most of the workers at Nanisivik were men. In 2001, for example, only 13% (five of forty) of the Arctic Bay workers were women, and they earned 7% of the wages paid to people from Arctic Bay, or \$72,800. The involvement of women changed somewhat from year to year. For example, in 2000, eleven women worked some time at the mine, contributing 28% of the Arctic Bay workforce at the mine, and earning 13% of the wages.

¹ The adjustment to 2001 dollars was made using the Bank of Canada's CPI calculator that can be found on the web at: http://www.bankofcanada.ca/en/inflation_calc.htm

Table 9 Wages paid by Nanisivik to Arctic Bay residents
 (\$ millions, \$ million adjusted for inflation)

	2001	2000	1999	1986*
Wages paid	1.01	0.98	1.01	0.920
Inflation adjusted	<i>1.01</i>	<i>1.01</i>	<i>1.06</i>	<i>1.38</i>
% of total northern wages	85%	82%	78%	
Number of workers	45	40	37	
- men	40	29	29	
- women	5	11	8	
Wages to men	\$937,200	\$855,397	\$940,417	
Wages to women	\$72,800	\$125,225	\$72,823	

Source: 1976 to 1980 data from Hickling-Partners Inc.; 1999 to 2001 data from Nanisivik mine payroll records. Dollar amounts in first row are at face value, not adjusted for inflation. The amounts shown in italics on the second row have been adjusted for inflation, based on Canada's Consumer Price Index.

* Note: 1986 wage data is for Arctic Bay only, as reported by DIAND "Profiles of Baffin Communities" 1986.

Payroll data provided by the mine shows that in 2001, there were 45 Arctic Bay people who worked for some period of time at the mine. Of these, 5 were women and 40 were men. Three families (four workers) were living in Nanisivik during that year. These 45 people earned a total of \$1,006,643 in 2001. The table below shows how this money was distributed amongst these workers.

Table 10 Distribution of Wages, 2001

	Amount earned at the mine by Arctic Bay people				
	less than \$5,000	\$5,000 to under \$10,000	\$10,000 to under \$25,000	\$25,000 to under \$55,000	More than \$55,000
Number earning this amount	15 people	11 people	5 people	7 people	7 people
Total earned by this group	\$36,605	\$81,926	\$68,930	\$294,596	\$524,586

Source: Payroll data from Nanisivik Mine

Described in another way, the top 11 workers from Arctic Bay earned \$726,906, while the 12 people who earned the least amount in 2001 were paid a total of \$22,479. The figure below illustrates this distribution of income. Each section of the

pie chart represents the same number of people (the smallest slice actually represents 11 people), with the size of the chart showing how much each group earned.

In addition to wages earned at the mine, employment provides potential access to Employment Insurance benefits. This can be particularly important for workers who have access only to seasonal work or temporary jobs. EI payments will also be available to workers laid off when the mine closes down this year. Statistics Canada reports that people from Arctic Bay received \$103,000 in EI transfers in 1999. For the purposes of assessing Nanisivik economic impact, we will conservatively ascribe half of this amount, or \$50,000 to the mine.

Finally, the Nanisivik mine has been a customer for local businesses. The primary contract is for a shuttle service to transport workers between Arctic Bay and Nanisivik each day. In the past, some char was purchased for meals at the Dome. However, the mine has not generated much business for local retail stores. In total, expenditures by the mine at Arctic Bay businesses are probably under \$75,000 each year.

Summary Of Direct Contribution

Table 11, below provides an estimate of the direct economic impact that Nanisivik mine currently has on the community of Arctic Bay. Both wages and the number of jobs created are considered. For the purposes of comparison, jobs are considered as “full-time job equivalents.” This is needed due to the large number of casual jobs that exist both at the mine and in the community of Arctic Bay. An wage level of \$35,000 is used to represent one full-time job equivalent¹.

Table 11 Direct Contribution of Mine to Arctic Bay Personal Income in 2001

Economic impact	Value of contribution	Full-time job equivalents (\$35,000 equals one job)
Direct wages	\$1,006,643	29
Annual EI eligibility	\$50,000	1.5
Wages paid due to procurement from local business by mine	No data	0.5
Total impact	\$1,056,643	32

¹ This wage is chosen to be comparable to typical hamlet jobs.

Source: Payroll data and estimates based on interviews. The EI estimate is rough. No data is available to assess the wages paid as a result of contracts to Arctic Bay businesses provided by the mine. In recent years there has only been one such contract—for bussing services. Wages paid to the driver are not known, but can be assumed to provide one part-time job.

Based on this data, we can conclude that in 2001, the Nanisivik mine directly contributed the equivalent of 32 jobs to residents of Arctic Bay. This is comparable to the approximately 33 jobs created by the hamlet government in Arctic Bay.

INDIRECT CONTRIBUTION TO ARCTIC BAY’S ECONOMY

In addition to direct wages paid, EI eligibility opportunities provided, and local services purchased, Nanisivik mine may be expected to have indirect impacts on Arctic Bay’s economy.

These indirect impacts will arise from an number of sources:

- income and business activity created by the Nanisivik town site and airport.
- jobs created by businesses supplying goods and services to the Nanisivik townsite
- goods and services purchased from Arctic Bay by Nanisivik employees from outside Arctic Bay, or by Arctic Bay residents as a result of Nanisivik’s presence.
- a “transportation and freight cost effect” as a result of transportation infrastructure and service improvement
- an “income effect” increased local spending of wages earned by Arctic Bay residents at the mine
- a “domestic economy effect” created by increased money to purchase hunting supplies and decreased time available to hunt

The following tables set out the data needed to assess these indirect effects.

Jobs And Business Arising From The Nanisivik Townsite

Table 12 shows the economic impacts of the Nanisivik townsite on Arctic Bay, through the creation of government jobs and the purchase of business services.

While some data is available, efforts to obtain estimates for other areas were not successful within the available time-frame. Key person interviews suggested that six Arctic Bay people are employed in the various government jobs at Nanisivik, earning a total of \$363,352. While it is known that two local businesses hold contracts to provide hauling, janitorial and garbage pick-up services to the townsite and the airport, no estimates of the wages paid as a result of these contracts were available.

Table 12 Economic impacts of Nanisivik town site

	Jobs to Arctic Bay residents	Wages	Business Activity
Government services ¹	6	\$363,352	
Purchase of Arctic Bay business services for Nanisivik town site and airport	no data	no data	no data

Notes: 1 Nanisivik government wage data provided by NEU. Includes base salary and northern allowance for Arctic Bay people working at the school, health centre, airport, and for public works.

Sales Of Arctic Bay Goods And Services Indirectly Generated By Nanisivik

Table 13, below, identifies the indirect impact of the mine on Arctic Bay through sales of goods and services to Nanisivik employees. Here again data is not available. On the basis of the interviews in Arctic Bay, it is fair to say that purchase of retail goods, sewing and tourism services did occur, but that these purchases were insignificant.

Purchase of carvings, on the other hand does seem to be a significant indirect contribution. In the absence of sales estimates, a value of \$50,000 is assumed for these sales¹. This is approximately equivalent to one full-time job. Interviews also suggested that increased use of the local taxi service, and increased demand for baby-sitting may occur as a result of the mine's presence. Here, however, the references are not sufficient even to hazard rough guesses. One person suggested she had been paying between \$150 and \$300 per week for a babysitter while she commuted to Nanisivik.

Table 13 Sales of goods and services indirectly generated by Nanisivik mine

Type of good or service	Value of purchases	Full-time job equivalents

¹ This estimate is based on an assumption that half of the southern workforce — approximately 150 people — purchase one carving at \$400 each year. In the absence of carving sector data, it is not possible to assess whether this is a liberal or a conservative scenario.

Purchase of retail goods at Arctic Bay stores	negligible	0
Purchase of carvings	estimate \$50,000	1
Purchase of sewing	negligible	0
Outfitting/tourism spending	negligible	0
Use of Arctic Bay hotel	negligible	0
Purchase of transportation (taxi)	no data	—
Purchase of babysitting by Arctic Bay people working at Nanisivik	no data	—

Source: These rough estimates are based on interviews with residents of Arctic Bay.

Transportation And Freight Cost Effect

A third indirect impact of Nanisivik is in the form of reduced freight and transportation costs. These impacts arise from three sources: reduced air transportation freight costs due to the availability of jet service; availability of freight subsidy to workers at the mine; reduced dependence on air freight due to an extended sealift season associated with the mine.

These impacts have the effect of reducing costs in Arctic Bay, however the extent of this impact is not estimated. Interviews suggested that the cost of retail goods, groceries, medical travel, construction goods and so on would be affected. Interviews also suggested that Arctic Bay workers did sometimes take advantage of a freight allocation provided by the mine as a benefit of employment. No data was available, however, on the extent to which this benefit was used.

Income Effect And Harvest Sector Effect

Other indirect effects—spending of Nanisivik income by Arctic Bay workers in Arctic Bay, and the impact of Nanisivik wages on the domestic economy—require a consideration of Arctic Bay’s economy before estimates can be made. This is presented in Section 3.0, below.

3.0 SNAP SHOT OF ARCTIC BAY’S MONEY ECONOMY

The closure of Nanisivik will result in the loss of the income identified in Table 11 above—an amount estimated to be just over \$1.1 million dollars per year. This section will put this loss in perspective with the total Arctic Bay economy. It will also attempt to assess the indirect impact—or “income effect”—of this income on Arctic Bay businesses.

SOURCES OF PERSONAL INCOME

Personal income entering Arctic Bay’s economy is available from taxfiler records. This data is presented in Table 14, below. Based on this source, total personal income of \$8.06 million entered the community in 1999.

Table 14 Sources of Personal Income in Arctic Bay

Source of Income	1999 Personal Income Estimate¹
Employment	\$6,339,000
Investment income	\$38,000
Employment Insurance	\$103,000
Social Assistance ²	\$730,000
Child Tax Benefit	\$262,000
Other transfers (tax credits, CPP, GST credits etc)	\$340,000
Other Income	\$186,000
Suppressed data ³	\$62,000
Total income	\$8,060,000

Sources: All data except for Social Assistance estimate is from Statistics Canada, 1999 Neighbourhood Income and Demographics Table 4 for “Arctic Bay, Place ID 5958” . Social Assistance data is provided by the GN Department of Education. Employment wages have been adjusted to include Nanisivik residents who are known to be “Arctic Bay people.”

Notes: 1 StatCan data includes data for taxfilers who use the Arctic Bay post office as their mailing address. Key person interviews suggest that this includes the Arctic Bay people who hold government jobs at Nanisivik. 2 Department of Education, unaudited “rough estimate”.

3 Suppressed data for Arctic Bay includes self-employment income, private pensions and income from RRSPs.

This estimate suggests that the income gained from the Nanisivik mine—\$1.1 million in mine wages, EI eligibility and contractor wages—accounts for approximately 13% , or one-eighth of the money flowing into the community. When the income generated from the Nanisivik town site is taken into account (Table 12 and Table 13), the total contribution to Arctic Bay personal income attributable to the mine increases to \$1.5 million—18% or nearly one fifth of total income.

4.0 SNAP SHOT OF THE HARVEST ECONOMY

Arctic Bay has an active harvest sector. The Interim Community Report for Arctic Bay released by the Nunavut Wildlife Management Board provides estimates of the number of people involved and of the level of production in this sector.

The Harvest Study covered a three-year period from June 1996 to May 1999. By the end of the third year 266 hunters had been registered in Arctic Bay. Of these, 222 considered themselves to be “occasional” hunters; 43 as “active” hunters and one as an “intensive” harvester. Self-identification means that different standards may apply from community to community, and even on an individual basis. With due emphasis to the need for caution in interpreting this data, the self-classification for hunters in the Baffin communities is presented in Table 15. “Intensive” and “active” categories have been grouped, and the proportion of the total number of registered hunters made up of this combined group is calculated as a percentage. Whether the apparently low proportion of active and intensive hunters in Arctic Bay is actually

significant would require additional analysis. If it were, a connection to the impact of Nanisivik could only be speculated.

