IMPACT AND BENEFIT AGREEMENTS AND THE POLITICAL ECOLOGY OF MINERAL DEVELOPMENT IN NUNAVUT

by

Michael William Hitch

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AUTHOR'S DECLARATION FOR ELECTRONIC SUBMISSION OF A THESIS

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

ABSTRACT

Mining has been a major economic activity in the Canadian Arctic for the last century. It has made a valuable contribution to the development of this fragile economy and to the living standards of its inhabitants. The benefits include jobs and income, tax revenues and the social programs they finance, foreign exchange earnings, frontier development, support for local infrastructure, and economic diversification into a broad range of activities beyond the life of the mine. These benefits emerge as the result of activities and influences of several actors that exercise differing degrees of power, whether coercive or exchange by nature. These benefits, however, do not come without costs, particularly to Northern peoples who have suffered historically from the inequitable distribution of resources benefits and inevitable, adverse socio-cultural and biophysical impacts of rapid resource development.

Impact and Benefit Agreements (IBAs) are a mandatory aspect of the Nunavut Land Claims Agreement. Proponents wishing to develop natural resources on Inuit-owned land are required to negotiate and complete an IBA with the Regional Inuit Organization. These agreements have evolved from simple socio-economic contracts, to multiparty assemblages of agreements designed to promote sustainability beyond the operating life of the mine.

A political ecology approach was taken. Using this approach, it was determined that the distribution of decision-making power appears to be unequal and largely confined to the Industrial and Regional Inuit Association actors. As a result, other affected interests were marginalized in the process including members of the local community, environmental and other non-governmental organizations, and federal, territorial and hamlet government actors.

Nevertheless, the use of IBAs signal a recognition on the part of all stakeholders that historic mining practices are no longer acceptable and that it is now necessary to move towards a more equitable and sustainable approach to mineral development.

In order to answer the question of an IBA's usefulness as a tool of sustainability, a set of sustainable mining criteria was developed and used to assess whether, in fact, the agreement could be used to promote a more sustainable path to mining development in the North. After the application of the criteria to IBAs in general and to one case study in particular, which fell under the Nunavut Land Claims Agreement, it was discovered that the IBA instrument is limited in its utility – at least in terms of its current structure. However, in conjunction with other agreements and review processes, the IBAs utility as a tool of sustainability may be enhanced.

By the Nunavut Land Claims Agreement's very nature, decision-making ability on behalf of the community is restricted to the Kitikmeot Inuit Association that only represents the interests of beneficiaries of the Nunavut Land Claims Agreement and the industrial proponent. Opportunities for broader community (non-beneficiaries) input appear limited, thus restricting the usefulness of IBAs as a tool of community sustainability, at least until this weakness is addressed. Moreover, on a broader level of analysis, it should also be noted that the IBAs still are designed to operate within the global, liberal, capitalist system which itself leads to power imbalances. Nevertheless, it should be noted that IBAs signal a recognition on the part of all stakeholders, that historic mining practices are no longer acceptable and that it is now necessary to move towards a more equitable and sustainable approach to mineral development.

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Completing this research is testament to a path of discovery. This discovery was not only of the problem but also perhaps of myself. The essence of this dissertation has been influenced by time, space and enlightenment. Over the past 5+ years the ideas contained within this dissertation have served as my personal, intellectual playground while traveling several hundred thousand air miles. The material developed in this volume was often written in hotel rooms and field camps in such places as Paris, London, Ulaan Baatar, Laoxia, Stockholm, Johannesburg, Honiaira, Geneva, Hanoi, Jakarta, Lima, Bambari, Abuja, Sydney, Seoul, Luperon and many, many airliner seats in between.

These ideas have developed as a result of over 19 years of seeing both the good and bad side of natural resource development and a desire to find a voice for those who have not had one and to effect change.

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ABBREVIATIONS

CARC	Canadian Arctic Resources Committee
CEAA	Canadian Environmental Assessment Act
DDMI	Diavik Diamond Mines Incorporated
ENGO	Environmental Non-Governmental Organization
GCS	Global Capitalist System
GMI	Global Mining Initiative
GN	Territorial Government of Nunavut
GNWT	Territorial Government of the Northwest Territories
IBA(s)	Impact and Benefit Agreement(s)
IREM	Integrated Resource and Environmental Management
JBNQA	James Bay and Northern Quebec Agreement
KIA	Kitikmeot Inuit Association
MTS	Mine Training Society
NCLA	Nunavut Land Claims Agreement
NGO	Non-Governmental Organization
RIA	Regional Inuit Association

Chapter 1: Introduction

1.0 Introduction

Interest in mining and mineral exploration has grown globally over the past two decades. This phenomenon, for the most part, is due to three factors: improved technology used in mineral exploration, the desire of First Nations to participate in the new wealth generated from the extraction of these minerals, and public awareness of the impacts of mining facilitated by rapid global communication. As technology advances and more accessible deposits are exploited, mining companies increasingly penetrate into remote areas. Mining activities often encroach upon forests, watersheds and mountainous regions. Many of these areas are also indigenous peoples' lands, whether or not they are officially recognized or claimed.

Mining has been a major economic activity in the Canadian North for the last century. It has made a valuable contribution to the development of the fragile economy and to the standard of living of its inhabitants. The benefits include jobs and income, tax revenues and the social programs they finance, foreign exchange earnings and all that they purchase, frontier development, support for local infrastructure, and economic diversification into a broad range of economic activities beyond the life of the mine.

At the same time, mining continues to be controversial because it has generated biophysical and social costs, especially at the level of local communities. The benefits, which could accrue to the local communities, have the potential to be more substantial than they have been in the past.

An Impact and Benefit Agreement (IBA) offers one approach that might contribute to the achievement of this goal. IBAs form a negotiated bond or agreement between industry and the local communities that can provide a foundation for mutual understanding. Items covered in the more comprehensive of these agreements include preferential employment and business contracting opportunities, training and education (including apprenticeships and scholarships), equity participation, revenue sharing, cash compensation, social

and environmental monitoring and/or mitigation measures, archaeological site preservation, access to facilities and infrastructure, information exchange, agreement management and dispute resolution mechanisms (O'Reilly and Eacott, 1998).

The primary purpose of the IBA is to address the adverse effects of mining activity on local communities and their environment, and to ensure that Aboriginal peoples receive benefits from the development of mineral resources. By 2004, four IBAs have been negotiated in the new (1999) territory of Nunavut, and their ultimate success in promoting a more sustainable pathway for Northern communities remains to be seen. The success of the mechanism may depend on the configuration of the dynamic power relationships between stakeholders and their biophysical, social, and economic environment. It can, perhaps, be redesigned and implemented so that it helps direct both industry and communities on a more sustainable path than is currently the case.

1.1 Overview

In this dissertation I examine current trends in Impact and Benefit Agreements (IBAs) and their utility to assist in the establishment of sustainable mining communities. The analytical perspective adopted is that of political ecology which is used to examine the interrelationships among political power, influence, decision making and mineral resource development in the Northern communities of Nunavut Territory, Canada.

The intent is to assess the political context and nature of discourse between affected actors, to identify and describe the presence of unequal power relationships, and to evaluate the success of the impact and benefit agreement instrument in establishing a sustainable future for these communities. The nature of the interaction between the industrial actor and the affected community will be mapped (using a political ecology framework), analyzed and considered within the context of a new proposed impact and benefit agreement structure.

This research also builds upon the literature regarding sustainability and natural resource development. It addresses the role of mining as an industry that may be used to promote community development in remote areas through the application of sustainable community development initiatives. The prescriptive tool employed is the impact and benefit mechanism. In addition, this research establishes an appropriate set of sustainability criteria in the context of a pre-mining community. The purpose is to consider how mining can be used and better still, understood, as a tool to promote sustainability and provide the impetus for the community and other actors to embark upon a sustainable pathway.

1.2 Theoretical and Applied Contribution to the Literature

Political ecology is a conceptual approach that suggests that environmental change is determined by relative powers of actors with conflicting agendas (Bryant and Bailey, 1997). The actors reflect the scale and nature of the analysis. On a global scale, the analysis focuses on the power of the global capitalist system and its economic and cultural penetration into increasingly remote places. On the local level of a community, political ecology focuses on how unequal power relationships can determine environmental outcomes. Bryant and Bailey (1997) identify and discuss in detail the role and interactions of the state and its institutions, multilateral institutions, businesses, NGOs of various types, and grassroots actors. Their work is exemplary of modern political ecology, which tends to have an eco-populist bias. Dietz (1999) and Blaikie (1999, 2000) also note the trend in the political ecology literature towards an emphasis on the importance of local actors and communities. This grassroots position focuses on the devolution of decision-making power to manage environments to local actors: the indigenous local community, community-based organizations (CBOs), people's organizations (POs), or in association with non-governmental actors (NGOs) of different types and with different degrees of participation (Amalric, 1999, Woodhouse, 1997).

Typically, central governments have taken control of natural resources and have imposed use restrictions. The administrative weakness of many states, collusion between elites and outsiders, and the weakness of the voice of local poor people, however, impair the efficiency and effectiveness of state-centred models of governance (Amalric, 1999). The consequence is that state agencies often manage resources ineffectively, while unequal power relationships persist.

The main contribution of this dissertation is to the literature on political ecology. A political ecological analysis of natural resource development is used in order to consider the effectiveness of a negotiated agreement between actor groups. One hypothesis might be that this agreement might facilitate a more effective dialogue between actors and a move toward a more sustainable pathway.

Over the last several decades, prospectors and developers have been turning their attention towards Canada's North to search for mineral deposits and to develop mines. The Canadian Arctic is a fragile environment in the broadest sense of the word, including the biophysical environment, economic sufficiency and enhancement of the social well being of Northern communities. To be sustainable, this environment, at a minimum, requires an enhanced dialogue between decision makers and other actors in order to more equitably distribute decision-making power regarding natural resource development. It has been my observation from over 19 years of international mining experience that the unequal distribution of decision-making power has left certain actors disenfranchised and exposed to the negative impact of mineral development.

Since the 1990s, the Canadian North has experienced a transition from a colonialist or paternalistic mode of governance towards self-government and more shared management of the region's natural resources (Osborn and Gaebler, 1992, Wherrett, 1999). For the past two decades, the region has been subject to a number of land claim negotiations and successful achievement of self-government. It is apparent, however, that not all actor groups benefit equally and that disparities exist where prosperity for all is intended. The contribution of this research from an applied perspective is to develop a

blueprint for a revised impact and benefit agreement that promotes sustainable communities in the Canadian North where mining is to take place.

These contributions will be realized through the review of a recently signed impact and benefit agreement between the Kitikmeot Inuit Organization and Tahera Diamonds (the proponents of the Jericho Diamond Project in the Cambridge Bay area). The Jericho IBA was chosen for a number of reasons: its recentness, it includes elements of past IBAs which both industry and the Kitikmeot Inuit Association felt relevant to the current operating plan, and, it has become a 'lightening rod' politically in the Hamlet of Cambridge Bay. This agreement is assessed through the application of a set of sustainability criteria generated through examination of research literature and previous impact and benefit agreements. These criteria are tested using focused interviews with members of actor groups. The criteria are further refined and integrated into a 'blueprint' for an improved design for impact and benefit agreements.

1.3 Rationale for Examining Interim Benefit Agreements as a Tool for Advancing Sustainability.

Many new mining operations are located in indigenous peoples' lands, whether officially recognized or claimed. Mining companies often fail to recognize the intricate nature of traditional and cultural values of affected Aboriginal communities; members of the mining industry, applying Western values, may see their own presence as tangential or even beneficial to the community. The companies often believe, therefore, that they need only to provide minor infrastructure and a few low-skill and minimum wage positions (O'Reilly, 1999). By taking this stance, these companies operate in a manner which they typically believe has satisfied their social obligations. However, the global mining industry is becoming increasingly aware of the protests and resistance of communities about how "their" resources are being developed. In the Canadian North, this includes resistance to granting licenses and permits required for construction and operation (e.g. BHP's Ekati Diamond Mine and Rio Tinto/Aber Diamond's Diavik mine, both in Nunavut) (O'Reilly, 1996).

One approach to solving this type of conflict is through the early development of a negotiated bond or agreement between industry and the local communities to provide a foundation for mutual understanding. Specifically, such an agreement provides a platform that establishes the recognition by the industrial actor of the traditional relationship that the community has with the land. In addition, the instrument assumes the role as a steward of the land for the duration of the corporate activities on that land. From the community perspective, the agreement may provide a platform from which the community can determine a more effective use of proceeds from the mineral development. Ideally, these proceeds will be employed to establish a basis for a sustainable future beyond the operating life of the mine.

Impact and Benefit Agreements (IBAs) may prove to be useful instruments for promoting sustainable Northern communities. IBAs are mechanisms that establish formal relationships between mining companies and local communities. Their primary purposes are: (1) to address the adverse effects of mining activity on local communities and their environment, and, (2) to ensure that Aboriginal peoples receive benefits from the development of their mineral resources as defined by the Nunavut Land Claims Agreement. However, the utility of this tool depends very much on the configuration of the power relationships between actors and stakeholders and their biophysical, social, and economic environments.

An exploration of the relative power and influence of various actors, therefore, should provide important information and insight to assess the effectiveness of the IBA mechanism for fostering sustainability. Political ecology can be a useful tool or analytical lens through which one can explore the power relationships between various actor groups and how these relationships have an impact on both the socioeconomic and the biophysical environment. Numerous examples exist where political ecology has been employed in the examination and resolution of political/biophysical conflict, including such work as mapping gender and cultural politics in agrarian post-revolutionary Nicaragua (Babb, 2001); a view of environmentalism as an

impetus for change (Gottlieb, 2001); examining the cultural dimensions of environmental policy negotiations (Hornborg and Palsson, 2000); and ethnographic examinations of Aboriginal relationships and society in the current age, reflecting on relations with their colonial past and problems posed by the future (Dahl, 2000) .

1.4 Statement of the Problem

Impact and Benefit Agreements are intended to ensure that Aboriginal peoples benefit from mining projects and are compensated for the negative impacts of mines on their communities, their land, and their traditional way of life. The revenues generated under an IBA have the potential to assist the local community in pursuing non-mineral dependant economic development and to provide a platform of sustainability well beyond the operating lifetime of the mine or mines.

The specific research question is as follows:

Can mining contribute to the development of sustainable communities through the application of Impact and Benefit Agreements in order to establish a pathway of community sustainability for the future?

The research question itself is broken down into five specific objectives:

- To determine the relationship between actors in order to assess their relative degrees of influence and power with respect to land and resource decision making in Nunavut, using a political ecology framework
- To develop sustainable mining criteria
- To apply those criteria to existing IBAs to determine if and how IBAs might be used to promote sustainable mining and communities
- To assess whether recommendations are needed to help promote and improve an IBA approach

- To analyze the extent to which an IBA might be able to address some historic inequalities identified through a political ecology analysis

It is important to this research to understand the nature of the complex web of existing relationships between the industrial actor and the local community, and the range of motives and value systems of actors, underlying decisions related to mining, land use, the environment and the distribution of benefits and costs.

The relationships that comprise the networks of interlinking actors have evolved and are influenced by population growth (along with other forces such as economic and political change). Population growth imposes new demands on the biophysical, social well being and economic state of the community.

Motives vary among stakeholders. Light and Gold (2000) observe, for example, that the motives of participants within ethnic ownership economies evolve towards collectivism and become engrossed in shared values, skills, information transfer, social ties, social relations, institutions, organizational techniques, kinship and marital systems, trust, social capital, cultural assumptions, religion, language, entrepreneurial values and attitudes, and ethnic solidarity ideology, among others. Motivation for industry actors is driven by a different set of concerns, such as profit and an underlying responsibility to a board of directors and shareholders. An important aspect to consider is how to reconcile the often-competing goals of stakeholders to develop an effective IBA tool.

In order to assess IBAs, the context, elements and in some cases, the outcomes of existing IBAs need to be reviewed. The number of existing agreements in Canada and, in particular, the North is small, although a cross section of components and success can be examined, compared and contrasted.

1.5 Specific Focus of the Dissertation

The focus is to examine the relationships between affected actors in the development of mineral natural resources in remote communities and the

effectiveness of IBAs as a tool for sustainable mining. The group of individuals and institutions that influence the decision-making process does not operate in isolation; rather, they operate within the context of a global capitalist system. This system confines and shapes actor relationships and generates cumulative interactive effects that condition the local community in terms of its potential. These predictable or irreducible-pattern effects can significantly influence the ability of a community to pursue a sustainable future (Kim, 2001). The power relationships between the industrial actor (the mining company) and the grassroots actors (the community) are shaped by systemic power, i.e. in this case, the dominant capitalist mode of development. This dynamic relationship is rarely informed by a mutual understanding of diverse values that ultimately shape community-industrial relations. For example, in remote Aboriginal communities, there is a unique bond to nature caused by the interrelated ebb and flow of human and biophysical activities. This dynamic is not always compatible with the capitalist mindset common to industry. Members of these communities rely on annual migration of food-stock wildlife (e.g. caribou and geese in Northern Canada) and require flexibility in their work schedule, inconveniencing their Southern-minded employers.

The nature of the interaction between mining employees and community members can be improved, if the company operates under a sustainability-based model. This model requires the dominant economic actors (the mining company and its employees) to work cooperatively with the grassroots actors (the community members) to achieve a more sustainable local environment. Such a process would incorporate many or all of the characteristics of sustainable enterprises illustrated in Table 1.1.

Characteristic Of Sustainable Enterprises	Definition
A vision of stewardship	Manage local resources for the long term, and give preference to locally available and renewable resources
Systemic technology	Use a systems approach that accounts for all inputs and outputs of production, and for more renewable resources
Value-added production	Emphasize the end value of a resource and attempt to maximize this value relative to the inputs
Enduring quality	Produce durable goods that are reusable and repairable
Sustainable measurement	Use alternatives to discounted cash flow analysis
Appropriate scale	Consider optimum business size, and how business growth may impact the environment
Maximization of non-material growth	Emphasize human activity and personal or community development that is not material or energy intensive, including health care, social services, the arts, hobbies, sports and education
Circular economics	Recirculate money within a local or regional economy
Work flexibility	Allow home work, flexible hours and other work alternatives
Orchestral style	Establish a link between ownership obligations (i.e. problem solving) and rights (the economic and social benefits of ownership)
Maximization of the 4 Rs	Reduce, reuse, recycle and repair
Direct investment	Investment in local and beneficial projects

Table 1.1 Sustainable Enterprise Criteria and Descriptions (Mathewson and M'Gonigle, 1997 and Davis, 1991)

The 'tipping point' is that point when an idea, trend or social behaviour crosses a threshold and becomes standard operating practice (Gladwell, 2000). In this case, the tipping point occurs when the industrial actor realizes it is in its best interest to establish more sustainable operations. This motivator of industry may manifest itself in the form of lower operating and capital costs. But more importantly, adoption of a more sustainable and holistic approach would reduce the risk of delays in commissioning and delivery of early cash flow (i.e. time value of money principle). This condition extends beyond the pre-mining state and potentially could reduce the risk of operational disruptions during the project's life span and maximize post-closure, legacy benefits. A

current (2004) example of this approach is occurring at Bathurst Inlet, NU between Miramar Mining Corp. and Kitikmeot Inuit Organization (KIA) and the proposed development of the Doris Lake project. Both Miramar and KIA have established an agreement-in-principle, outlining the obligations of each party going forward and working towards the negotiation of an IBA (Miramar Mining Corporation, 2004)

1.6 Conclusion

The development of mineral activities increasingly occurs in areas occupied by indigenous peoples, because mineral exploration and mine development are being pushed ever further into frontier areas of the North of Canada. In these areas, Inuitmiut are often a majority of the population, and in many cases they are owners of the mineral resources.

The First Nations peoples may benefit enormously in future decades if they can acquire relevant mining skills so that they can have more control and influence over mining activities in the North. Ultimately, this influence will become increasingly evident as a result of more application of the terms and conditions of the Nunavut Land Claims Agreement that encourages partial or complete ownership of potential mining enterprises.

Political ecology presents one lens through which to view the unequal distribution of decision-making power that exists when development of mineral resources becomes an option. One of the challenges facing those institutions which adopt and plan for sustainability is how best to introduce policies that bring about short-term benefits to industry as well as deliver long-term benefits to society and culture at large. Political institutions are one set of actors that influence long-term sustainability while being required to balance economic performance and environmental conservation in a competitive world. They must also manage the pressures applied to them by NGOs and ENGOs, often the principal instruments of environmental change.

The role of natural resource development in the politicized environment provides fertile ground to propagate understanding, and often misunderstanding,

between actors (Bryant and Bailey, 1997). With the development of any natural resource intended for export, for further value-added processing or end use, there is the heightened awareness of the potential for foreign currency and wealth creation. Company views of sustainable development suggest that resources need to be developed and extracted with minimum impact to the biophysical and social aspects of the environment while providing equitable distribution of the revenues. The political ecology approach seeks to assess the actions and interactions of the actors involved in any politicized environment given any set of dimensions, scales and apportionment of the available power base.

The remainder of the thesis is organized in the following manner.

Chapter 2 examines the approach employed, including the political ecology conceptual framework, the development of criteria of sustainable mining particularly in the context of Northern communities, and the Impact and Benefit Agreements which are proposed as one method of promoting community sustainability.