Table 15 Harvester self-classification in Baffin communities

	Intensive or active	Occasional	Total registered	% of registered hunters who consider themselves "active" or "intensive"
Arctic Bay	44	222	266	17%
Qikiqtarjuaq	35	103	138	25%
Cape Dorset	107	416	523	20%
Clyde River	34	191	225	15%
Grise Fiord	22	39	61	36%
Hall Beach	86	71	157	55%
Igloolik	123	137	260	47%
Iqaluit	167	277	444	38%
Kimmirut	39	67	106	37%
Nanisivik	7	13	20	35%
Pangnirtung	99	111	210	47%
Pond Inlet	142	184	326	44%
Resolute Bay	32	37	69	46%
Sanikiluaq	83	78	161	52%

Source: NWMB Harvester Study

Notes: The data present the number of hunters registered by classification and community by the end of year 3 of the harvest study. The NWMB notes that, "Hunter classifications were obtained by a process of self-identification. No statistical analysis has yet been done to test the reliability of this process."

Harvest estimates are provided in the following table for Arctic Bay. No attempt is made here to estimate the money value of this harvest. It is clear, however, that the harvest economy contributes significantly to the food supply of Arctic Bay.

Table 16 Arctic Bay Wildlife Harvest: June 1996 to May 1999

	June 1996 to May 1997	June 1997 to May 1998	June 1998 to May 1999
Beluga	24	3	8
Narwhal	78	65	68
Ringed seal	1,460	1,140	1,290
Harp seal	8	8	18

Bearded seal	14	21	6
Char	8,534	10,839	8,476
Cod	151	159	72
Sculpin	66	18	52
Clams	0	29	25
Lake trout	4	6	31
Polar bear	3	10	10
Caribou	1,195	836	745
Muskox	1	0	2
Wolf	7	13	15
Arctic fox	195	157	23
Red Fox	0	1	0
Arctic hare	199	108	124
Snow geese	578	238	297
Canada geese	1	1	0
Brant geese	0	4	9
King eider	0	15	7
Old squaw	0	3	0
Common eider	19	6	3
Ptarmigan	646	668	460
Other birds	3	5	8
Snow goose eggs	590	108	1,241
Seagull eggs	13	4	21

Source: Nunavut Wildlife Management Board.

Note: The NWMB emphasizes that, "The data were obtained from the Interim Community Reports of the Nunavut Wildlife Harvest Study which summarize the harvest data collection from June 1996 to May 1999. The Nunavut Wildlife Management Board conducted the Harvest Study from June 1996 until May 2001, collecting harvest data from hunters from 28 Nunavut communities. Interim Community Reports are still under review by the NWMB and the participating communities. All data are preliminary and may change as further verification and statistical of the data are done."

CHAPTER THREE: ANALYSIS OF THE DATA

The previous two chapters provided two streams of information that can be used in assessing the impacts of Nanisivik and its closure on the community of Arctic Bay. Chapter One reflected the knowledge and experience of people in Arctic Bay who have lived in a close relationship with Nanisivik over nearly three decades. Chapter Two is an attempt to peer inside the local economy through a look at income and expenditure numbers.



Readers will no doubt bring their own perspectives, frameworks of experience and array of questions they are seeking to answer. They are invited to use the material presented to come to their own conclusions.

The chapter is organised into three major sections. The first, Section 1.0, looks at the impacts and benefits that arose during the period during which the Nanisivik mine was under development and operation. Section 2.0 considers the impacts that are anticipated following closure of the mine. In Section 3.0, we look at Nanisivik from the point of view of Arctic Bay development and what, if any, impacts Arctic Bay's experience with the mine has had on the community's capacity to achieve its future development goals.

1.0 IMPACT OF NANISIVIK DURING MINE OPERATION

This first section considers the positive and negative effects that Nanisivik has had on the community of Arctic Bay during the period of its operation. As illustrated in the grid below, these impacts related to a wide range of social and economic factors. Further, these positive and negative impacts have been experienced not only by those who have been directly involved at Nanisivik, but by other community members as well.

The intent of the following analysis, then, is to assess both the nature of the impacts experienced as a result of Nanisivik, as well as the distribution of these impacts. In particular, I will seek to answer the question, "Have the various costs and benefits arising from Nanisivik been equitably distributed amongst residents of Arctic Bay?"

To aid in this assessment, I have grouped impacts under the headings of 'social' and 'economic'. This distinction between these groups is rather fuzzy. Increased income (an 'economic' impact) may clearly lead to greater well-being or increased status (both 'social' impacts). Changing roles in the household (treated under 'social' impacts) clearly have a major economic implication. Nonetheless, this simple grouping does provide a convenient framework from which to hang the various impacts that have been identified.

Table 17 Nanisivik Impact Grid

Impacts and benefits experienced regardless of direct involvement in Nanisivik work		
Open access policy	→	alcohol abuse → domestic violence neglect of children, FAS children suffer
Alcohol/absence of social norms at Nanisivik	→	socially inappropriate relationships → domestic violence marriage breakdowns children suffer
Impacts and benefits experienced only by individuals and families involved with Nanisivik work		
Income	→	reduced financial problems → reduced stress happier family life children benefit
Ability to be productive	→	increased self-confidence and self-esteem → happier family life children benefit
Long hours at work	→	parents away from home → children get into trouble
Stress from work	→	this was not identified in conversations I had with people in Arctic Bay →

Social Impacts And Change Arising From Nanisivik

This section seeks to gain an understanding of the social impacts and changes that may have arisen from Arctic Bay's experience with Nanisivik, as perceived by those people we spoke with. During the conversations held in Arctic Bay, I sought to discover how people felt the mine experience has affected individuals, families and the community as a whole.

In particular, I was interested in learning whether the various positive and negative impacts — both social and economic — were equally distributed amongst people. I have noted in other situations, for example, that while benefits from community — mining relationships are experienced by the individuals who get the jobs and earn the income, negative impacts may be more broadly felt by those not directly involved and not directly in receipt of these benefits. Does the experience of Arctic Bay reflect this situation? Have negative impacts been experienced by individuals or groups within the community who have not shared in the benefits?

Methodology is important in gaining insight into these sorts of questions. Problems may arise, for example, if certain groups — in this case, groups of people not directly involved in the benefits of Nanisivik but still affected by potential negative impacts — are not heard from adequately. It is difficult to know with certainty that no group has been excluded. What can be said, though, is that the range of people who contributed to this study included an approximately equal number of men and women. Mine workers, past and present, as well as their spouses provided their input. Children of workers — many now grown, along with members of the Youth Council also contributed. A significant number of Arctic Bay's elders also shared their knowledge and wisdom. Interviews with people in key positions included a nurse, social worker, community wellness counsellor, and RCMP. With this broad representation I have reasonably high confidence that if there were other voices that needed to be heard, I would at least have become aware of this. I did not.

With this in mind, what can be said about the influence of Nanisivik on social aspects of life in Arctic Bay? Three themes emerged from the conversations. These relate to:

- impacts on families
- education and skills development
- cultural “bridging”

Impacts On Families

Did the Nanisivik experience have significant and lasting impacts on families? Did it lead to changes in the roles played by different members of the family? Has the “alcohol effect” created serious impacts for Arctic Bay families?

This section will consider the positive and negative effects that Nanisivik has had on families. It will begin by looking at the benefits that families have gained from the Nanisivik legacy. This is followed by a consideration of what, if any, part Nanisivik has played in changing roles within families. Finally, I will present an assessment of

the negative impacts that have arisen in association with Nanisivik, with specific reference to the impacts of alcohol.

Benefits from work and wages

Significant and lasting benefits to families were clearly reported as being associated with Nanisivik. First, several family members and professional observers noted that the increased income that Nanisivik work brought into the family had the effect of lowering levels of stress caused by low income or poverty. Clearly, having some financial 'breathing room' was a benefit for those who were able to find work.

I believe that the very presence of Nanisivik jobs served to create feelings of economic empowerment amongst those who knew they were capable of getting work. Many people noted the positive fact that with Nanisivik, jobs became available. Even though significant barriers may have existed (early mornings, separation from family, intense workplace setting, and so on) the fact that one could go and earn money provided a degree of economic choice for some residents. This is a very different situation from one where there are no jobs, no wage-earning opportunities, no prospects — no hope.

The ability to work is a further benefit of Nanisivik that can be considered independently from the income earned. As noted by one person, having a job increased sociability and over-all well-being. This was described not simply as a personal benefit, but as a benefit to the whole family. The ability to provide for one's family can be a powerful benefit to an individual's confidence and self-esteem.

Finally, income earned at Nanisivik is widely reported to benefit other family members through strong kinship ties. Money and access to a worker's freight allocation benefit are the two direct benefits of work that were shared. Lending snow machines purchased with Nanisivik income, or a worker purchasing gasoline for a relative to go hunting are some of the indirect ways in which the proceeds of work were shared. This practice seems to be widespread in Arctic Bay. It is not known, though, what portion of a worker's wages might enter into these sorts of sharing networks.

The ability to share proceeds of work has a beneficial impact on an individual's position and status in the extended family. Further, this process of sharing must be seen to strengthen the social fabric of a family, and, through extended family connections, the whole community.

A period of changing family roles

Nanisivik is viewed by many of those we spoke with as a source of jobs that emerged during a transition from a domestic economy toward a wage economy. But this transition was happening, independently from Nanisivik. Several people noted that in the past, people worked for food but that now they work for money. Money is now important in the life of people in Arctic Bay, and Nanisivik is widely seen as having provided an important source for this resource.

Not one of the people I spoke with suggested that Nanisivik was in any way a cause of this transition. It is interesting to note that in the context of discussing this point, several people volunteered that they felt the schools have played a very significant part in changing the roles of parents and elders in raising children by taking the children out of the home. Clearly this community is still seeking ways to bridge traditional teaching and child-raising with modern education.

Alcohol

The link between Nanisivik and negative impacts arising from alcohol is strong. Arctic Bay residents consistently — and without me specifically asking about it — identify the availability and use of alcohol as directly contributing to significant social impacts in their community. Many people noted that Nanisivik’s permissive policy toward bringing in alcohol, and the availability of alcohol during social events such as the Christmas/New Years parties as working against Arctic Bay’s attempt to restrict alcohol in their community. The 1980 BRIA report (p 343) noted that shipping alcohol to Nanisivik became permitted in the summer of 1978. Prior to that time Nanisivik workers were not permitted to import alcohol to Nanisivik.

It should be said that several people did feel, however, that Nanisivik was not the only source of alcohol in Arctic Bay. The ability to get alcohol import permits from the local Alcohol Committee — and then bring it in from Iqaluit — was noted. Nonetheless, “Nanisivik alcohol”, is clearly identified as the fuel that drove many of the other negative social impacts identified by people we spoke with to be associated with the mine.

The message that Nanisivik contributed to alcohol availability was clearly made. Availability of alcohol in the community of Arctic Bay seems to be a contributing factor to a number of social problems. References to instances where children have been neglected and to instances where women have been abused included mention of alcohol being a contributing factor. Alcohol is also consistently identified as being a factor in socially inappropriate sexual activity at Nanisivik. These relationships have contributed to a range of social impacts directly affecting women and indirectly affecting families and children. Reference to Foetal Alcohol Syndrome was made by one person I spoke with. These impacts were not directly related to work at Nanisivik. This is a clear area where those experiencing negative impacts may or may not be benefiting from increased income and access to work.