Chapter 3 delves into the literature surrounding the concept of sustainability in order to demonstrate the level of current thinking on the topic. This serves to establish the definition of sustainability applied in this dissertation.

Chapter 4 examines political ecology as the conceptual lens through which the current study is viewed. This chapter also includes a further examination of the concept of power as it applies to the unequal distribution of decision making in a politicized environment.

Chapter 5 examines principles and applications of literature on sustainable mining criteria and adapts those criteria for the purposes of this project. Those criteria are then used to identify the points of concern of the political actors and form the basis for identifying elements of a sustainability tool (i.e. impact and benefit agreements) of immediate concern to them.

Chapter 6 considers impact and benefit agreements as a tool for fostering sustainability through a comparative review of selected impact and

benefit agreements currently in force. They are tested against the sustainability criteria developed in Chapter 5 through a literature review and selected interviews with key informants and institutions active in Canada's North.

Chapter 7 reflects on the findings from the primary and secondary Impact and Benefit literature review and focused interviews in Chapter 6 by focusing on the case study of the IBA recently signed between Tahera Diamond Corp. and the Kitikmeot Inuit Association.

Chapter 8 concludes the thesis with a discussion about the future role that could be played by an improved comprehensive Impact and Benefit Agreement for Northern communities and the limitations of such a mechanism, given existing global economic power dynamics and the market economy. The conclusion then broadens in scope with an analysis of the contribution to the literature followed by recommendations for future research.

Chapter 2: Approach

2.0 Introduction

This dissertation is based on two components: (1) literature review, and (2) field work in Nunavut, Canada. A conceptual framework of political ecology is employed to explore the role of key actors in order to appreciate the ways in which actors interact with respect to environmental issues (Bryant and Bailey, 1997: 47). Political ecology has been used in this research to assist with the following objectives:

- To determine the relationship between actors in order to assess the relative degrees of influence and power with respect to land and resource decision making in Nunavut, using a political ecology framework
- To develop sustainable mining criteria
- To apply those criteria to existing IBAs to determine if and how IBAs might be used to promote sustainable mining and communities
- To assess whether recommendations are needed to help promote and improve an IBA approach
- To analyze the extent to which an IBA might be able to address some historical inequalities identified through a political ecology analysis

The following section discusses the specific elements of the approach, including the rationale and justification for its choice.

2.1 Conceptual Framework: Political Ecology

Political ecology is a historical outgrowth of many of the central questions posed by social scientists about the relations between human societies in the context of their bio-cultural-political complexity (Gouldson and Murphy, 1997). Political ecology, furthermore, draws on a number of theoretical perspectives including dependency theory, political economy and systems thinking. This

being recognized, two major theoretical thrusts have most influenced the formation of political ecology. These are political economy, which emphasizes the link between materialism and the distribution of power, and ecosystem thinking which rests on a comprehensive vision of the complex interactions within biophysical and socio-economic relationships. Political ecology involves the analysis of the socio-economic and biophysical impacts caused by unequal power relationships between various political actors (Bryant and Bailey, 1997).

Another way of looking at political ecology is to see it as rejecting the view that environmental degradation can be understood as a simple problem amenable to a scientific fix or response. Instead, political ecology stresses there is an ecology of politics and a politics of ecology. Wolford (2005) proposes that there is a central role that the distribution, allocation and extraction of natural resources plays in shaping the nature of political and social institutions within a society. Ecological conditions may influence, but do not determine the development of social structures.

One of the challenges facing the institutions which adapt to, and plan for, sustainability is how best to introduce policies that bring about short-term benefits to industry (in order to produce revenues) as well as to deliver long-term benefits to society and culture at large. If political institutions are to act as agents of sustainability, they must balance economic performance and environmental considerations in a competitive world. They must also manage the pressures applied to them by NGOs and ENGOs, often the principal agents of environmental change.

Today, development initiatives bring another cast of actors to the stage, such as non-governmental organizations or members of First Nations. These actors are predominantly interested in ensuring that the resources are developed and extracted with minimum impact on the biophysical and social aspects of the environment, while at the same time providing an equitable distribution of the revenues. Political ecology is a useful tool to assess the actions and interactions of the actors involved in a politicized environment. Stott and Sullivan (2000: 2) define political ecology as:

> A concern for tracing the genealogy of narratives concerning 'the environment', with identifying power relationships supported by such narratives, and with asserting the consequences of hegemony over, and within, these narratives for economic and social development, and particularly for constraining possibilities for self-determination.

This definition supports the notion that political ecology reflects the complexity and the pervasive nature of the power relationships among actors, particularly as it pertains to their economic and social well being.

Forsyth's view (2003: 278) of political ecology sees that it "should seek to conduct critical analysis of the political factors that underlie competing definitions and explanations of environmental reality".

An illustration of this complexity is developed by Bryant and Bailey (1997), who describe five approaches in the application of political ecology. Each approach reflects a different way in which research has historically been conducted in the field as well as differing research priorities. No one review or examination of a situation using political ecology fits neatly into any one approach. It is more likely that a researcher might combine elements of two or more approaches in order to answer questions. One approach is to frame political ecology around a specific environmental problem or set of problems, such as soil erosion or tropical rain forest deforestation. This approach reflects a more traditional geographic perspective or understanding of the human impact on the physical environment. An example of this I personally have encountered occurred at the Bullmoose Coal mine of Teck Corporation during my tenure as Chief Geologist (1990-1994). The issue of the potential for acid rock drainage was raised at the regional planning level, which drew attention from the provincial (British Columbia) and the federal department of fisheries. As a proactive attempt to understand the potential problem, we, the industrial actor, were required to operate in what became a highly politically charged forum.

A second approach involves focusing on the social construction of natural hazards and the reconciliation of sustainable social and economic development within the global capitalist system. I experienced this situation

working in Uzbekistan in 1995. The company, Oxus Minerals, was developing a gold operation in the former Soviet Union. Under the old planned economy and political structure, social structure, development of natural resources and social infrastructure was single purpose. The mine operated to extract a specific volume of metal regardless of economics and environmental (in the broadest sense) impact. The community served the operation with little diversification. Once the Soviet Union broke up, each country needed to develop an economy along more capitalistic lines and needed to move towards a more sustainable pathway. Oxus Minerals helped local and federal government officials adjust to a 'profit motive' mindset and helped them move towards a greater understanding of mineral development compatible with sound environmental principles. Such terminology as 'green development' is common under this banner.

The third approach examines the linked nature of political and ecological problems in a specific region. This approach is concerned with the environmental variability and spatial variations in resilience, and the sensitivity of the land, and theories of regional growth and decline. This approach accepts the premise that political/ecological issues can vary from geographic region to region. I have experienced this approach first hand working in Guizhou province in Southern China. The particular area where the mineral project is located is largely agricultural land with little developed formal economy. Locally, barter of agricultural products for manufactured goods is the norm. In this region, there is a long established illegal mining culture that generates some cash for purchasing consumer goods. Although the mining activities are illegal, and are responsible for the degradation of the local water source, the political establishment allows the activity to continue. The mining activity has degraded the local surface waters with dissolved heavy metals, siltation and cyanide discharge as well as being responsible for several deaths of miners. Conflict has arisen as the company has been executing a development plan that meets or exceeds Canadian environmental standards as it stops illegal mining operations.

The county officials are willing to turn a blind eye to the illegal operators in return for economic activity.

A fourth approach explores political ecology issues with reference to socio-economic characteristics, such as class, race and gender. A pervasive example of this approach is the manner in which Aboriginal workers have been dealt with historically in the mining industry. Generally, Aboriginal workers are assigned low-level positions in a mining operation with little or no opportunity to reach higher levels. Historic IBAs simply required developers to hire a specified percentage or number of Aboriginal workers, and only recently have they specifically called for installation of these workers in levels of increasing responsibility and authority.

Finally, the fifth approach focuses on the interests and actions of different types of actors in managing political-ecological conflicts. An example of this approach was the work done by the Mining Association of Canada and the Whitehorse Mining Initiative. This event was the first of its kind where a divergent set of actors met to discuss their issues and work towards a better understanding of each other. Of the approaches described, the final one stresses the need to focus on the interests, characteristics and actions of different types of actors to achieve both explanatory and prescriptive ends. An explanatory approach using political ecology analyzes the key political actors related to a particular issue area, in this case, mineral development, in order to assess relative levels of power and influence over ecological and economic resources. By doing so, it can illuminate the nature of the conflicts or barriers to consensus. A political ecology approach can also be prescriptive because it can be used to assess the potential for cooperation between actors in order to achieve a measure of social equity and to redress power imbalances.

Blaike (1999: 132) sees two approaches to political ecology. First, political ecology explores "the interaction between changing environments and the socio-economy, in which landscapes and the physiographic processes acting upon them, are seen to have dialectical, historically derived and iterative relations with resource use and the socio-economic and political sets of relations

that shape them". Second, political ecology examines "different states of nature, their change through time, and their contested representations under conditions of unequal power; this usually involves the production and/or critique of scientific interpretations as well as others such as by the mass media, policy makers, formal and informal institutions, and various other actors in civil society" (Blaike, 1999: 132).

In this research, the political ecology framework is used to achieve a view of the nature of the distribution of decision-making power, and the sustainable mining criteria are developed as a means of highlighting these relationships.

2.2 Sustainable Mining Criteria

A set of sustainable mining criteria needs to be delineated; one which best represents the essential elements of sustainability, the unique nature of the industry, and the nature of the interactions between actors or stakeholders involved on both temporal and spatial scales. The criteria are based on social equity, economic sufficiency and biophysical integrity, discussed further in Chapter 3.

2.3 Understanding the Northern Situation in the Context of the Criteria

As indicated above, mining has become more and more of a reality in the Canadian North. The reason for focusing on the North is twofold. First, the Northern environment and the cultures within it are fragile. Northern peoples have been forced to accept non-renewable resource development over a relatively short period of time. The challenges from the perspective of long-term sustainability are enormous and need to be addressed. To achieve this, mechanisms need to be in place that can resolve some of the challenges to sustainability. That said, with recent treaty agreements, Northern peoples have an opportunity to participate in the future of Northern development and are no longer readily shunted to the margins of environmental and political decision

making. As such, a Northern case study is an appropriate one to pursue for both academic and applied reasons.

Second, I have spent ten years of my professional career working as a mining executive developing gold projects in the North. This experience has provided the opportunity to see many positive and negative aspects of mineral development in the North. As a result of the established relationships with some members of this community, this locale was selected.

Mining has always been important in Nunavut. From the fool's gold that tricked the English explorer Martin Frobisher in the 16th century, to Kitikmeot copper that supplied the Inuit with weapons and tools, to the mica mines of Kimmirut at the turn of the century, Inuit and non-Inuit have sporadically exploited minerals (Wolfe, 2001). Modern mining in Nunavut began in Rankin Inlet in the 1950s with a nickel mine. Many believe that Inuit in the Keewatin acquired their entrepreneurial capability from experience working at the mine (Wolfe, 2001). Nanisivik, a lead and zinc mine in operation since 1974, is the longest running operation in Nunavut. Currently all four of Nunavut's advanced gold projects, Meliadine near Rankin Inlet, Hope Bay southwest of Kugluktuk, the Meadowbank project near Baker Lake, and the Goose/George Lake project near Bathurst Inlet, are either on sub-surface or partly Inuit-owned land.

Other than the primary factor of permissive geology, investment conditions were established as part of the Nunavut Land Claims Agreement of 1993 (Canadian Arctic Profiles, 2004). Under that treaty, title to approximately 350,000 square kilometres is granted to the Inuit beneficiaries, of which some 35,000 square kilometres included mineral rights. Furthermore, the people of Nunavut are entitled to a share of federal royalties from mineral exploration on what were previously federal lands. Where the Inuit have only surface title to the land, the people have the right to negotiate independently with mineral developers for economic and social compensation for non-renewable resource development.

It is on this basis that the people of Nunavut have the potential to shape their future in a more sustainable fashion. The territorial government of Nunavut has established a separate Department of Sustainable Development to administer the broader functioning of the territory along more sustainable lines; however, the more immediate negative and positive impacts of natural resource development have been most acutely experienced.

The criteria developed in this thesis are based on the notion of sustainability of a local community from all perspectives: industry, local community and government. One mechanism that may embody the characteristics mentioned above is the Impact and Benefit Agreement.

2.4 Impact and Benefit Agreements as One Tool of Sustainable Mining

Impact and Benefit Agreements (IBAs) represent one approach to structuring community and industrial relations. IBAs are tools that, if designed well and implemented effectively, can be used to promote resource development in a manner that contributes to the sustainability of the local environment and economy, and the social and cultural fabric of affected communities (Keith, 1995; O'Reilly, 1999; O'Reilly and Eacott, 1998). IBAs have become a significant component of settled Aboriginal land claim treaties globally, and include some well known decisions, including the Mabo judgment in Australia (Reynolds, 1993; O'Faircheallaigh, 1999) and the Gwich'in and Sahtu in Canada (Keeping, 1999).

IBAs encompass various arrangements and instruments of agreement. They are intended to provide opportunities for communities to derive economic benefits from natural resource development projects that affect them, and to participate in the management, monitoring and mitigation of social, cultural, economic and biophysical impacts.

2.5 Applying the Sustainable Mining Criteria to the Canadian North: An Evaluation of the Literature

Sustainable mining criteria are applied here to examples drawn from the literature to identify where problems have either existed, or continue to exist, with respect to natural resource development. This review serves two purposes. First, it will confirm existing assumptions, and solidify the criteria. Second, it will weigh or measure the relevance of criteria elements and move towards a prioritization of elements, thereby moving towards the development of a blueprint for the next generation of IBAs.

2.5.1 A Comparison of Current IBAs According to Criteria

In this thesis, the criteria are applied to the six existing IBAs shown below (Table 2.1). These examples were chosen as they represent the evolution of the IBA model from its earliest form (e.g. Dona Lake) to its most complex form to date (e.g. Ekati or Diavik). This is accomplished through the use of secondary literature. The results will be compared and contrasted and essential, acceptable, and undesirable elements (all based on the criteria) and common characteristics extracted.

Project	Project Owners(s)	Aboriginal Groups
Raglan Nickel (PQ) (1995)	Falconbridge Ltd.	Nunavik Makivik Corporation
Musselwhite (ON) (1992)	Placer Dome Inc.	Windigo, Cat Lake, Shibogama, North Caribou Lake, Kingfisher, Wunnumin Lake First Nations
Ekati (NU, NWT) (1998)	BHP/Diamet	Akaitcho Treaty 8 Council, Dogrib Treaty 11 Council, North Slave Metis Association, Kitikmeot Inuit Association, Inuit of Kugluktuk
Diavik (NU, NWT) (2000)	Rio Tinto/ Aber Diamond Mines	Yellowknife Dene, Dogrib Treaty 11 Council, North Slave Metis Association
Voisey's Bay (NF) 1998)	Inco Ltd.	Labrador Inuit Association, Innu Nation
Ulu (NU, NWT) (1997)	Echo Bay Mines Ltd.	Kitikmeot Inuit Association
Jericho (NU) (2004)	Tahera Diamond Corp.	Kitikmeot Inuit Association

Table 2.1 Impact and Benefit Agreements Reviewed

2.6 Review of the Primary Case Study IBA: Tahera Diamond Corporation's Jericho Project

On September 9, 2004, Tahera Diamonds and Kitikmeot Inuit Organization signed the most recent IBA, and it may be considered as state of the art in terms of the sustainability criteria developed as part of this research. This IBA is examined relative to the criteria, but also interview results are incorporated to supplement and enrich the analysis to develop a view of the political ecology of natural resource (i.e. mineral) development in the West Kitikmeot Region of Nunavut, and the territory as a whole. I attended the signing ceremony in Cambridge Bay as well as having several meetings with senior officers responsible for the agreement. I was able to have interviews with a senior

member of NIRB, KIA and the Hamlet to discuss their perspectives on the agreement.

The results of the interviews identified deficiencies in the current IBA structure as well assisted in developing a sense of the political ecology of natural resource development in the Cambridge Bay area.

The location map (Figure 2.1) highlights the Hamlet of Cambridge Bay and the Jericho Diamond Project.

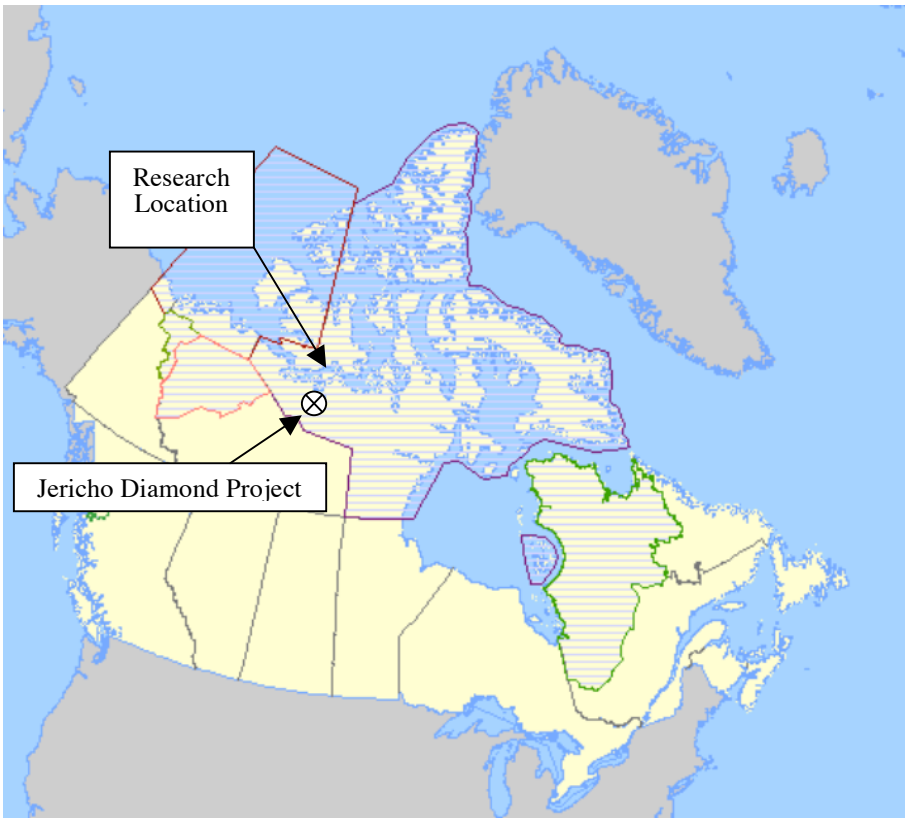

Figure 2.1 Cambridge Bay and Jericho Diamond Project Location Map

2.7 A Blueprint of the Next Generation of IBAs for Sustainable Mining

The final phase of the research develops a blueprint for a conceptual IBA for sustainable mining for communities, modeled after Cambridge Bay. Using sustainable mining criteria as a guide for exploring government, community and industry priorities, this ideal blueprint represents the culmination of an exhaustive review of the literature, as well as a review of previous and existing

IBAs and socio-economic agreements. The ultimate utility of this proposed next-generation IBA lies in the hands of the actors themselves and their ability to find compromise through effective and open discourse among a variety of stakeholders or actors.

2.8 Methodological Tools for Case Study Analysis

The following list includes the major tools and approaches used in the analysis. They include:

- Case Study Approach
- Qualitative Analysis
- Key Informant Interviews
- Examination of Documents and Material Culture
- Analysis - Discourse Analysis
- Triangulation - Bracketing

The following is a brief description and rationale for each tool.

2.8.1 Case Study Approach

The case study approach has a long tradition in the sciences. Case studies bring real-world situations under examination. A case study strategy, with its emphasis on the examination of one setting, was considered appropriate since it placed action and events in context. In order to take account of the uniqueness of each case, to fully understand the issues being studied, and to make findings more given to examination under the theoretical lens (i.e. political ecology) and to develop generalizations (Miles and Huberman, 1986), a multi-case study approach was adopted. This enabled issues emerging from one case to be compared and contrasted with issues from other cases. It was hoped that this would enhance not only the validity of findings and the scope of ideas developed, but also contribute to the robustness of the understandings established.

2.8.2 Qualitative Analysis

For this research, a qualitative approach has been selected. 'Qualitative' implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured in terms of quantity, amount, intensity, or frequency. Qualitative research stresses the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational context and constraints of what is being studied. This type of inquiry emphasizes the value-laden nature of inquiry and seeks answers to questions about how social experience is created.

In contrast, quantitative studies emphasize the measurement and analysis of causal relationships between variables, not processes. Proponents of such an approach often claim their work is done within a value-free framework.

Flick (1998: 3) summarizes the differences between these two approaches. He observes that the quantitative approach has been used for the purposes of isolating "causes and effects… operationalizing theoretical relations… [and] measuring and… quantifying phenomena… allowing the generalization of findings". Flick (1998: 2) continues:

> Rapid social change and the resulting diversification of life worlds are increasingly confronting social researchers with new social contexts and perspectives … traditional deductive methodologies … are failing … thus research is increasingly forced to make use of inductive strategies instead of starting from theories and testing them … knowledge and process are studied as local knowledge and practice.