I was interested in learning whether work at Nanisivik itself contributed directly or indirectly to alcohol abuse and associated social impacts, either by increasing stress, or by providing income for the purchase of alcohol. Here the message was mixed and not particularly strong. Only a few comments were spoken related to benefits or negative impacts related to such personal areas of life. Some indication is that families and individuals living at Nanisivik where alcohol was most liberally available went through a transitional period of learning how to manage this substance. I am not, however, able to assess what level of suffering or lasting damage was sustained by family members as a result of alcohol.

To summarise, it is fair to say that Nanisivik contributed to alcohol-induced social problems both by increasing the availability of alcohol in Arctic Bay, by providing people from Arctic Bay with opportunities for drinking with workers and during organised events at Nanisivik itself, and by providing an environment for workers and their families living at Nanisivik where alcohol was readily available. Because alcohol-induced impacts were indirect, they were experienced both by people involved in Nanisivik work, as well as those who had no connection to the benefits flowing from Nanisivik in the form of work and income.

Other negative impacts

Additional negative impacts were indirectly referred to by one person I spoke with who mentioned that he and his wife gave up their jobs at Nanisivik because they “worried a lot about their older son.” While I did not hear sufficient commentary on the problems experienced by children due to parental absence to develop a good understanding of the issue, clearly this sort of impact could have a serious and lasting impact on the child and the family.

Another person noted that workers at the mine had to deal with stress related to their work experience. Spouses of workers also experienced stress and loneliness related to absence of their partner during the long work week periods away from home. I also received comment related to a perception that Nanisivik work has led to some marriage breakdowns. Domestic stress and relationship problems can have serious and lasting impacts on children caught in the midst of these things, as well as on the individuals involved. Again, I do not have a clear picture of the intensity of these impacts.

These impacts were experienced by families that had direct involvement in the mine work and therefore that also enjoyed whatever benefits arose from this work. It is not clear to me whether the income benefit from the mine was able to reduce negative impacts of low income living sufficiently to provide the family — workers, spouses, children, grandparents and other relatives — with a net benefit from the work.

Regardless of whether or not wages earned were able to mitigate negative impacts, These sorts of comments are indicative of situations that may arise. In future projects, they should be anticipated and steps taken to avoid the associated problems.

What Others Have Found:

The 1980 BRIA Report noted that while “Separation from Family” was the most frequently identified reason amongst all Inuit workers for quitting a job at Nanisivik, this was not a major concern of workers from Arctic Bay. (BRIA Table 7.8, p 197) However, separation from family was identified by Arctic Bay workers as the thing “most hated” about Nanisivik work. (BRIA Table 7.11, p 201).

BRIA also spoke with partners of workers, “In summary, the wives appear to be typically less content with the implications of the Nanisivik employment than were the men. The reason clearly is that it is the wives who have to cope with the problems of running a household and raising the children alone.... The consequence of this situation is that the wives appear to experience much more ambivalence over the employment option than do their husbands.” (BRIA p 225.)

“That their children might ‘Get into trouble without their father at home’ was identified as a worry by 62% of the fathers, 27% saying it concerned them ‘very much’, with Frobisher Bay and Pangnirtung fathers again over-represented in this category.” (BRIA p 243) “In summary, these responses show that high proportions of the workers indicate that they are much troubled by the separation from other members of their families and by their inability to play the traditional meat-provider role which results from their Nanisivik employment. They also report considerable anxiety over what may happen to ... particularly their children during their absences. Many said they found their awareness of their wife’s and children’s ‘loneliness’ haunting, as well.” BRIA p 247-248).

Education And Skills Development

People who attended the Nanisivik school while living with their parents at Nanisivik expressed satisfaction with their educational experience. Learning English, smaller student to teacher ratios than at Arctic Bay, and higher expectations both amongst teachers and students had positive impacts on learning the skills needed to function in future jobs. Others — elders and educators — also noted improved ability to function in English amongst this group. This was considered a positive thing. Some comment was made that in the past the student population was a majority of southern students whose parents placed higher expectations on schooling than was the case in Arctic Bay.

During the process of carrying out interviews with people in key hamlet positions, I got a strong sense that a disproportionate number of these positions were filled by “alumni” from the Nanisivik school.

Another aspect of education I was interested in was whether the presence of mine jobs at Nanisivik had the effect of improving educational attainment at Arctic Bay. Such an influence has been suggested in relation to the impact of Polaris at Resolute (Arman, 1997). According to people I spoke with, this does not appear to have been the case in Arctic Bay, however. Several reasons were offered. First, the relationship between various types of mine jobs and education does not seem to have been made clear by anyone involved — either from the mine, the government, or the Inuit organisations.

Secondly, success in school is said to be determined by the attitude toward education within the family. As noted above, there is a significant level of concern that school is responsible for having negative impacts on traditional family roles. As a result, perhaps, parents or grandparents may be less supportive of formal schooling — performance expectations on students are not, then, as high as they may be. Finally, it is only in the past five years that the Arctic Bay school has had a high school

program. Prior to this students had to go to Iqaluit if they wished to obtain a high school diploma — a fairly significant barrier to education. It may be the case, however, that families where the parents themselves attended the Nanisivik school — experiencing high expectations and, often, the reward in terms of finding good jobs afterward — may begin to change the attitude toward education.

Skills acquired at Nanisivik related to several trades (electrical, mechanical, welding) and skills (general skills related to structured industrial work place and specific skills in heavy equipment operation, first aid/CPR, workplace safety and mining). While some of these skills were previously acquired through work with Pan Arctic Oil, Nanisivik provided further opportunity to use the skills and to develop confidence in their use through lots of real-work experience.

Cultural Bridging

Through work and social activities at Nanisivik, Arctic Bay residents have gained considerably more contact with people, ideas, and cultural practices of other regions of Canada than they otherwise may have. Nonetheless, this contact was limited in its breadth and took place when Arctic Bay residents travelled to Nanisivik. There was apparently little cultural or social interaction between Nanisivik and Arctic Bay that took place at Arctic Bay. The conclusion of one person I spoke with that in spite of the long presence of Nanisivik next door to Arctic Bay, Arctic Bay “never became a mining town,” nicely summarises this relationship.

Working in the “Qallunat work culture” was one area where Inuit from Arctic Bay were exposed to new ways of relating and of working. Sensing that the money-based economy is going to remain an important part of Arctic Bay’s economic future, several people suggested that learning this new work culture was beneficial.

This cultural learning was rather one-sided. As observed by one former Nanisivik resident from Arctic Bay, most of the cultural learning took place amongst the Inuit — the mine never changed.

Another aspect of cultural bridging occurred in a more social context. This seems to have been greatest for those living at Nanisivik. One woman in particular noted how Nanisivik families would socialise together, holding baby showers, picnics and so forth.

Opportunities for social interaction were also available to family members of workers during the Christmas banquet hosted by the mine at the Dome, and during other occasions. Many students from the Arctic Bay school also had an opportunity to visit the mine or the Nanisivik pool.

Summary Of Social Impacts And Benefits

Has the Nanisivik mine led to social change in Arctic Bay? The answer is not obvious to me. On the one hand, the community is described by outside observers, both Inuit and Qallunat, as being one of the more traditional Baffin communities. On the other hand, significant social change has taken place during the period that

Nanisivik has operated in the region. But is this change a consequence of Nanisivik or part of a wider cultural change caused by many interrelated factors?

The overall impression I have from the discussions with people from Arctic Bay is that apart from alcohol-related impacts, residents of Arctic Bay do not feel that Nanisivik has had a negative social impact on the community as a whole, nor on specific groups within the community. Positive social impacts were also equated with Nanisivik.

One of the things I was looking for was whether 30 years of wage earning at the mine has led to a shift away from sharing, toward greater individualism when it comes to economic production in the household and in the community at large. The role of money has clearly increased in Arctic Bay over the years. Some families acknowledge that they now live from money, not from the land. It would be too great a leap, though, to suggest that this shift has been caused wholly by mine employment. Further, many people described how money earned by one family member would be spread around to assist both immediate family members as well as relatives. Sharing of major purchases such as snow machines also is widespread in the community. There was no evidence offered that the level of sharing of country food has been reduced by increased wage earning, and some suggestions that this has not occurred, that food continues to be shared in traditional ways.

Another form of social change I was interested in learning about related to changes in the roles of elders, parents, and children. When I asked about changing roles, many people expressed strong opinions that the roles of parents and elders with respect to raising children are changing. Elders no longer live in constant contact with parents and their children and are losing their role in raising children. However the cause of this shift was almost entirely identified as the school system — which takes children out of the home all day — and not work (either at Nanisivik or at the jobs in the hamlet).

Economic Change Related To Nanisivik

The impact of Nanisivik on the economy of Arctic Bay households and on the Arctic Bay economy generally must be considered in relation economic change that has taken place throughout Nunavut. This change began with trade between Inuit hunters and the Hudson Bay Company, and continued with the emergence of government services related to health, social assistance, and the introduction of schools. More recently, links to a global culture and economy through television, the internet, and well-stocked retail stores has further influenced the profile of household economies throughout the north.

As noted by several people quoted in Chapter One, money has become an important aspect of how people live now. Nanisivik did not make this change happen in Arctic Bay. Rather, Nanisivik provided opportunities to get money at a time when money was becoming a particularly important resource.

An assessment of the economic benefit of Nanisivik to the community of Arctic Bay should include at least two levels of analysis:

- How has Nanisivik affected the economic well-being of individuals and of the Arctic Bay economy overall.
- Was the Nanisivik project was a good “northern development” strategy for the community of Arctic Bay.

I will first address the economic impacts of Nanisivik on the community of Arctic Bay. The issue of Nanisivik as a development strategy will be addressed under Section 3.0, below.

Benefits Of Wage Income

The data presented in Chapter Two shows that Arctic Bay people have earned some \$1 million per year from the Nanisivik mine. These wages are distributed to two general groups. First, there are a large number of people earning small or moderate amounts of income. For example, in 2001 26 people each earned less than \$10,000 in a year. Secondly, there is a small group of people who earn a good wage from the mine. There are 7 people who earned more than \$55,000 in 2001, for example.

What is the importance of this income to these individuals and their households? The interviews indicate that income from Nanisivik work has clearly been an important component to the household economy of Nanisivik workers. I heard many comments about how this income provided some financial breathing room so that, for example, groceries could be purchased without worrying about where the money would come from. Other comments referred to the shift toward a money economy and how the ability to earn money is now very important.

To put this general impression into some more formal analytical context, it may be helpful to sketch out a framework for assessing the impact of income (See the

Productive and Consumptive Spending

Money can be spent, or it can be invested. Typically, the term “investment” is used to refer to financial investments such as those promoted by banks and investment institutions. We can further distinguish between money that is spent on “productive capital” from that spent on “consumption.” Productive capital expenditures enable the household to increase its economic productivity. In the Arctic Bay context purchases of snow machines, boats, sewing machines, carving tools, and so on all fall in this category. Capital expenditures may also include spending on education, training, skills development — all of these areas enhance an individual’s productive ability by increasing their “human capital”.

“Consumption expenditures”, on the other hand, refers to spending that may make life easier or more enjoyable on the short term, but which do not have a lasting impact on a household’s economic situation. Spending on luxury or convenience foods may fall into this category. Purchase of vehicles or snow machines for recreational purposes could also be considered as consumption. It is worth noting that the line between capital investment and consumption spending can be blurry. For example, “social status” is a form of “social capital” that could influence a persons productive ability. Some forms of consumption may increase social status and therefore could be considered productive investment.