Becker (1986) identifies five significant ways in which qualitative research differs from quantitative research:

(1) *Positivism and Postpositivism*

Both of these traditions hold to critical realist positions concerning reality and its perception. The positivist position contends that there is reality which can be studied, captured and understood, whereas the

postpositivists argue that reality can never be fully apprehended, only approximated (Guba, 1990). Postpositivism relies on multiple ways of capturing as much of the reality as possible. At the same time, emphasis is placed on the discovery and verification of the theories. Qualitative procedures also lend themselves to structured analysis including frequency counts, tabulations and low-level statistical analysis.

(2) *Acceptance of postmodern sensibilities*

There tends to be a blurring of the differences between the two traditional styles of inquiry. A new trend in inquiry sees the use of positive methods as just one way of telling stories about society or the social world. These methods may be no better or worse than any other methods; they just tell different kinds of stories (Guba, 1990).

(3) *Capturing the individual's point of view*

Both traditions of inquiry believe that they are concerned with a person's perspective. Qualitative researchers access this through detailed interviewing and observation, whereas quantitative researchers rely on more inferential empirical methods and materials. Quantitative researchers argue that the empirical materials produced by interpretive methods are unreliable, impressionistic and not objective (Guba, 1990).

(4) *Examining the constraints of everyday life*

Qualitative researchers are more likely to confront and come up against the constraints of the everyday social world. They see this world in action and their findings are embedded in it. Quantitative researchers abstract from this world and rarely study it directly (Guba, 1990).

(5) *Securing rich descriptions*

Qualitative researchers believe that rich descriptions of the social world are valuable, whereas quantitative researchers are less concerned with

such detail. Quantitative researchers are deliberately unconcerned with rich descriptions because such detail interrupts the process of developing generalizations (Guba, 1990).

As indicated above, an overall postpositive, qualitative approach has been chosen for this research. The principal reason is the nature of the subject itself. The issues being examined are largely social constructs and highly value laden. A large part of what drives success in designing and completing a successful IBA is derived from interviewing, observing and writing rich descriptions.

2.8.3 Key Informant Interviews – Qualitative

There is a range of methods for collecting and analyzing information from qualitative research, from direct observation to the interview.

Perhaps the most common method of data collection is the interview. In the process of the interview, such elements as power, race, gender and class intersect. The interviewer him/herself sets the tone with imposition of their own worldview, gender, class and race through the design of the actual questions to be asked. The interview itself is a conversation and certainly not a neutral tool of inquiry. The method produces situated understandings and is highly influenced by the personal characteristics of the interviewer.

There are three general forms of interview: structured, unstructured and open-ended. Within these categories, there are subdivisions including focused or group interviews, oral history interviews, creative interviewing and gendered, feminist, and postmodern or multivoiced interviewing. For the purpose of this research, the unstructured interview was the preferred form, due to the nature of the interview subjects and their culture.

2.8.3.1 Unstructured Interviewing

This method offers the opportunity to provide a greater breadth of data and insight than other types due to its intrinsically qualitative nature. Fontana and

Frey (2000) define this type of interview in great depth. Their analysis highlights the true qualitative nature of this type. For example, the consideration of how to access the setting, or how to 'get into the subject' group along with understanding the setting and culture of the subject group are essential aspects. These types of interviews require careful note taking, documenting both what is being said and what is not being said or implied.

For the purpose of this research, the principal investigative tool is the unstructured interview. This method provides one step of the data gathering process planned for this research. Other steps include reviewing and analyzing primary and secondary literature. Each successive step builds, augments and reinforces the next.

The results of the interviews set the practical boundaries for the criteria of sustainable communities. Careful note taking, as mentioned above, was key in extracting as much as possible out of the interviews. The interviews were conducted during the period of September 6-13, 2004 in Cambridge Bay, NU and over the following several months through telephone interviews. Interview subjects were selected based on several criteria. First, most of the interviewees were familiar to me which allowed for easy access. Second, these individuals were freer in their admission of inherent biases based on our exiting relationship. Other contacts and subjects interviewed were selected on the basis of availability. In terms of local Inuitmiut inhabitants, I tried to meet and interview individuals representing diversity in terms of age, gender and ethnicity to compare and contrast opinions, values, attitudes, images and willingness to accept change. The purpose of the interviews was not as a major source of data, but rather as a supplementary source augmenting information obtained from primary and secondary literature reviews and analyses.

Table 2.2 identifies the interview subjects.

Actor	Number of Participants
Industrial	3
Kitikmeot Inuit Association	2
Community of Cambridge Bay	4
Territorial and Government	2
Non Governmental Organization	1
Total	12

Table 2.2 Interview Participant Matrix

Unfortunately, I was unable to successfully complete any interviews with the Elders of the community. Three attempts were made with different individuals but it became apparent that this group was not willing to participate. It was pointed out by a younger Inuitmiut representative that Elders are loath to speak individually as this is against the tradition of presenting themselves as a group. Had the researcher had the opportunity to have several Elders in a group interview setting with a younger person as an interpreter, the process might have been successful. I was unable to assemble a group of Elders due to lack of access to those who could assist me.

The purpose of the interviews was not to serve as a primary data collection source but rather to substantiate issues that emerged from the case study review. Although the sample size is small, many of the individuals were leaders in their respective organizations.

2.8.4 Examination of Documents and Material Culture

Considerable data were collected from primary and secondary literature and documents. Documentary material endures physically, and can be separated from the author, and its time and space.

Lincoln and Guba (1985) make an important distinction between a record and a document. A record, in their view, is an attestation of some formal event, such as a contract. A document, however, is a more personal text,

reflecting something closer to speech and requiring a more contextual interpretation. Traditionally, the review of documents has been seen as a true indication of original meanings as opposed to other types of inquiry (see Derrida, 1978). Derrida, interestingly, points out, however, that the meaning of the text does not reside in the text, but rather in the writing and reading of it. There is a decisive gap between the author and the reader, and the opportunity for multiple reinterpretations becomes infinite. The record and document can say many things in different contexts and are a classic tool of the qualitative researcher.

During the research, I had access to proprietary text material, both documents and records. I recognize the nature of documentation as pointed out by Derrida above, as it is acknowledged that much of the specific literature and material will have a strong bias associated with it. As part of the due diligence associated with this review, a clear note of bias was made where recognized.

2.8.5 Discourse Analysis

Discourse analysis is neither a quantitative nor a qualitative method, but a manner of questioning the basic assumptions of quantitative and qualitative research methods. Discourse analysis does not provide a tangible answer to problems based on scientific research, but enables a view of the ontological and epistemological assumptions behind a project (Palys, 1997). Discourse analysis helps the researcher to recognize hidden motivations behind a text. Critical or discourse analysis is nothing more than a deconstructive reading and interpretation of a problem or text (a postmodern interpretation of reality) (Derrida, 1990). Discourse or critical analysis is a matter of interpretation. As there is no hard data provided through discourse analysis, the reliability and the validity of research findings depend on the force and logic of the argument.

Due to the nature of the situation under examination, it is important to identify hidden motivations associated with any particular stakeholder group. As cited in Frohmann (1992), discourse analysis simply exposes the conditions behind a problem, and helps determine the essence of that problem. This

depends on an understanding of the context – which can be brought to documents, if otherwise gained, most often from firsthand experience. Although no hard data are collected in discourse analysis, careful recording of interviews (audio and text) provides the raw data.

2.8.6 Triangulation – Bracketing

Qualitatively-oriented social scientists often use triangulation to argue in favour of an integration of qualitative and quantitative methods (see Denzin, 1978; Flick 1992; 1998; Fielding and Fielding, 1986). The term was initially borrowed from quantitative psychology, specifically the theory of psychological testing. Campbell and Fiske (1959) proposed to supplement or to further test empirical results by the use of different instruments or methodologies. Webb et al. (1966) argued that the collection of data from different sources and completing their analysis with different strategies would improve validity. They state: "Ideally, we should like to converge data from several different data classes, as well as converge with multiple variants from within a single class" (Webb et al., 1966: 35).

However, the idea that research results produced with different instruments can be used to enhance validation has been criticized by some authors (e.g. Fielding and Fielding, 1986 and Flick, 1992; 1998). Fielding and Fielding (1986: 31), for example, called attention to the fact that researchers may misinterpret commonalities and differences between data collected with incompatible methods by falsely assuming "a common epistemic framework among data sources". Consequently, using several different methods can actually increase the chance of error. Other critics of Denzin's approach (e.g. Hammersley and Atkinson, 1983: 199; and Bryman, 1988: 133) have rejected the view that convergence of research results has to be interpreted as a sign of validity. Two meanings of the term triangulation emerge in the literature: triangulation as a process of cumulative validation, and triangulation as a means to produce a more complete picture of the investigated phenomena.

Denzin (1989) suggests a method termed bracketing. In this case, the researcher treats all the data in various forms equally. Subsequently, the data can then be categorized, grouped and clustered in order to interpret the data. The following outlines what Denzin (1989) suggests as the steps in bracketing.

1. Locate within the personal experience, or self-story, key phrases and statements that speak directly to the phenomenon in question. 2. Interpret the meanings of these phrases as an informed reader. 3. Obtain the participants' interpretation of these findings, if possible. 4. Inspect these meanings for what they reveal about the essential, recurring features of the phenomenon being studied. 5. Offer a tentative statement of definition of the phenomenon in terms of the essential recurring features identified in Step 4.

Table 2.3 Steps to Bracketing (Denzin, 1989)

2.9 Strengths and Limitations of the Research:

The following sections identify what I believe to be the strengths and limitations to the research. These include the role of the author as both a participant and observer, the limitations of the political ecology framework discussed earlier in this chapter, and the specific nature of each IBA. Each IBA is unique to the situation and less prone to generalities. The following section will specifically focus on the role of the author in the research.

2.9.1 The Role of the Author as Participant-Observer

During the winter of 1995, the author was part of a contingent of mining executives charged with negotiating the terms of an Inuit Impact and Benefit Agreement with members of the local Kitikmeot Inuit Association in Cambridge Bay, NWT (now Nunavut Territory). The successful completion of the agreement was an important step towards the attainment of all of the necessary licenses and permits needed to put the Ulu Gold project into production. This was the first contact I had had with any Inuit peoples, and reshaped how I viewed native peoples, their culture, values and lifestyle.

For the most part, my travels had taken me largely to Latin America up to that point, and I had experienced mineral development from the perspective of principally Andean agrarian societies. In contrast, from a solely Southern Canadian existence, I came to realize a dramatic shift in values, from what I had known to what I then experienced. In particular, over the course of negotiations, public meetings and local hamlet visits, I came to recognize a unique power structure, ways of demonstrating or exerting influential power, and perhaps most important, the contradictory struggle the Inuit people were having with the intrusion of Southern-based natural resource development on traditional aspects of their livelihood.

I have since then traveled to 138 countries and have participated in the development of natural resources in many different cultures and geographies. One common thread exists: the need for the fair negotiation of impact and benefit agreements. The term 'fair' in this context implies equitable distribution of any benefits (economic and social) arising from the development, as well as mitigation and protection from any deleterious environmental and socio-economic effects. Although the current research focuses on the Inuit of Northern Canada, the principles derived may be generally applicable, whenever the possibility of natural resource development arises.

2.9.2 The Author as Participant-Observer: Biases and Experience

As indicated above, the researcher and final product are placed in a realm much different from that which they originate. The researcher must be able to perceive and contextualize his or her own experience and world view, while at the same time be in a position to view, with an element of empirical detachment, the subject of the research itself. Vidich and Lyman (2000: 38) stated "one that conceives the observer as possessing a self-identity that by definition is re-created in its relationship with the observed".

The research task itself consisted of observation and gathering of data, as well as the communication of the analysis of those data. However diligent the researcher was, the description of the data gathering exercise might never be

complete due to a shift in logical reference from life experiences of oneself and the apparent objective observation. Goffman (1959, 1974) describes this as drawing on an interesting contrast of observations made during a strictly scientific exercise and the final performance or product of an artist (e.g. a ballerina or a poet). In a purely scientific endeavour, the observation is a collection of readings or measurements, whereas the act of composing, writing, painting, or performing is a creative act and an intrinsic part of the creator's craftsmanship. Goffman (1959) observes that if the artist were asked how the piece was created, the response would be some sort of "ex post facto reconstruction" or method. The end result is the same in both the pure science endeavour and the art of social science; that being the integrity of the final product is the same, regardless of how it was accomplished. The argument reduces itself to the final condition of creativity. The creativity behind qualitative research is a function of the enriched life history of the observer (i.e. researcher) and the application and experiential lens through which the subject is observed.

Not only do researchers have to understand and acknowledge their position (e.g. observations and conclusions) relative to their subject, they must be confident of their position within the community in which they operate. They also must be in a strong position to defend their conclusions within an increasingly charged ethical and political regime. Greenwood and Levin (2000) correctly point out that since the inception of the social sciences in the 1800s, and perhaps earlier with Aristotle and up to the beginning of the 17th century, social research has been aimed at social improvement. Furthermore, social-change oriented research (or the 'action research' of Greenwood and Levin, 2000: 94) is the form of research required to achieve valid results and bring about useful social change (Greenwood and Levin, 2000: 92). This change is not without ethical and political battles. Researchers find themselves in a position of operating within the confines of a university setting, ever increasingly becoming more focused on financial issues and extra- academic political positioning rather than social engagement. Greenwood and Levin

(2000) propose a redefinition of social research to distance the researcher and product away from academia and to embrace a more collaborative agenda.

Such research would include the involvement of community or organizational stakeholders with the researcher in the process of defining objectives, constructing the research questions, learning research skills, pooling knowledge and efforts, conducting the research, interpreting the results, and applying what is learned to produce positive social change (Greenwood and Levin, 2000: 94). Such an approach to social research would satisfy the test of social research, whether it provided effective support for stakeholders' actions, organizations and communities in their quest for self determining social change.

2.10 Ethics

The research program outlined above has received approval from the University of Waterloo, Office of Research Ethics. The identity of the participants in the unstructured interview phase of the project has not been revealed here. When using a participant's quotation, observation or comment, the individual was identified only by their affiliation.

A second approval was obtained for the Northern Research Institute (Nunavummi Qaujisaqtulirijikkut) in Iqualuit, NU. A research license was granted after the application was reviewed at the territorial, regional and local levels.

2.11 Conclusion

The approach in this research consists of a political ecology conceptual framework providing a mechanism to view the power relations that exist within the dynamic setting of natural resource development in Northern Canada. Although the concept itself is relatively young and the result of the hybridization of several other fields of research, it is a potentially effective tool to analyze the political landscape of mining and the impact on Inuit communities, and allows the researcher to identify areas where this inequality of decision-making power can be resolved.

As discussed in Chapter 1, IBAs are the suggested tool to promote sustainability and overcome inequality. The IBA mechanism contains many elements that, if employed appropriately, may be effective to achieve that end. A second method employed in this research is to develop criteria intended to alter the existing IBA architecture. These criteria are then applied to existing and past IBAs to assess their level of 'sustainability'. The criteria are then applied to a specific case study (i.e. Jericho Diamond Project IBA), along with unstructured key informant interviews, to identify, confirm and further illustrate the political ecology of the Hamlet of Cambridge Bay. A political ecology landscape is then developed, and observations and recommendations are based upon that analysis.

The overall methodology is qualitative. I believe this is an approach that stresses the social aspects of the research topic, places the researcher into the story as participant and observer, and ultimately seeks answers to questions about how the political ecology of the region operates.

Chapter 3 examines the topic of sustainability, mining and impact and benefit agreements through a review of the existing literature.

Chapter 3: Sustainability, Mining and Impact Benefit Agreements: Literature Review

3.0 Introduction

This chapter examines concepts of sustainability and sustainable development, sustainability criteria and the evolution of IBAs. Common elements of the various definitions and notions of sustainability provide the basis for a working conceptual framework from which the Impact and Benefit Agreement blueprint is developed. The chapter also serves to identify gaps in the existing knowledge base and the contribution of the thesis. Included in this chapter is a review of the literature on the sustainability of communities affected by mining operations. The literature on this topic has recently been broadened as part of a mining industry initiative (e.g. the Global Mining Initiative) (ICMM, 2004) and efforts from the International Institute of Environment and Development in response to submissions at the Rio +10 conference in Johannesburg (ICMM, 2004). These contributions to the literature tend to have an industry bias. They do, however, also demonstrate a concerted effort to reconcile mining with sustainability principles.

3.1 Sustainability and Sustainable Development

The definition of sustainable development, well known from the United Nation's World Commission on Environment and Development, has evolved and developed over the years. The most widely quoted definition of sustainable development is from the United Nation's World Commission on Environment and Development

> Humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED 1987:44).

Furthermore, the Commission acknowledged the role of various agents, including economic ones, in the following statement:

> In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations (WCED 1987: 46).

The 1992 Rio Conference on Environment and Development suggested that the purpose of sustainable development is to seek the mutual goals of economic development and environmental protection to fulfill basic needs of all (United Nations Division for Sustainable Development, 1992).

Since then, other environmental, political, and industrial groups have modified this definition to encompass a variety of interactions between humans and their use of the Earth's resources.

One of these definitions was proposed in Caring for the Earth – A Strategy for Sustainable Living, published by the World Conservation Union (IUCN), the World Wide Fund for Nature and the United Nations Environment Program. They describe sustainable development as "improving the quality of human life while living within the carrying capacity of supporting ecosystems" (WCU et al., 1991: 8). This definition narrows the concept to focus on the biophysical aspects of sustainability, not as one that is holistic or one that incorporates social and economic considerations.

A more workable definition of sustainability is that of living within ecological limits. The key issue is the extent to which the environment (which includes interrelated biophysical, economic and social components) can support an increasing throughput of energy and materials. Approaches that are based upon long-term sustainability goals require a set of threshold criteria for environmental performance (sustainability indicators). Rigorous methods of assessment and regulation need to be developed in order to monitor and assess

land use and energy and mineral extraction locally, nationally and globally against sustainability criteria.

Sustainability entails the realization of human needs and rights, while maintaining the natural integrity of biophysical systems that support anthropocentric activities over the long term. Healthy human communities are an integral part of sustainability. Poverty leaves little room for contemplation about either the needs of future generations or the long-term health of an ecosystem because immediate survival is the predominant concern. Recognition of human needs and rights includes a wide range of requirements such as adequate food, water, and shelter; economic stability; cultural fulfillment; and meaningful political participation and decision-making capacity (Gardner and Roseland 1989; Robinson et al., 1990; United Nations Division for Sustainable Development, 1992; and Gibson, 2002).

Glauser et al. (2005: 2) suggest that the three essential elements of sustainability are biophysical integrity, social vitality and economic sufficiency.

(1) *Biophysical Integrity*: The process of sustaining desired ecosystems and all human and natural activities that depend upon them requires biodiversity and regenerative capacity. Biological diversity of plant and animal species is needed to protect the resiliency of ecosystems, allowing them to recover from human-made or natural disturbances (Kay et al., 1999). Maintenance of species biodiversity in a mining region requires management practices that protect, sustain and possibly restore important habitat and ecosystem functions. Healthy ecosystems have the capacity to evolve and regenerate naturally. A healthy ecosystem will produce clean water, clean air, and fertile soil through complex cycles (carbon, hydrologic and nutrient), which must be maintained for regeneration (Kay et al., 1999). Ensuring that ecosystems in mining regions do not lose the ability to regenerate naturally requires proactive planning and management.

(2) *Social Vitality*: Social vitality requires more than the fulfillment of basic needs; it also requires a good quality of life as well as a sense of personal efficacy in which individuals have some control over the decisions that directly affect their environment. Several human necessities, however, must be met before any other economic, social or biophysical goals can be accomplished. These include the provision of adequate amounts of food, clean water, and suitable shelter (Robinson et al., 1990, United Nations Division for Sustainable Development, 1992). A requirement of sustainability in any mining region is to ensure basic needs, despite the temporary nature of the mining activity. Sustaining a local mining community depends on planning throughout the mining life cycle, from exploration and development through to post-closure, so that community members can contribute to the social vitality of their living environment.

Social vitality also suggests that communities and their residents maintain a measure of control over those decisions that affect their immediate environment (Gardner and Roseland 1989, United Nations Division for Sustainable Development, 1992). Within mining regions, this would mean that decisions about resource exploitation, health and safety, and physical development would include all relevant stakeholders in the decision-making process. This participation could take place through health and safety committee meetings, open community forums, or other means where the interests and opinions of all members of a mining community can be aired.

(3) *Economic Sufficiency*: Mining activities can serve to polarize a community through the inadequate distribution of wealth. Sustaining the life of a mine as well as that of a community depends on a cooperative company-community relationship. This can be achieved by enhancing the quality of life of the community, through such initiatives as profit sharing, development of community approved

> programs that foster education, health and economic opportunities. Finally, new mining management practices need to be adaptable and flexible in order to respond effectively to rapidly changing environmental, socio-economic and political circumstances.

Cameron (2004) suggests a fourth pillar of sustainability be 'Cultural' to cover a set of values, history, traditions and behaviour that link specific groups of people together.

This 'pillar' way of thinking reflects conventional modern categories. It is understood that these pillars are interconnected and interdependent. The sustainability debate in the literature is evolving towards a system that is developed on the basis of concerns rather than pillars that represent contradictions. CEAA (2005) presents a list of 'spheres of concern' that integrate aspects of ecological systems theory, corporate greening initiatives, growth management planning, civil society advocacy, ecological economics, and community development.

CEAA (2005) presents the following concerns that serve to elaborate on the definition of sustainability.