It is not necessary to develop this theoretical framework further than this. It is sufficient to simply acknowledge that not every dollar earned will have the same lasting impact on the person that earned it. It is worth noting that the line between ‘investment’, ‘consumption’, and ‘production’ can blur, depending on the way in which spending occurs. For example, if money is spent on convenience foods (‘consumption’) to be shared with extended family members the effect may be strengthened family bonds. This serves to increase ‘social capital’ and therefore should be seen as a form of ‘investment’. What sorts of impact have the wages earned at Nanisivik had on Arctic Bay workers and their families?

adjacent box). To assess the economic impact of the wages earned on workers and their families, it is necessary to consider the effects of this income. Money can be used in ways that provide lasting benefits or it can be used in ways that provide little lasting impact.

While I have been unable to locate quantitative data that shows where Nanisivik wages have gone, in terms of “productive” versus “consumptive” uses, there is qualitative evidence to suggest that the effects of this income have been beneficial as understood by residents of Arctic Bay. Many people — women and men, elders and younger adults as well — noted the use of Nanisivik wages to purchase snow machines, boats and other harvesting equipment. Others referred to Nanisivik income being shared with extended family members. It appears that at least some of the income earned at Nanisivik has been spent in a way that has significantly strengthened social bonds — an investment in social capital.

The only reference to wasteful spending (“Some are not wise in spending money. Things are more available now than in the past”) was made alongside the statement that “People used their money wisely to buy harvesting tools.” There was a comment made about the need for money management skills, and the ability to balance income with obligations like rent. The connection between Nanisivik income and the problem of increased alcohol in the community was not directly suggested during the community interviews. Most comment related to alcohol focused on the fact that it was available, not that people could better afford it since they were earning money. Further comment suggested people who really wanted alcohol would get it, regardless of whether they could afford it — it would be the first thing they purchase with whatever money they had.

Findings from BRIA (1980) are relevant here. They found that many people from Arctic Bay felt that work at Nanisivik and increased income contributed to alcohol consumption (see box).

What others have said:

In the 1980 BRIA report, the authors specifically looked for a connection between increased income and increased liquor consumption. (BRIA, p 341-348). Based on the available, but incomplete, data for alcohol imports from the government liquor warehouse in Frobisher Bay [Iqaluit], they were unable to make the connection. They did note that 74% of people they interviewed from Arctic Bay felt that “people here drink more liquor when there are men working at Nanisivik.”

The authors acknowledged the contradiction between the alcohol import data and what people said. Still, they concluded that “while we cannot be sure that there has been no increase in consumption, on the basis of the import data we may be confident that any increase has been modest, and that there is not a liquor problem in any of these

The issue of the link between wages and alcohol remains rather unclear. Based on what people chose to say, however, the impression I am left with is that Arctic Bay residents see Nanisivik wages and the opportunity provided by the mine to earn these wages as a very good thing. It will be missed.

It is also worth addressing the issue of whether money earned through work at Nanisivik ultimately benefited the workers, or if it simply reduced the amount of Income Support paid out by government. Hickling-Partners Inc. note an analysis carried out in 1978 by the GNWT which addressed this balance between increased wage income and decreased social assistance payments. They report that this analysis suggested that “the increased income in earnings available through mine employment relative to social assistance payments was only marginal. ...a labourer working 206 hours per month at the mine and living at Nanisivik would realize a net increase of only 34% to 60% in take home pay (based on a family of four from Arctic Bay or Igloolik. For workers who occupy single status accommodation at the mine the net increase would be up to 100%.”

I have not re-visited this calculation. Certainly, a few people suggested that it isn't worth working since the increased income simply goes to pay higher rents. However, most people we spoke with equated Nanisivik work with higher income. Further, if Income Support provides only enough income to cover basic needs, a net increase of “only” 34% to 60% could represent the entire discretionary income available to the family that would otherwise have no means of getting ahead financially. The final equation determining the utility of work for an individual will depend on the productive options that person has if he or she does not work.

Impact On Traditional Harvest Activities

There is a clear perception amongst people in Arctic Bay that Nanisivik wages helped many people to purchase equipment needed for hunting — snow machines, boats, gasoline and so on. These are productive expenditures, both in terms of adding to the families' ability to produce food and clothing, as well as in strengthening social bonds through sharing.

It was interesting to hear two elders, speaking on different occasions, draw parallels between working at a job and hunting out on the land. In the first instance, the comment was made that when a man is away from his partner all day working, it is no different than if he were out hunting far from the home. The second comment equated working for money with working for food (hunting) — “it's the same thing.” Money is a resource just like any other. This view of money as a resource was new to me and was therefore quite striking. To repeat the words of [an elder], “When the mine closes, people will suffer because there will be less money to earn.” Money is a resource that comes and goes over time.

From the interview data, it appears that mine employment has not had the effect of eroding these sharing networks. Rather, the qualitative evidence supports a conclusion that work at the mine has provided many individuals with some valuable resource — money — that they could share.

Mine employment is said to limit the time that workers had available to hunt. It is not possible, however, to assess whether the harvest level in Arctic Bay actually

decreased or increased as a result of this interplay between increased money (and possibly better hunting supplies) and decreased time.

I expect that what has happened in Arctic Bay is that the additional “economic niche” offered by the mine has led to a certain degree of economic specialization. The best hunters continue to hunt. Others took work at Nanisivik or within available jobs in town. Money is transferred from these wage jobs to the specialist hunters through existing networks of sharing.

Community-Level Effects From Business And Income

There are two important ways in which major industrial projects can influence the economies of near-by communities. These include what I’ll call an *entrepreneur effect* and an *income effect*.

The *entrepreneur effect* refers to an increased level of business activity and entrepreneurial skills and capacity that develops as a result of increased business opportunity. Business opportunities may include the supply of goods and services directly to the development, or indirectly to the people who are employed on the project.

The *income effect* refers to the results of increased money being spent by project employees in a community. Wages may be spent on local goods and services, leading to greater business profits or new business opportunities. They may also

I’ll use the above framework as a starting point to assess the influence that Nanisivik has had on the Arctic Bay money economy.

Entrepreneur effect

The Nanisivik mine has had a small impact on Arctic Bay’s business community. The mine has supported the emergence of a local entrepreneur who runs the bus service on contract to the mine. This company also holds a government contract to provide janitorial and garbage pick-up services to the Nanisivik town site. The Nanisivik town site has further supported the emergence of a local business oriented to transportation of goods. One person noted that in the early days, the mine purchased considerable quantities of goods from the Arctic Bay Co-op Store at a time when that store was just getting established. Nanisivik workers are also reported to be the major market for local carvers. During a period when the local retail stores no longer purchase large quantities of carvings, this market has been a welcome avenue for sales.

Apart from these limited business activities, the mine does not appear to have had much additional impact on local business. As one person remarked, *“Things could have been different. The mine should have been more visible in the community so opportunities would be known.”*

Income effect

The wages paid by Nanisivik to local workers do provide an important *income effect* on the local economy. In Chapter Two, it was noted that the Nanisivik mine has provided \$1 million in direct wages to Arctic Bay workers each year, with an estimated additional \$100,000 being paid out through EI eligibility and through local procurement. Government jobs at Nanisivik provide a further \$363,000 in wages. The total Arctic Bay economy was estimated to be in the area of \$8.06 million.

Nanisivik income, then, represents a significant share of total community income. The best estimate of local expenditure patterns I could generate suggests that between 50% and 60% of community income is spent at the local retail stores. If this pattern applies equally to Nanisivik income, then the mine is generating between \$500,000 to \$600,000 of the \$4.15 million local retail business through an income effect¹. This represents between 10% and 15% of the business of these stores. This income effect could actually be greater if Nanisivik income contributes disproportionately to household disposable income.

Summary Of Economic Impacts

Nanisivik has provided an important contribution to the household economies of workers. Two groups can be described. The first is small, and is made up of those who make a living from Nanisivik work, earning a wage sufficient to support their families. The other group is larger, and is made up of people who work shorter periods of time and earn less than what they require to live on. For these people, Nanisivik income is only once source of money, perhaps representing a disposable income component. For both groups, it is important to their household economies, and is reported to be productively spent.

Of particular importance is the level to which Nanisivik income is reported to be spent on equipment and supplies needed for participation in the hunting economy. From the start of Nanisivik employment back in the 1970s to the present time it seems that this income has provided the means for people to purchase snow machines, boats, gasoline and so on. Some of this money is provided to family members so they can make similar purchases. In other instances, Nanisivik workers lend their equipment to others while they are working. Although Nanisivik work cuts into the time workers have available for hunting, the benefits of Nanisivik income in terms of access to equipment and supplies promotes harvest activities. Traditional sharing networks seem to have been maintained throughout the Nanisivik era in Arctic Bay.

¹ A rough estimate combined retail sales of the Co-op and Northern store is \$4.15 million. This is derived from Co-op sales of \$2.15 million reported in the annual report, and a rough guess of \$2 million provided by the Northern store manager. \$4.15 million is 51% of \$8.06 million.

Finally, the effect of Nanisivik on promoting the local business sector has been limited. Two local businesses have emerged to carry out contracts with the mine and at the town site. Local carvers have found a ready and welcome market selling to Nanisivik workers. The effect of earned income on the Arctic Bay economy is important to local retail stores. This income is estimated to represent between 10% and 15% of sales. This impact could be even more significant, depending on actual expenditure patterns.

2.0 IMPACT OF NANISIVIK'S CLOSURE ON ARCTIC BAY

The previous section looked at how Nanisivik has affected the community of Arctic Bay during the past decades of its operation. This section looks at the effects that the closure of the mine will have on the community. It is acknowledged that there are some significant uncertainties in this look toward the future. This uncertainty arises from the possibility that some continued use may be made of the Nanisivik site. This is widely discussed by people in Arctic Bay.

Such a future use could have implications for the analysis presented here. In the meantime, however, the following analysis is based on what is certain — closure of the commercial mine operation. Where additional impacts may arise from loss of infrastructure or services associated with the mine (in particular the Nanisivik airport, jet service, and port facility), these are specifically noted.

Direct Loss Of Jobs And Income

Casual workers

It was noted in Chapter Two that many Nanisivik workers have earned relatively small amounts of money at the mine. For example, Table 10 indicated that 26 people earned a total of \$118,531, or \$4,559 each on average. Most of these people will not be eligible for transitional Employment Insurance payments, since they have not worked a sufficient number of hours to qualify.

It may be reasonable to expect that for these casual workers, the psychological significance of the work is less significant than it may be for full-time workers. One psychological impact of loss of access to casual employment may be, however, the loss of a sense of economic choice. With Nanisivik in place, many people felt they were able to choose to work at the mine when they needed to earn a little money. Loss of this choice could lead to feelings of economic hopelessness, although this is rather speculative on my part. It should be pointed out that access to Nanisivik work was clearly not available to everyone who wanted it, as evidenced by comments related to having job applications turned down or simply not responded to.

Opportunities to replace the relatively low levels of income earned by the significant number of casual workers might typically be sought through casual employment at the retail stores in town. However, as previously noted, lost community income must be expected to lead to reduced retail sales and, consequently, reduced not increased, hiring of retail staff. The climate for finding casual work in town will not be good following the Nanisivik shut-down.

Significant efforts will be needed if new sources of casual wage income are to become available in the community. These levels of income are consistent with what might be paid by small-scale entrepreneurs for example. This income might also be expected from the pursuit of various micro-enterprises. The local women making birthday cakes for sale within the community would be a good example of this small-scale business that provides important income. Reasonable government support will be needed to overcome the barriers to micro- and small-scale entrepreneurship.

Steady workers

For a small but significant number of high income earners, loss of Nanisivik jobs will have a dramatic effect on their livelihoods. While a small number may seek work in other regions, there is an expectation that most will remain in Arctic Bay. During the eligible period of time, these workers will have access to EI payments. These may help to cushion the economic blow by providing an on-going — though much reduced — source of income. This will only be in effect for a maximum benefit period of 45 weeks, however. After that time, these workers will end up on the Income Support program if they are unable to find other work.

Loss of work may also be expected to affect other aspects of the well-being of these workers and their families. Reference was made to the positive effects of steady work on the overall “happiness” of some individuals and how this affected the entire family.

Replacing the higher levels of earning of people in more steady jobs will be, perhaps, a greater challenge. In 2001, for example, 14 people from Arctic Bay earned \$25,000 or more, with an average wage of \$58,500. While workers in this category may be eligible for EI payments, that income source will be temporary. Based on the interviews, it is possible that a small number of these steady workers may seek employment in regions outside Arctic Bay. Most, however, are expected to stay in the community.

The loss of steady jobs may increase further if the town site is also closed down. As noted in Chapter Two, six Arctic Bay residents hold government jobs related to the Nanisivik site. The average wage of these jobs is \$60,500. Some of these jobs may also be at risk.

Implications For Local Business

Reduced business revenue

In addition to loss of full-time and casual work at the mine, some additional job losses should be anticipated. These indirect job losses relate to reduced local spending associated with loss of income. In the absence of expenditure estimates, it is not possible to predict how much revenue will be lost from local businesses. However, it is reasonable to predict that the decline in revenues will be matched by a more or less proportionate decline in wages paid by these businesses, and a resulting loss in jobs.

The following table provides an assessment of the impact that Nanisivik mine closure is expected to have on various local business sectors.

Table 18 Business Vulnerability Assessment Grid

Business	Impact		
	Loss of mine-related	Loss of community income	Loss of port and jet service (hypothetical)
Local retail stores		Reduced sales	freight cost
Carvings			Reduced tourism
Traditional clothing sales			Reduced tourism
Guiding and outfitting			Reduced tourism
Consulting/Translation			
Hauling company			
Local transportation company (taxi, bussing)			
Local hotel			Reduced tourism
Other local businesses			

Note: Darkest shading represents greatest loss of business. No shading indicates that little or no impact is anticipated.

Potential to replace lost business

Some of the lost business caused by the Nanisivik shut-down should be recovered through adjusted marketing strategies. The most obvious of these in the carving sector. While mine workers have provided a good market for local carvings, alternative markets do exist and can probably be exploited with a reasonable level of effort.

It may require more complex adjustments to replace some of the other business. The Nanisivik-related transportation businesses seem to be dependant on what, if any, future use is made of the site. Some of this business (taxi, postal and cargo hauling) will continue regardless of what takes place at Nanisivik. However, the level of demand may be reduced. If this is the case, the affected business owners may need to pursue new business ideas in order to recover lost business revenues. Support may be needed to facilitate this process.

Finally, lost revenue caused by reduced community income will only be recovered as community income increases. The local retail stores are expected to adjust their operating costs to reflect new sales patterns and the overall impact should be incremental, not catastrophic.

Impacts associated with loss of jobs and income

As previously noted, Nanisivik is not identified as being the cause of a shift toward the money-based economy from a traditional economy. This shift has been seen throughout the territory. It is therefore unlikely that households that lose income from Nanisivik work will return to a traditional economy. For those who become dependant on income support, the traditional economy may well be beyond their economic reach, given the high costs capital and operating costs associated with this sector.

Rather, those who lose Nanisivik work are more likely to seek ways to replace this lost income, as discussed earlier. For some this may mean migration out of Arctic Bay. For others, some success may be found as owners or employees of new businesses as they emerge in the community.

Over the short term, however, it is reasonable to anticipate that many will be unable to adequately replace lost income. Income Support and lowered rents will do little to reduce the impact of this loss of disposable income. The result of this situation will be financial hardship.

In addition to financial stress, job loss may also mean a loss of the ability to feel productive or to be able to play the role of family provider. This may lead some to suffer increased stress, depression, loss of confidence and so on.

Associated with these consequences of job loss will be the impacts that arise from increased stress. As noted by one professional I spoke with in Arctic Bay, it is typical for social and law enforcement agencies to anticipate increased problems when these conditions arise.

Increased alcohol abuse is also typically implicated in situations of increased personal and social stress. Will this be the case following Nanisivik closure? If Nanisivik has had the effect of making alcohol more readily available, then closure of the mine must be expected to reduce access to alcohol. On the other hand, people have noted that alcohol can be obtained through other sources. I won't attempt to speculate on how this may play out, except to suggest that the price of alcohol on the Arctic Bay black market may be expected to increase.

Impacts Associated With Reduced Social And Recreational Opportunities

The ability to 'get out' of Arctic Bay to take part in social or recreational activities at Nanisivik has previously been noted as a benefit to people in Arctic Bay. Several people noted that they will miss the Dome restaurant when it closes. However, people also noted that access to Nanisivik facilities has already declined significantly in recent years. As a result, the immediate impacts of lost social opportunity may be less noticed than they might have been.

Comment was also made that the present social atmosphere at Nanisivik is less healthy now than it was previously. Families were seen as providing social structure to the site. The number of families has been declining in recent years and Nanisivik

is now described as being more of a ‘mining camp.’ A higher level of social dysfunction seems to be associated with this designation. While some may miss the present opportunities to socialise with the miners, others may welcome an end to the problems that arise when alcohol is thrown into the mix.

In terms of longer term impacts, I expect that Arctic Bay will become more isolated socially and culturally. I will not attempt to speculate on how this will affect the community — presumably there will be both benefits lost and negative impacts alleviated. If other uses are made of the site, or if Arctic Bay development leads to increased tourism, then the opportunity for cultural interaction may increase — again with the potential for associated benefits and drawbacks.

3.0 IMPACT ON ARCTIC BAY’S DEVELOPMENT

The intent of this section is to begin to look forward toward Arctic Bay’s future — how have the Nanisivik decades influenced Arctic Bay’s present ability to achieve its development goals?

There are two reasons for raising this question. First, the capacity of a community to achieve its social, cultural and economic objectives is at the heart of community development and any impact that a major project has on this capacity is very relevant to socio-economic impact assessment. Secondly, there is evidence to support the idea that part of the rationale for providing public support for Nanisivik at its outset was that this project would serve as an important engine for regional development.

Public Investment In Northern Industry As A Development Tool

The analysis presented in this section focuses on the contribution of Nanisivik to development processes in Arctic Bay. It begins with a review of the rationale for public investment in Nanisivik, and then considers how Nanisivik has contributed to development processes in the community.

Investment Of Public Money In Nanisivik

There are several motivations for government to spend public money on private sector developments like Nanisivik. The first is to generate benefits to the country as a whole. These benefits typically arise in the form of revenues flowing from the project to the public accounts, and from income taxes payable by the workers employed by a project. Benefits to the country may also include national development interests — pioneering new technologies and opening new economic sectors, are two examples.

A second motivation relates to using a major project like Nanisivik to kick-start a process of economic development in the region surrounding the project. The use of public funds to attract or to initiate major industrial projects as a “regional

The Nanisivik mine development attracted significant public investment from the Federal and Territorial Governments. In a 1981 evaluation report, Hickling-Partners calculated that the total public sector investment chargeable to the project was \$16.1 million (adjusted for inflation, this equals approximately \$45 million in current dollars¹). These funds were used to develop the town site, road, airport, and dock. Of this amount, \$9.5 million (\$26 million adjusted for inflation) in public sector funds had been spent on developing the town site. This amount is the amount left over after \$10 million had been recovered through project payments and user fees.² An additional \$590,000 (\$1.5 million adjusted for inflation) in public funds was provided in annual O&M at the time.

The Hickling-Partners report suggests that at least some of this public investment seems to have been intended specifically to support Inuit development. For example, they quote a cabinet document associated with the project as stating, “The project offers an opportunity to test northern technology and obtain additional knowledge in the fields of ... employment policies, and so forth in a socially acceptable framework.” They also note that alternatives were chosen that, while more costly to the public purse, were expected to promote Inuit employment.

For example, they suggest that the mine company was prepared to “develop a bunkhouse type operation at the mine without government participation. [But the mine] argued, however, that this approach would not lead to significant Inuit involvement in the workforce.” They further note that local concerns were expressed as to the appropriateness of the town site investment, “It is also apparent that Inuit leaders in the Baffin Island communities did not favour the establishment of a townsite at Nanisivik which they felt would draw away from the development of their existing communities.”

¹ Inflation adjustment has been calculated using the Bank of Canada CPI calculator available on the web at: http://www.bankofcanada.ca/en/inflation_calc.htm

² Hickling-Partners Inc. 1981. “Evaluation of the Nanisivik Project.” Chapter 2.0

Rationale for a townsite development and public investment

Hickling-Partners (H-P) presented the mining company's case for government investment through statements made by MRI's consultant, Watts, Griffiths and McOuat (WGML) which was contracted to prepare the production feasibility study. This argument is worth reproducing here, for the record.

“In assessing the economics of the project, there are two principal alternatives open to MRI. One is to operate the mine as an isolated mining camp to which single mine workers from the south would be flown in on a frequent rotating basis. With this approach there would be no permanent community established, and employment of local labour would be at a minimum.

The other approach is to create a full community with normal community services and in which mine workers would live together with their families, as in most southern towns. This approach would result in a large number of permanent residences being build, a majority of which would be occupied by the large number of Baffin Island residents we hope to encourage to work at Strathcona Sound, should the mine by developed.

It is our hope we will eventually be able to have as many as 100 permanent Eskimo [sic] employees on the staff at Strathcona Sound, or approximately 50% of the total work force. Large numbers of other Eskimos [sic] would gain employment in various service industries that would be required if a full mining community was established at Strathcona Sound...

It is clear from our studies of the project to date that the financial returns are not sufficiently attractive for private industry to undertake the entire capital investment on their own, should the second approach be followed. Some form of government participation will thus be essential, if the project is to proceed on this latter basis which we are sure all concerned, Federal and Territorial Governments and Mineral Resources International, would prefer.”

– WGML, 1973, as quoted in Hickling-Partners Inc. 1981

The H-P report also summarise the responses of various federal departments and of the GNWT. The GNWT's position is of interest:

“GNWT: Strongly supported the project based on the prospect of major social benefits for Inuit people in the Baffin and Keewatin Regions, both economically depressed areas where population pressures were threatening to outstrip the ability of the land to support it, and where a significant number of persons had expressed a desire to obtain wage employment.”

H-P also quote the federal cabinet document that gave the go-ahead for the project. In terms

Impact On Arctic Bay's Development

Arctic Bay Mission Statement

The people of Arctic Bay want their community to be a place:

- ❖ Which respects cultural values and traditional life styles;
- ❖ Where people work together for the common good;
- ❖ Where there are appropriate services and programs dedicated to physical and mental health;
- ❖ Committed to the development of a higher standard of education;
- ❖ Which identifies training needs and provides appropriate training opportunities;
- ❖ Where there are proper and adequate buildings, housing and

Arctic Bay developed a Community Economic Development Plan in 2000, with the assistance of Consilium Inc., that identified what were considered to be the strategic sectors that would help to carry the community toward the achievement of its development mission. Seven sectors were identified:

- Tourism
- Arts and crafts
- Commercial fishery
- Small and micro-business
- Mining
- Public sector
- Community infrastructure

Looking back on the Nanisivik legacy, what has been the effect of Nanisivik on Arctic Bay socio-economic development? Was the investment of public funds in Nanisivik an effective way to help Arctic Bay achieve its development mission and goals? Were major social benefits for Inuit achieved? Is the local “capacity profile” that Nanisivik helped Arctic Bay develop appropriate for the development work that needs to be done? Has Nanisivik promoted the development of capacity needed to succeed in the strategic sectors that will carry the community into the future?