(1) *Integrity*: Build human-ecological relations to maintain the integrity of biophysical systems in order to maintain the irreplaceable life support functions upon which human well being depends.

(2) *Sufficiency and Opportunity*: Ensure that everyone has enough for a decent life and that everyone has opportunities to seek improvements in ways that do not compromise future generations' possibilities for sufficiency and opportunity.

(3) *Equity*: Ensure that sufficiency and effective choices for all are pursued in ways that reduce dangerous gaps in sufficiency and opportunity (and

health, security, social recognition, political influence, etc.) between the rich and the poor.

(4) *Efficiency*: Reduce overall material and energy demands and other stresses on socio-ecological systems.

(5) *Democracy and Civility*: Build our capacity to apply sustainability principles through a better informed and better integrated package of administrative, market, customary and personal decision-making practices.

(6) *Precaution*: Respect uncertainty, avoid even poorly understood risks of serious or irreversible damage to the foundations for sustainability, design for surprise and manage for adaptation.

(7) Immediate- and Long-term Integration: Apply all principles of sustainability at once, seeking mutually supportive benefits.

These areas of concern serve not as a substitute for the pillar approach but rather as an enhancement which ameliorates the sometimes contradictory image they present.

3.2 Challenges Facing the Sustainability of Mining Communities

The mining industry suffers from a range of problems associated with real or perceived environmental and social performance. This has been well documented in the literature (Mining Association of Canada, 2004). Key issues are:

- Public opinion of the sector as a whole is poor.
- Pressure groups have consistently targeted the sector at the local and international level, challenging its legitimacy.

- The financial sector is focusing on the mineral industry from both risk management and social responsibility perspectives.
- Many companies have invested significantly in improved environmental and social performance, and yet cannot shed negative public perceptions.

Negative public perceptions have become key drivers for the mining industry to introduce sustainable business plans which include the support and fostering of sustainable mining communities.

Increasingly, the terms sustainable mining and sustainable mining communities have entered the discourse of the mining industry and multilateral institutions (e.g. World Bank). A number of initiatives have sought to define a 'sustainable mining community' as characterized by socially and environmentally responsible mining (see Bass and Ruiz-Mueller, 1999; Ross, 2001; Power, 2002; Weber-Fahr, 2002; and Pegg, 2003).

Mining transnational corporations have developed a framework that they call 'mining sustainability'. This term appears primarily to refer not to sustainable development or sustainability in the sense defined above, but rather to lengthening the lifespan of mining operations (Placer Dome, 2000 and Rio Tinto, 2001). This extension of the mine's life has the potential to reinforce mineral-dependent behavior in affected communities. These policies usually increase the biophysical effects of operations and exacerbate negative social and cultural impacts (Wolfe, 2001).

Mining is often the leading economic player in its physical area of operation. The development of a mining operation represents a windfall development, ushering in a sudden influx of wealth to a community. However, most mines have a lifetime of 15 years or fewer. Furthermore, mining companies often have monopsony power (i.e. the only economic alternative in the region) over their areas of operation, and are often the only source of stable employment and infrastructure development. As a result, they have a significant political advantage in their areas of operation.

Two of the most significant challenges facing the sustainability of mining communities are: (1) the degree to which the mining industry itself operates within the community; and (2) how the industry views its social responsibility towards affected communities (Eggert, 2001).

3.2.1 Mining and the Affected Community

Viega et al. (2001: 30) define a mining community as "one whose population is significantly affected by an associated mining operation. This may be through the provision of direct employment or some impacts arising from mining, albeit environmental, social or economic impact".

Although offering a reasonable starting point, this definition should further include that the mining operation is not restricted to just the physical removal and processing of material but also includes all phases of the project life span from exploration and discovery, development and construction, mining operations, closure and to post closure monitoring. These phases of operation, neglected in the definition offered by Viega et al. (2001), have the potential for impacts of considerable magnitude in addition to those commonly associated only with the operation itself.

The global mining industry, through the operations of transnational corporations as well as smaller operators, has often operated in less than a sustainable manner (see Table 3.1) and usually not in accordance with the principles of sustainability discussed above.

Nature of the Event	Company(s)	Country	Reference
Appropriation of lands of indigenous peoples and massive displacements of communities	BHP Gold Fields of South Africa PT Freeport	Papua New Guinea Ghana Indonesia	MPI Media, 2001 Project Underground, 1998 TAPOL, 1997
Large-scale destruction of lands, mountains, forests, agricultural lands (i.e. erosion, siltation, deforestation, and desertification)	Placer Dome Pegasus	USA USA	CBC, 1998 CBC, 1998
Pollution of soils and rivers	Esmerelda Expl'n. Cambior Boliden	Romania Guyana Spain	ENS, 2000 CBC, 1998 Macklin et al., 1999
Mining accidents (i.e. collapse of underground workings)	Wheal Jane AngloGold	England South Africa	Younger, 1997 Project Underground, 1999
Health problems	TeckCominco	Canada	TeckCominco, 2001
Destruction of traditional values and customs	BHP Placer Dome	Papua New Guinea Philippines	MPI Media, 2001 CBC, 1998

Table 3.1 Types and Examples of Mining Impacts on Communities

As a result of these types of impacts, the global mining industry is increasingly faced with protests and the resistance of communities against the entry of mines, land displacement, and pollution of land and waters. These consequences have resulted in increasing militarization in many communities particularly in Latin America (e.g. Tambo Grande in Peru, Manhattan Minerals Corp., 2001), stimulating the industry to pay more attention to community demands. As a result, it is noted that local actors are gaining influence.

The notion of mineral-led sustainability offers one way in which the incidents, exemplified above, can be more effectively managed.

3.2.2 Mineral-Led Sustainability

Mineral development occurs in several stages, known as the 'mineral cycle'. The process begins with the discovery and development of a major mineral reserve (the youthful stage), followed by the discovery of additional deposits and expansion of existing facilities (the mature stage) (Auty and Mikesell, 1998; Auty and Gelb, 2000). At the mature stage, the mineral potential of the country is being exploited and mineral output has peaked or leveled off. During the youthful stage, mineral exports may constitute a large contribution to the rate of economic growth. This initial phase is unsustainable on a stand-alone basis and a non-mineral dependent sector begins to develop.

Often there is an existing non-mineral dependent infrastructure already in place and it may become disrupted as a result of the new activity. In this case, the existing infrastructure may re-develop. I experienced a first-hand example of this in the community of Tambo Grande in Northern Peru in 2001. A Canadian exploration company had completed exploration activities in a region that was almost entirely agriculture-dependent. The progression to a development from the youthful stage was aborted because the local community did not want its local economy disrupted. Another example of this kind of reaction that I experienced was in central Argentina in 2003, where Meridian Gold was attempting to initiate an exploration program. Again, the local community decided that mineral development was not compatible with its largely agrarian economy, hence the development was aborted. If sustainable policies are not instituted early in the life of the project, the economic performance of a nation or community will decline sharply and halt further economic growth. Another factor that may affect the overall performance is how the particular mineral product performs in a global market. In a declining price environment, the secondary industry development would be slowed if not halted.

The rate of evolution from the youthful to the mature stage is an important factor, and one that can severely influence the success of any

sustainability program or policy. If early maturity takes place, policies are required to accelerate sustainable economic diversification.

Over the long term, mineral production revenues will decline significantly relative to the size of the overall economy. It is not the mineral industry that needs to be sustained, but rather the employment of mineral revenues to stimulate secondary and tertiary economic activity and growth. This spin-off effect allows for ongoing maintenance of economic, political, biophysical, and social conditions for sustained community health and stability beyond the life of the mine.

An example of a successful transition from a predominantly mineral-led economy to one not dependent on a mine is the community surrounding the Kori Kollo mine in Bolivia. The owner at the time, Battle Mountain Gold, planned for the closure of the mine while developing the original operation. A product of this closure and post closure planning included the establishment of the Inti Raymi Foundation which was responsible for the provision of education, community health and economic development services for over 1000 families in 25 communities around the Kori Kollo mine (World Bank Mining Group, 1997). In 1994, I visited the operation and saw a thriving program that was focused entirely on preparing the community for a life without mining. An extensive industry consisting of handicraft textile manufacture and livestock breeding was providing employment for many of the community's women and men. The operation is in a mature phase where production is far less than at its peak, with mining operations having been reduced to minimal levels.

A significant risk associated with mineral-led economies is fluctuations in the price of the commodity on which their existence depends. In these types of economies there is a tendency towards 'boom or bust' cycles that can impede any long-term secondary or tertiary economic development or redevelopment of the local economy. There are numerous examples of cases where the price of the commodity dictated an early demise of the mine and therefore the livelihoods of many members of the affected community (e.g. Detour Lake in

Northern Ontario, Shebandowan Nickel Mines in Northern Ontario, Uranium City in Northern Saskatchewan, Black Dome in British Columbia.

A mining company that wishes to adopt sustainable practices must rely on consultation with the other actors through each stage in the life cycle of an operation, including exploration, design, construction, operation and closure. These activities must take place in a way that respects and responds to the social, economic, and biophysical needs of the current inhabitants and does not adversely affect future generations (Table 3.2). This approach requires a comprehensive evaluation of what is required for a sustainable community.

Criteria of Sustainability	Description
A vision of stewardship	Manage local resources for the long term, and give preference to locally available and renewable resources
Systemic technology	Use a systems approach that accounts for all inputs and outputs of production, and for more renewable materials
Value-added production	Emphasize the end value of a resource and attempt to maximize this value relative to the inputs
Enduring quality	Produce durable goods that are reusable and repairable
Sustainable measurement	Use alternatives to discounted cash flow analysis
Appropriate scale	Consider optimum business size, and how business growth may affect the environment
Maximization of non-material growth	Emphasize human activity and personal or community development that is not material or energy intensive, including health care, social services, the arts, hobbies, sports and education
Circular economics	Recirculate money within a local or regional economy
Equity	Meet peoples' needs through sharing political power and the fair distribution of life-sustaining resources
Work flexibility	Allow home work, flexible hours and other work alternatives
Orchestral style	Establish a link between ownership obligations (i.e. problem solving) and rights (the economic and social benefits of ownership)
Maximization of the 4 R's	Reduce, reuse, recycle and repair within the organization
Direct investment	Invest in local and beneficial projects

Table 3.2 Sustainability Criteria and Descriptions (M'Gonigle 1989; Davis 1991; and Mathewson and M'Gonigle 1997)

These criteria are also reflective of the 'spheres of concern' developed by CEAA as a tool to blend the traditional pillars of sustainability.

3.3 The Social Responsibility of the Mining Industry

Mining companies, during the recent phase of globalization, have contributed towards improved social development through providing jobs, and tax revenues, building an industrial base, enhancing efficiency, earning foreign exchange and transferring technology. On the other hand, they also have been linked to interference in sovereign affairs, deepening disparities in wealth, poor labour conditions, corruption, transfer pricing, pollution incidents, health and safety failings and disrespect for human rights (Warhurst and Lunt, 1997).