The following narrative is an attempt to consider the Nanisivik legacy in these developmental terms. To do this, I will consider how Nanisivik has affected the following ‘ingredients for development’:

- Human capital
- Social capital
- Entrepreneurial capacity
- Infrastructure

Human capital

Some of the skills developed at Nanisivik have clearly been applied within Arctic Bay. In particular, reference was made during the interviews to carpentry, machinery operation and mechanical skills being transferred from Nanisivik to Arctic Bay. It should be noted that some of these skills were also developed through employment at Pan Arctic. Several people have earned their trades papers through apprenticeships at Nanisivik.

Nanisivik employment was also identified as helping workers to develop formal wage economy work habits. Some of these may be well-applied within local Arctic Bay organisations. They may also be relevant for entrepreneurial development.

The Nanisivik school was frequently identified as having provided a good educational environment where students experienced high expectations, learned English, and gained confidence. Many positions in Arctic Bay are filled by former students from the school at Nanisivik.

Another area of benefit to human capital relates to the overall well-being of people in Arctic Bay. Nanisivik appears to have had both positive and negative impacts in this regard, both of which have been noted earlier. On the positive side is the reduced stress levels associated with increased family income. As previously quoted, one woman noted, “His job let us afford things — the basics plus other things. This was more up-lifting. Life was less depressing after work was available.” To the extent that employment helped to alleviate negative stress and emotions, and provided confidence and other personal strengths, Nanisivik has helped to generate positive human capital.

On the negative side, though, is the impact of alcohol and its associated domestic impacts on workers, spouses and children. The importance of alcohol has been discussed earlier in this chapter. Here the impacts are not limited to families directly involved at Nanisivik, but are more widely distributed throughout the community. As previously noted, it is not possible to allocate any specific proportion of the negative impacts of alcohol directly to the mine. There is a strong perception amongst people in Arctic Bay, however, that Nanisivik has contributed to these impacts. In terms of the effect of alcohol on human capital, perhaps the greatest concern relates to children. Foetal Alcohol Syndrome may lead to a lifetime struggle to learn and practice skills. Domestic violence can leave lasting impressions and lead to cycles of destructive behaviour. The research undertaken for this study is not sufficient, however, to go beyond simply pointing to this area as a concern.

One question that I was interested in addressing was whether Nanisivik had the effect of withdrawing critical skills from the community by “out-competing” local businesses, hamlet government, or other organisations. This is a situation that has been noted to occur in some situations. For example, businesses in Iqaluit have noted the negative impact that widespread government employment has on their ability to access skilled workers at affordable prices.

The scope of this project clearly did not encompass a full-scale labour force needs retrospective and assessment. However, some qualitative data did emerge to support some broad observations. The evidence that I was able to generate does not support a strong conclusion that this was the case, at least in relation to access to skills by government agencies. The strong preference amongst workers seems to be to find jobs in Arctic Bay. Numerous references were made to movement of people from Nanisivik jobs to jobs located in Arctic Bay. One person did note the loss of a worker in a government service agency to a Nanisivik job. Overall, though, it appears that over a certain range of wage disparity, the benefits of working in the community over-ride the better wages that mine employment was generally able to provide.

Did Nanisivik employment create labour or skills shortages in other areas? The obvious sector to consider is the harvest sector. Certainly some comment was expressed to the effect that work interfered with the ability to hunt. The discussion of the impact of Nanisivik on traditional harvest activities suggested, however, that there is also a reasonable argument to be made that Nanisivik may have improved hunting success by providing access to cash needed to purchase hunting supplies and equipment. The harvest classification data presented in Table 15 must be interpreted cautiously due to the inherent constraints of the methodology. Nonetheless, the low proportion of hunters who consider themselves to be ‘active’ or ‘intensive’—and the corresponding high proportion in the ‘occasional’ category—would not be inconsistent with a conclusion that Nanisivik has had some impact on the hunting sector by shifting people toward occasional involvement. If this were so, it would not mean that productivity has declined in the hunting sector. The increased income available amongst Nanisivik workers was widely identified to allow the purchase of better hunting equipment. This could increase productivity, allowing an ‘occasional’ hunter to have better success in less time than s/he previously may have had.

Even if Nanisivik employment did not reduce total production within the harvest sector (a question that remains un-answered), perhaps the fact that Nanisivik workers had less time to hunt has influenced the transmission of hunting skills from one generation to the next. This would certainly be a significant impact on human capital in an area of importance to the community. The only source of data available to address this question is from the interviews. Here the message was clear. As recorded in Chapter One, people I spoke with felt that the education system, not work, was more important in separating children from those who teach traditional skills (both hunting and sewing).

Again, it is reasonable to suppose that if Nanisivik provided a household with better hunting equipment and the ability to buy gasoline, opportunities for youth to get out on the land — perhaps with family members other than immediate parents — may not have been negatively affected by the father’s absence at work.

Social Capital

At least two implications of Nanisivik on the social structure of Arctic Bay can be identified. The first relates to Nanisivik's impact on family integrity and the institution of marriage. Instances were referred to where extra-marital relationships initiated at Nanisivik parties or social events generated stress within families. Some marriages have broken down. In other cases children have been affected.

An indirect impact of Nanisivik on Arctic Bay's social integrity also arises. Alcohol is identified as an important contributor to social problems, and, as previously noted, Nanisivik is felt to have increased access to alcohol in the community.

A positive impact of Nanisivik income on Arctic Bay's social capital should also be noted. As previously suggested, the sharing of income and other benefits of Nanisivik work was apparently widespread. For those who might not otherwise been able to afford snow machines and other major productive tools, Nanisivik offered the ability to take part in sharing networks. Strong kinship ties will be important during Arctic Bay's transition toward its desired future.

Entrepreneurial capacity

What impact has Nanisivik had on Arctic Bay's entrepreneurial capabilities? Is Arctic Bay in a better position to capitalize on present or future business opportunities because of Nanisivik? There are two streams of evidence that can help in addressing these questions. The first relates to the businesses that have emerged to sell goods and services to the mine. As noted earlier, Nanisivik has had only a weak "entrepreneur effect" — little business has been generated in Arctic Bay related to the mine. It might be noted, however, that the two business currently providing services to the mine and to the Nanisivik town site represent an important part of the total Arctic Bay private sector. The business skills and expertise developed in transporting people and goods will continue to be required on some scale, regardless of the direction that Arctic Bay takes in the future. Thus these businesses will continue to be relevant for the community.

The second area to examine involves the extent to which Nanisivik may have helped to develop potential new entrepreneurs. Have people who worked at Nanisivik become more inclined to enter into business than those who have not had that experience? Has the income earned at Nanisivik provided seed capital that can be used to kick-start local business activity. Have children who grew up seeing what their parents can accomplish by working at Nanisivik become more apt to search for ways to earn their own money through business activity.

The evidence that this study has managed to accumulate is based on the observations of a small number of Arctic Bay residents. One person suggested a connection between working at Nanisivik and having ideas about starting a local business. Another person did not see this link. One person volunteered the insight that it is very important that children see the wide range of things their parents can accomplish — including making things as well as working. Even

though they may pursue different paths, they will develop a sense that they can accomplish whatever they want to. This sense of optimistic determination is certainly an important part of the entrepreneurial mindset. Clearly the evidence for any positive contribution from Nanisivik to local entrepreneurial capacity is weak.

One may then turn the question around. Has Nanisivik suppressed entrepreneurial development? No one I spoke with volunteered this observation. It is possible, nonetheless, that the ability to earn income at Nanisivik may have diverted people from taking steps toward business activity. This is purely speculative on my part, however. Further, while entry into micro-business may be a response to economic hardship in some regional economies, it is not at all clear that this response exists in Inuit economies. The ability to borrow equipment to hunt, strong sharing networks, and a robust social assistance net all work to avoid the intensity of need that sometimes catalyses micro-enterprise activity. Thus I would again conclude that evidence of a negative impact by Nanisivik on local entrepreneurial activity is also weak. It remains to be seen whether the closure of the mine will release pent up entrepreneurial talents, triggering a small flood of entrepreneurial effort in Arctic Bay.



Influence on Arctic Bay art sector

One area where Nanisivik may have had a dampening effect on entrepreneurship is in the arts sector, specifically in the area of carvings. Has the Nanisivik market had the effect of delaying the development of more aggressive marketing strategies. Has this easy market led Arctic Bay to fall behind the “best practice” in terms of promoting its artistic talent, when compared to other Nunavut communities? Or has this local Nanisivik market been a positive influence on the Arctic Bay carving scene by providing an avenue for sales in a time where the Co-op has stopped purchasing these works, thereby supporting the development of artistic talent that can now be marketed in new directions?

I am not able to answer these questions based on my conversations in Arctic Bay. People generally perceived the Nanisivik market as a good thing for local carvers that provided a good price. I found no evidence to suggest that opportunities to promote and develop markets for individual Arctic Bay artists had been foregone as a result of this localized market opportunity. However, the possibility is there and might be considered in the context of efforts to better understand and develop Nunavut’s art sector. It must be noted, in this context, that the hamlet has recently initiated, with GN funding, a revolving fund to purchase local Inuit art so that a selection of high quality works are available for viewing and sales when tourists and other visitors come to the community. Thus, the Nanisivik market has not prevented this first small step toward market diversification from taking place.

Infrastructure

I will consider two aspects related to infrastructure. First, what impact, if any, has Nanisivik had on the development of infrastructure in Arctic Bay? Secondly, has infrastructure available at Nanisivik had any lasting influence on Arctic Bay?

Development of Arctic Bay infrastructure

To address the first question fully would require a comparative assessment of capital investments made over a long period of time in Arctic Bay in relation to other communities. Unfortunately, such data was not readily available. The interviews identified a small level of concern that Nanisivik had a negative impact on Arctic Bay infrastructure development. Reference was made to Arctic Bay being ineligible for a community pool program some years ago, because Nanisivik already had a pool. More common, however, was the sense that Arctic Bay infrastructure suffers in the same way as other small Baffin communities.

Clearly Arctic Bay infrastructure needed to support local development is badly lacking. There is no community library facility. There is a gym but no community hall. The Arctic Bay airstrip is sub-standard. Arctic Bay has relied on Nanisivik for disaster response and back-up power sources. The community has little to no building space to accommodate business start-ups. There is no centre to support tourism development. These are some of the important infrastructure short-falls facing Arctic Bay. They are not unique to Arctic Bay. Other small Baffin communities suffer similar problems. It is possible, though, that Arctic Bay's situation is graver than other communities. That conclusion could only be validated through a detailed comparative assessment of infrastructure — an exercise that may serve little developmental purpose.

There has been little public or private sector investment in physical capital in Arctic Bay that is vulnerable to the mine shut-down. The local hotel does not gain significant business from the mine. The Northern Store has recently undertaken a major renovation, however the local manager does not seem to feel that advanced knowledge of the Nanisivik shutdown would have affected this investment decision. The greatest private sector capital stock developed specifically to carry out business with Nanisivik are the vehicles used for transporting goods and people. Some of this capacity may become surplus or be under utilised with the shut down of the mine — depending upon whether or not some future use is made of the Nanisivik site. Some loss of private capital investment may therefore be incurred.

In terms of future planning, it may be worth assessing whether the public dollars that were spent on developing Nanisivik for the purposes of regional development might have had greater impact had they been spent to develop productive local infrastructure. This sort of 'alternative use of funds' evaluation should be done on a routine basis as part of future project feasibility assessments.

Impact of Nanisivik infrastructure on Arctic Bay

Nanisivik infrastructure has affected Arctic Bay in several ways. The jet service made feasible by the airstrip and by the level of business provided by the mine has also made transportation between Arctic Bay, Iqaluit and other southern destinations easier and cheaper. Many people in Arctic Bay say they will miss the fresh food that jet service made possible, and will miss the convenience of jet transportation. The jet is also said to have significantly reduced the cost of air freight. Jet service also seems to be a key component to tourist traffic in the region. Reference was made to groups of cruise ship guests coming up or flying back south using the service, as well as participants in the Midnight Sun Marathon. Some people did note the inconvenience that occurred when air service between Arctic Bay and Pond Inlet was cancelled.

The port facility has had very similar impacts. As with the jet, the Nanisivik port has provided cheaper and more frequent shipping due to the number of vessels sailing on mine-related business. It has also served as a cruise ship re-supply point, thereby supporting what has been a rather experimental high arctic cruise sector.

The Nanisivik port and Jet service, then, seem to have played a role in the regional tourism sector. Neither the marathon nor the cruise ships have yet had significant impacts on Arctic Bay business development. The reasons for this probably relate both to issues of human capital — attitudes, knowledge, preferences and skills — as well as to an absence of supporting infrastructure in Arctic Bay. However, the tourism sector is clearly identified as an area in which future community economic development efforts are desired. Should the port and airport infrastructure remain in place and jet service to Arctic Bay/Nanisivik continue, Arctic Bay may continue to find itself in a favourable position from which to develop its tourism sector, provided that other barriers to such development are identified and removed.

Nanisivik infrastructure has also had an impact on Arctic Bay human capital. Many people talked favourably about having access to Nanisivik facilities. Going to the dome restaurant, using the pool, school trips to the site, and so on. Some mentioned the benefits of simply having some place to “get away to”. All these opportunities may have helped improve general well-being amongst many Arctic Bay residents.

CHAPTER FOUR: CONCLUSIONS

In Chapter Three, above, the data presented in Parts One and Two have been considered in terms of the impacts that Nanisivik has had in the community of Arctic Bay over the history of this relationship. An assessment was also made of how the mine's closure will affect the community, and how Arctic Bay's "ingredients for development" have been affected by the Nanisivik experience.

This chapter summarizes these findings in two sections. The first considers the long-term influence that Nanisivik has had on the community of Arctic Bay. Particular reference is made to Nanisivik's contributions to the community's outlook for development. The second section considers the transitional impacts that will be felt in the short term following closure.

1.0 NANISIVIK — A LASTING LEGACY?

As stated at the very beginning of this report, Arctic Bay's history did not begin when Nanisivik started operations, nor will it end with the mine's departure. As one person noted during our conversations, Arctic Bay never became a mining town. In this section, we will consider what, if any, lasting impacts Arctic Bay's experience with Nanisivik will have on the community in the long run.

The standard for assessing the impact of Nanisivik is higher than simply, "Did the mine have no net negative effect on the community of Arctic Bay?" Evidence is strong to suggest that significant public dollars were invested in the project with the purpose of promoting regional development. This, then, raises the standard to, "Did the Nanisivik project provide a reasonable positive return on taxpayer investment in terms of enhancing the long-term development capacity of Arctic Bay?"

There was once a time when mega-projects were supported by public funds as regional development tools, even though the stand-alone economics of these projects were questionable. This does not seem to be the case with Nanisivik. Nonetheless, the rationale for creating the Nanisivik townsite—a decision that reportedly expanded the life of the mine—was made using arguments that this would contribute to development in the area. Opportunities to play this development role, however, seem not to have attracted the focussed attention needed to capitalize on them. Reference was made to Nanisivik having a "strictly business" focus, for example.

Human Capital

The lasting impacts of Nanisivik on people in Arctic Bay are mixed. For some, the mine has provided an important opportunity for personal growth and advancement in a region where such opportunities are limited in their scope. Others have, as described by one elder, "had a rough life" because of indirect impacts of the mine, closely associated with Nanisivik alcohol.

Some individuals directly involved in work at the mine have benefited through a general improvement of individual well-being. This is associated with the increased confidence and sense of empowerment that work and income can provide. It is also linked to increased skills and experience gained through work; improved social status arising from the ability to support their family or to contribute to kinship sharing networks. Many of those now working in hamlet jobs learned or honed their skills at Nanisivik.

Others have benefited from attendance at the Nanisivik school which provided access to a school system with higher performance expectations—and outcomes—than available locally. Many of these people have now found jobs in the hamlet.

Children of parents who worked at the mine have benefited from increased family income and from seeing parents productively engaged in work. The nature of these positive impacts on later outcome of children is not well known, however. The potential concerns that children of workers may be less-exposed to traditional skills were not supported by community interview. The impact of school in this area is seen to be the factor of concern in this regard.

Indirect negative effects on individual well-being must also be acknowledged. These arise particularly as a side-effect of alcohol abuse and misuse that is widely attributed to Nanisivik's lax alcohol policy. Based on the interview data, it can be concluded that those affected through alcohol-related domestic violence include people who had a connection to the mine as well as those who had no connection. This latter group did not share in the benefits of increased household income, only in the negative impacts.

The long-term well being of some children have also been affected by the Nanisivik alcohol-effect. Exposure to domestic violence and Foetal Alcohol Syndrome are known to have significant impacts on future outcome. Little is known about the details of these sorts of indirect impacts in Arctic Bay.

The relevance of these impacts to Arctic Bay's future are significant. A healthy, confident and well-educated population will be essential to achieving progress in the strategic sectors identified in Arctic Bay community economic development planning processes. Children who have seen the productive work their parents can do may become more motivated to explore their abilities as well. On the other hand, considerable community efforts and resources will need to be focussed to create opportunities for those who have suffered major set-backs to build productive lives in the community.

The skills profile developed by Nanisivik work must also be considered. These have been mostly in areas that relate to infrastructure creation and maintenance—carpentry, machinery operation and repair, some trades. These skills are not irrelevant to Arctic Bay's future development, but they are not the skills that will power the community toward development in the identified strategic sectors such as tourism, arts and crafts, commercial fisheries, and even mining development. What are needed will be entrepreneurial skills, administrative skills, research capabilities,

people skills, conflict resolution, and so on. Over nearly three decades of proximity to Arctic Bay, Nanisivik has had a remarkably negligible impact on building skills in these areas.

This was not inevitable. As several people noted, there could have been more opportunities. People could have been hired and trained in office administration jobs, innovative approaches to successfully develop Inuit supervisory talents could have been explored, further efforts to support small-business development could have been made. Inuit could have been trained to train others. All these skills would have provided very tangible contributions to Arctic Bay current capacity to achieve its stated development goals.

Social Capital

Arctic Bay is widely perceived as a traditional Inuit community. Frequent references to sharing of the proceeds of Nanisivik work suggest that kinship sharing networks have been well-maintained throughout the Nanisivik era. The shift toward a money-based economy in which Nanisivik played a supporting role---but did not cause---does not seem to have led to dramatic movement toward individualistic attitudes to material wealth. In the absence of any attempts to identify and measure appropriate indicators, little more than this can be said. It is conceivable that income earned at Nanisivik provided opportunities for people who otherwise would only have been beneficiaries of these sharing networks to actually participate by playing a sharing role. This would both lead to increased social status for these individuals, as well as strengthening the sharing networks. References to orphans and others who lacked economic means gaining opportunities through Nanisivik are significant in this regard.

Nanisivik provided opportunities for socializing with people from other regions of Canada. Some comments were made about how significant friendships were developed. The evidence for a significant development of strong links between people in Arctic Bay with those in other regions is not well-developed however. Perhaps all that can be concluded is that this possibility exists. The developmental value of ‘social bridging’ is acknowledged. Gaining a broader social perspective may be particularly useful in developing sectors such as tourism or in promoting art to high-value markets around the world.

Other comments referred to situations where the “social norms” of Nanisivik were significantly different than those in Arctic Bay. In particular, the impact on established marriages was noted. Did Nanisivik have a significant and lasting effect on the institution of marriage, or more broadly, on gender relationships in Arctic Bay? Various suggestions were made that negative impacts on marriages tended to be temporary, although references to marriage break-down were also made. Again, evidence that would shed more light on this indirect impact is not well-developed. Clearly such an erosion of the cornerstone of family---and ultimately community---social integrity would be a serious issue. What can be stated, though, is that impacts in this area were not directly imposed on Arctic Bay. Miners from Nanisivik are not said to have frequently traveled to the community for social interaction. Rather people from Arctic Bay chose to travel to Nanisivik. The physical and cultural

separation between Nanisivik and Arctic Bay is recognized to have mitigated impacts in this area.

Financial Capital

A conservative estimate of wages paid to Arctic Bay residents over the life of the mine might peg this in the neighbourhood of \$1 million a year over 25 years. That's \$25 million in inflation-adjusted wages entering Arctic Bay's economy. Some of this simply replaced social assistance payments, some went to pay income taxes. Much of this money, however, became discretionary income. While expenditure data is lacking, evidence was provided that some was used to purchase improved hunting equipment. Other income was used to purchase groceries, perhaps better quality or more convenient than might otherwise have been afforded. Some may have been used to purchase domestic labour-saving equipment such as washing machines. Some no doubt was spent on junk food, alcohol, drugs and so on.

In terms of the lasting impacts of this Nanisivik cash infusion into the Arctic Bay economy, there is little that is certain. No evidence was provided to support a connection between Nanisivik income and increased capacity to finance local business start-ups or expansions. Evidence to support the possibility that potential entrepreneurs have access to savings built-up as a result Nanisivik work was not found. A few workers are said to have purchased homes as a result of having jobs at the mine. This is physical capital that could be converted into money should these people choose to enter into business.

The developmental value of expenditure of Nanisivik income should not be entirely discounted though. Some of this income may have been converted into social capital, if, as discussed above, sharing of proceeds of work (snow machines, gasoline, money, groceries, country food harvested as a result of equipment purchased and so on) did strengthen kinship sharing networks. Some of the income may also have been converted into human capital through expenditures that served to improve individual health and well-being. Suggestions that Nanisivik income reduced stress is evidence in this direction.

Infrastructure

The benefits of Nanisivik infrastructure were discussed in the previous chapter. They related to improved and cheaper transportation services, and expanded recreational opportunities. The lasting benefits of Nanisivik transportation services are limited. Some progress was made in developing the tourism sector by outside cruise ship companies. This experimentation was reliant on both the port facility and the jet service. While the direct benefits to Arctic Bay were small, these initial efforts have been a start in exploring the potential for this product. Other impacts of these transportation services are basically related to cost savings and are, therefore, similar in their effect as Nanisivik wages. These effects were discussed in the previous section.

Evidence that the presence of Nanisivik infrastructure reduced the investment of public money into Arctic Bay infrastructure is small but credible. However, the

overall assessment is that Arctic Bay suffers from inadequate infrastructure alongside other small Baffin communities, not in contrast to them.

However, it may be fair to consider what the community's development status would be today, had government invested in Arctic Bay infrastructure rather than in the infrastructure of the Nanisivik townsite. Nanisivik could have functioned as a bunk-house operation, with government money going to build better nursing facilities and school, a community hall, a visitor centre, space for business development and so on.

Summary Assessment

- ❖ Nanisivik has made some positive contributions to Arctic Bay's development capacity.
- ❖ There are people who have suffered through indirect effects associated with the Nanisivik legacy.
- ❖ Overall, the Nanisivik experience has not provided a dramatic enhancement of Arctic Bay's capacity to achieve its development goals.
- ❖ The mine could have had a greater positive influence if a consistent focus on its role in local development capacity-building had been maintained by public sector parties, alongside the private sector function of running a profitable mine.
- ❖ Alternatively, the public investment in Nanisivik that was rationalized for its potential to contribute to regional development could have had greater developmental impacts had it been spent directly on local development capacity-building.

2.0 TRANSITIONAL IMPACTS FOLLOWING CLOSURE

Full-time workers

The major short term impact following Nanisivik closure will be the loss of jobs and income. Long-term workers will experience the greatest impact. Fourteen people from Arctic Bay have been earning \$25,000 or more. This group and their families may be expected to suffer from the effects of significantly increased economic stress. Opportunities to find other work in Arctic Bay are limited. Employment Insurance benefits will provide temporary relief, but will not come close to replacing the high incomes enjoyed by full-time employees. While some may seek to re-locate to find other work, migration out of Arctic Bay is not expected to be significant.

Casual workers

Arctic Bay residents who have sought work at Nanisivik on a casual basis will lose this option. Some thirty people from the community have been earning under \$25,000 per year. While some casual work is available in Arctic Bay, competition for these jobs will increase and there will be an adjustment in the local casual job market as some become discouraged and eventually drop out of the labour force. Loss of the relatively small amounts of money earned by casual workers is expected to represent a significant decline in disposable income for those individuals and their households. Many of these casual workers are young and single. The loss of the sense of economic empowerment represented by mine jobs is expected to have an impact on these workers.

Declining income to depress local business and on hunting sector

Nanisivik mine directly contributes over \$1 million per year to Arctic Bay's total personal income. This represents one-eighth of the money flowing into Arctic Bay households and a more significant proportion of household disposable income. The loss of this income can be expected to impact on the large retail stores, as well as on smaller consumer-oriented local businesses. Loss of income may also be expected to have a negative impact on hunting activity.

School crowding and housing shortage

The Arctic Bay school is currently experiencing some over-crowding conditions. Return of Nanisivik students to the Arctic Bay school is not expected to have a significant worsening effect on this condition, given the small number of returning students involved.

Similarly, Arctic Bay's housing situation is also experiencing a shortage situation. The small number of returning families will contribute to this shortage and some people will remain on the waiting list longer, as a result. The scale of the problem is expected to be small, however.

Loss of social and recreational opportunities at Nanisivik

The use of recreational facilities, including the restaurant, has declined in recent years. Loss of these opportunities is not, therefore, expected to have a significant impact when the mine closes. There may be some loss of a sense of recreational 'choice' however—"the ability to get out and do something if we really wanted to."

Loss of opportunities to socialise with workers at Nanisivik will also be experienced. This loss of social options may affect the sense of empowerment amongst some people. Others may welcome the loss of a social environment that has contributed to alcohol-related problems. Nanisivik was described as having recently become more like a 'mine camp' than it was in previous years, and is said to have contributed to serious health and social impacts.

CHAPTER FIVE: RECOMMENDATIONS

1.0 MITIGATING THE IMPACTS OF MINE CLOSURE

Establish Certainty About Future Use Of Townsite ASAP

Many people expressed an understanding that the Nanisivik townsite may be transformed to some alternative use. This process was begun as early as 1986 when DIAND issued a report on “Alternative Uses For The Nanisivik Site.” Apparently no progress was made in addressing this issue during the 15 years following that report. So long as alternative uses are held out as a possibility, it will be difficult for the community to galvanize its energy toward its future.



It is imperative, therefore, that a decision be made soon about what, if any, development is to take place at Nanisivik, and that firm government commitments are put in place.

Monitoring And Assistance For Those Affected By Lost Income

Nanisivik workers who have lost or left their work in the past have found support during the transition period from extended family members, some of whom may have had work at the mine themselves. The closure of the mine, and withdrawal of a significant proportion of Arctic Bay household income may put stress on these support networks. There may, therefore, be an important role for government in providing assistance for people who have lost income, especially during a transitional period.

Because the way that Nanisivik income is spent in the community is unknown, care will need to be taken to ensure that those who are affected indirectly are not overlooked. The EI system is designed to take account of income earned and used by individuals. Evidence suggests that in some cases at least, a Nanisivik income paid to one person becomes not only income for that person’s household, but also a form of allowance for a range of other individuals or households. If Nanisivik income has been widely shared beyond the household, EI payments may be inadequate to allow continued extended sharing of these benefits.

Specific monitoring should be established to detect financial hardship. In particular, attention should be paid to families making adjustments to their shopping expenditures. Private homeowners should also be tracked to ensure they are coping.

In addition to monitoring for financial impacts, government should ensure that early warnings of stress—to be expected during this period of economic adjustment—are detected and appropriate assistance provided.

Consideration should be given to developing an enhanced financial adjustment package. Lessons can be learned from packages such as The Atlantic Groundfish Strategy (TAGS) which provided enhanced support for individuals affected by the closure of the Atlantic cod fishery. That program was largely unsuccessful, since it focussed primarily on payments to individuals and missed opportunities for investments in longer term community capacity. If such an assistance program is devised, it should pay due regard to the existing social sharing networks and work to strengthen, not erode, this important area of Arctic Bay’s social capital.

Transitional job creation

Over the medium term, special consideration should be given to designating Arctic Bay as a recipient of a targeted job creation package. One possibility would be to begin to undertake some of the infrastructure projects that the community so badly needs.

Support for micro- and small-scale entrepreneurship

Immediately and over the longer term, support needs to be focussed on Arctic Bay entrepreneur development. Existing programs do exist, although these are not always accessed to the extent they could be. Further, significant barriers—including infrastructure (see below), as well as lack of professional services support—exist in this area. Micro- and small-scale businesses can provide a substitute for much of the income levels that Nanisivik mine provided.

A concerted effort should be made to assist people in Arctic Bay, as well as the appropriate hamlet staff, to continue implementing business activities in the strategic sectors identified in Arctic Bay’s community economic development plan.

Infrastructure in Support of Durable Economic Development

Lack of infrastructure is a significant barrier to economic development in Arctic Bay. Several specific references were made to the need for generic business space, as well as to infrastructure barriers to specific business ideas—such as restaurants—and the interaction between infrastructure and compliance with government regulations. It is recognised that building infrastructure for business ideas that may be no more than “an idea” can be a risky endeavour. However, at the same time business capacity will require some basic infrastructure to be in place.

If Arctic Bay is going to build a sustainable future, there are some key ‘anchor’ businesses that will be needed. This would be a good time to begin building the infrastructure that will be needed to house these business types.

Marking the passing of Nanisivik

Some sort of celebration and public event should be held to provide closure to the Nanisivik era, and to commemorate those who have played a part in this era, both from Arctic Bay, as well as from the mine and from other communities. Many people supported this concept and provided suggestions about what an appropriate way to mark the passing of Nanisivik might be.

2.0 RECOMMENDATIONS FOR FUTURE COMMUNITY – MINE AGREEMENTS

Maintain A Focus On Regional Development

The potential role that the Nanisivik project could play in promoting local development capacity was part of the discussion and justification for public involvement leading up to the initial approval stages of the project. This role seems to have been progressively abandoned as the mine progressed, however. The ability of mining projects to function as efficient development tools in the context of Aboriginal communities has yet to be convincingly demonstrated. Unfortunately, the Nanisivik experience was not managed in a sufficiently experimental mode to test the idea. It would, however, be premature to conclude from the experience of Arctic Bay with Nanisivik that mine developments cannot play a positive role in community development.

If the potential benefits to local community development are used to rationalize government approvals for future mining projects, it is incumbent on the responsible government agencies to ensure that a sustained focus on this role is maintained throughout the project. The day-to-day functioning and profitability of the business side of the mine is a legitimate concern to all parties. However this private sector interest must be recognised by all parties to be but one concern. Environmental protection is increasingly recognised. Contribution to the capacity of local communities to achieve their self-identified development goals must also be recognised.

There must be an on-going relationship structured from the outset and maintained through to closure and decommissioning to ensure that the development dialogue is not lost. Formal impact and benefit agreements can be a useful starting point. However, a high-level management group that includes community, industry, and government representation should be maintained. Part of the terms of reference for this group should extend beyond overseeing the specifics of any agreement, in to

encompass monitoring, evaluating, and enhancing the impacts on local development capacity-building.

Access To Corporate Memory

Steps need to be taken to ensure that corporate memory be preserved and accessible throughout the life of a project. This regardless of changes in corporate ownership. An active management group—with an adequately resourced secretariat—could be one means to maintain employment data, business contracts, training activities and so on.

Need To Track Social And Economic Impact Indicators

Many details of the impact of Nanisivik on the community of Arctic Bay remain poorly understood, due to a lack of data. For example, to what extent has alcohol influenced individuals and families? How was income spent? Has social interaction with southern workers created more benefits or more problems than if the mine site had been inaccessible to the community? Nanisivik generated stress, but it also reduced stress due to economic constraints—what was the relative extent of these impacts?

The ability to assess these things in the context of an end-of-project impact assessment is limited. Therefore, an on-going and carefully designed social and economic monitoring system should be implemented as part of any major resource project. This system should include the identification of appropriate indicators that represent concerns of community members.

Communication Channels For Community And For Workers

Avenues for communication must be nurtured so community members have access to mine managers to share concerns, and so that mine managers can undergo cultural learning throughout the project. Social and cultural change and learning should not be one-sided on the part of the affected communities. Several suggestions from people in Arctic Bay noted this need for improved communication.

Avenues are also needed for Inuit workers to be able to communicate sensitive issues through a sympathetic, ideally Inuktitut-speaking, management-level advocate or liaison person. This person could also serve as a community liaison manager to support the achievement of enhanced community dialogue.

Alcohol

One of the key negative impacts of Nanisivik on the minds of most people contacted during this study was alcohol and its effects. Why alcohol was not controlled at Nanisivik—a community within easy distance of Arctic Bay—is perplexing. It seems to be an artefact of a cultural mindset that would not change to meet the needs and interests of an adjacent culture with different values.

The issue of alcohol is not necessarily black and white. However, the interests of permanent communities should be heard and heeded. If alcohol is permitted as a convenience to a southern workforce, thorough monitoring should be implemented in all impacted communities. The impacts of alcohol on those not directly involved in the mine—spouses, children, other community members—should be specifically monitored.

Appendix A

People we spoke with



People We Spoke With

Rebecca Williams	MLA for Arctic Bay
Joanasie Akumalik	Arctic Bay mayor
Levi Barnabus	Community Reclamation Coordinator
Cecil Marshal	Hamlet SAO
Morty Allooloo	Arctic Bay School Co-Principle
Mishak Allurut	Parents worked at the mine
Mark Lahey	Northern Store Manager
Seemee Kalluk	Works at mine
Judah Oqituq	Works at mine
Qayaq Naqiturvik	Works at mine
Frank McDermot	Nanisivik Mine HR manager
Gail Redpath	Nurse
Qapik Attagutsiak	Elder
Frank May	Councillor, businessman
Jaypeedee Inutiq	Worked at mine
Jacqueline Marshal	Hamlet CED
Leah Qoonerk	Husband worked at mine
Neevie Naqitarvik	Husband works at mine
Mucktar Akumalik	Elder
Clare Kines	RCMP
Jean Kigutikakjuq	Community Wellness Co-ordinator, Youth Council
Susie Issuqangituq	Partner works at mine
Pauloosie Mukpa	Elder
Mary Tatatoapik	GN Community Wellness Counsellor
Daniel Aloa	Housing Authority Manager
Tim Reid	Airport worker, local entrepreneur
Anna Qaunaq	Municipal Liaison Officer
Carol Etwangat	Social Worker
Judah Muckpa	Worked at mine
Kigutikajuk Shappa Muckpa	Husband worked at mine
Atagotak Ipeelie	Elder
Ruben Tunraluk	Worked at mine
Eunice Tunraluk	Husband worked at mine
Salome Qaunaq	Income Support back-up
Koonoo Oyukaluk	Worked at mine
Mr. Nakatarviq	Pastor

Esau Tatatoapik	Outfitter
Kautaq Joseph	Elder
Leah Levi	Elder
Ina Tunraq	Youth council
Samantha Eecheak	Youth council
Isaiah Oyukaluk	Youth council
Ligonie Iqaqrialu	Local business
Aimo Muckpaloo	Elder