A growing voice in society is demanding that mining companies be proactive in dealing with the people and environment in which they operate (Wismer, 1996). Warhurst and Lunt (1997) argue that in developing countries, with the absence of a strong state and empowered stakeholders, and especially where regulation is weakly developed or enforced, mining companies should develop their own models of environmental and social responsibility that go beyond acting within their more narrowly defined legal obligations.

The same authors categorize the effects of mining companies on the environment within three dimensions: economic, social and biophysical (Figure 3.1). In this model, the mineral project is considered the input, while the health and well being of affected stakeholders are outputs. Furthermore, this model links social, environmental and economic performance by suggesting that corporate social responsibility should not be considered independently from the biophysical and economic spheres. Environmentally responsible production is, therefore, part of corporate social responsibility.

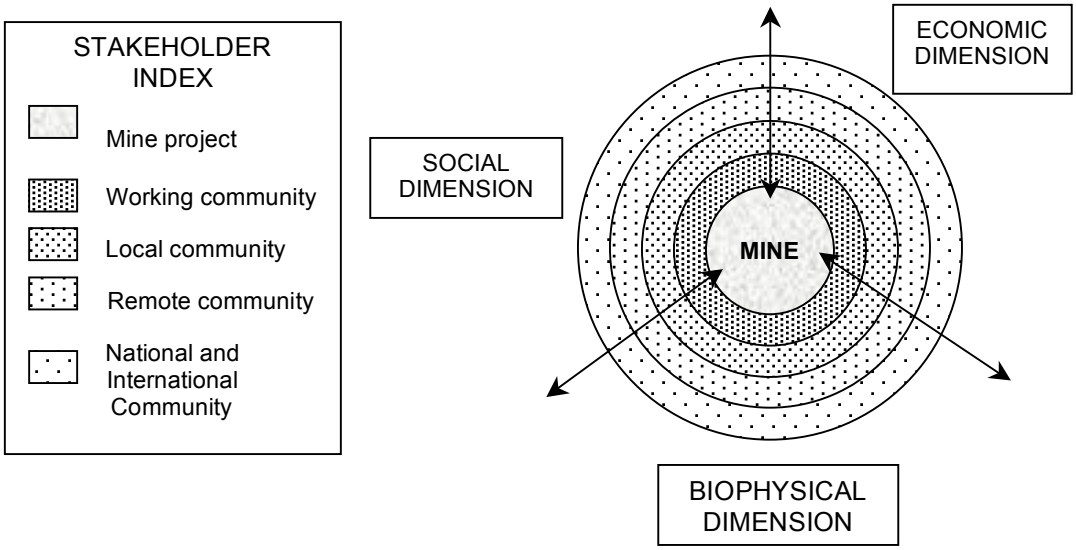

Figure 3.1 Effects of Mining Companies on Environmental and Social Development (Warhurst and Lunt, 1997)

Box 3.1 Dimensions of Influence of Mining on Communities

1) The **Biophysical Dimension** includes effects over time on the health of the ecosystem, on biodiversity conservation, on clean air and water, and the physical base of healthy livelihoods: marine resources, minerals, forests and agricultural soils.

2) The **Economic Dimension** includes effects over time on relative economic benefits, wages/salary rates, the distribution of natural resource-based commodity rents (taxes, royalties etc) between central and regional state agencies, and economic effects on local and remote community livelihoods.

3) The **Social Dimension** includes:
   a. Sociopolitical effects over time on the rights of individuals and groups, and their capacity to organize. It also includes effects on human health and working conditions.
   b. Socio-cultural effects over time on the cultural heritage of individuals and groups, on their spiritual and cultural well being, on their attitudes and behavior, and with respect to their education.

Source: after Warhurst and Lunt, 1997

3.4 The Traditional Approach to Mining Community Development

The traditional approach to mining community development and industry's attention to its social responsibility is described by Logan (1997). It can be summarized as successfully running a business and at the same time addressing the needs and interests of employees, investors, suppliers and customers, while making charitable donations and social investments in the community. Such behavior would be in response to perceived moral imperatives, as well as to ensure the maintenance of a healthy workforce. Some firms do more of this than others. It involves complying with regulations where required, and includes cleaning up pollution, managing incidents, and treating other effects of mining after they have occurred.

In the last two decades, the notion of corporate social responsibility has expanded from "the social responsibility of business is to increase profits" (Friedman, 1970) to the notion expressed by Drucker (1993) that "[corporate] citizenship means active commitment. It means responsibility. It means making a difference in one's community, one's society, and one's country" (Figure 3.2).

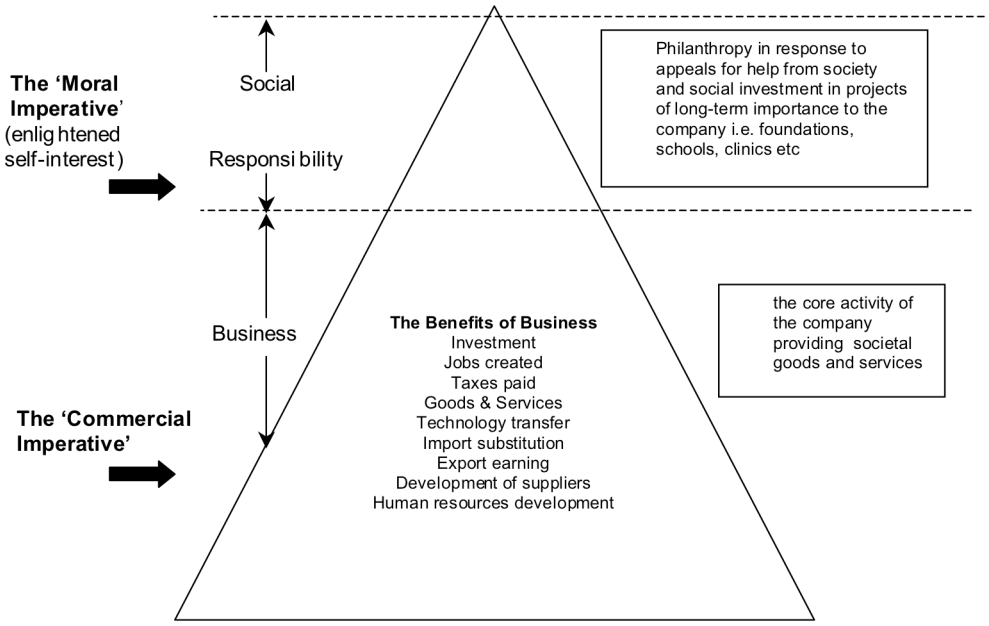

Figure 3.2 The Traditional Model of Corporate Social Responsibility (Logan, 1997)

Corporate and social responsibility for the purpose of this study aligns with the findings of Warhurst et al. (2000). The internalization by the company of the social and environmental effects of its operations through proactive pollution prevention and social impact assessment is done so that harm is anticipated and avoided and benefits are optimized. It is suggested that corporate social responsibility contributes to social justice in the work place as well as to human rights and development within the host countries of the operation (Warhurst et al., 2000).

3.5 Voluntary Initiatives

Increasing demands for information, accountability and particularly community participation have encouraged the private sector to adopt voluntary initiatives. Sustainability indicators provide one mechanism of measurement of continuous performance that motivates corporations to adopt more sustainable business practices.

Walker and Howard (2002) examine the idea of voluntary initiatives in the mining sector, and conclude that most initiatives fall into two categories:

- Broad guiding principles requiring a low level of commitment, and tending to attract many signatories; and
- Differentiation mechanisms, with third-party assurance against well-defined performance standards requiring a significant compliance effort from companies and tending to have a lower uptake rate.

Voluntary initiatives can be best defined as any action not required by legislation. In the context of the current study, these may include such one-off social programs as employee counseling or reducing sulphur dioxide emissions through more biophysically responsible business practices. In the case of mining, the success of any voluntary initiative depends on specific circumstances surrounding the location and development of any potential mine site, on the motivation of senior management, and on the ultimate execution of the activity (Sinclair Knight Merz, 2004). They argue that any real net move towards sustainable development by industry can only be achieved by initiatives requiring a concrete commitment from signatories to improve performance and also identifying a key 'need' linking environmental performance to economic profitability.

Gibson (2000: 2) provides a powerful statement concerning one of the drivers behind voluntary initiatives:

> 'Voluntary initiatives' is a misleading label for those activities that are rarely voluntary in the usual sense. Virtually all such initiatives are undertaken because the relevant actors have been pressured to act. The distinguishing feature of voluntary initiatives is that the pressures to act are not directly from regulatory obligations.

Gibson (2000: 11) believes that the effectiveness of voluntary initiatives depends on "integrating all available motivations, and tools and players in ways

that encourage them to be mutually supporting". He points out some of the main drivers of voluntary corporate initiatives for enhanced environmental performance (Table 3.3).

• incentives to reduce costs, especially by cutting resource use and waste generation; • desires to avoid or at least delay additional regulatory action that would impose undesirable administrative and compliance costs; • fear of damage to public image and associated customer and investor confidence, or desire to enhance public reputation and associated customer and investor confidence; • desire to minimize risk of costly surprises; • expectation of competitive advantage through exclusion of new competitors and by access to new markets; • requirements imposed by banks and/or insurers which do not wish to inherit environmental liabilities; • demands of suppliers and customers who wish to avoid environmental costs and liabilities; • pressure from staff or fellow industry members; and • personal commitment of corporate leaders.

Table 3.3 Drivers of Corporate Voluntary Initiatives (Gibson, 2000: 11)

Voluntary initiatives have a place and certainly are a step forward in terms of the industrial actor recognizing that it must move beyond simply complying with conditions of permitting and licensing. This often involves determining what the community's aspirations are in the first place.

From the local communities' perspective, the question is whether the potential negative impacts from a mining operation outweigh the potential benefits. Some workers suggest that before any mineral activity (including initial prospecting and exploration) takes place, a full environmental and social assessment should be carried out and further action halted if the assessment suggests that the subsequent activity is likely to damage environmental or social well being. Dudley and Stolton (2002) propose choices against which any new project can be measured. These include:

- a veto on mineral activity,

- a veto on mineral activity unless maintenance of critical ecological and social values can be maintained at site, and
- conditions under which mineral extraction and related activities could proceed with responsible management.

Another source of voluntary initiatives is industry associations. In 1993, the Mining Association of Canada launched the Keep Mining in Canada campaign as a voluntary initiative to educate the general public on the benefits of mining in their daily lives and to dispel the myths and mistruths that had developed in the past. During 1993 and 1994, I was the Western Canadian Ambassador for the program and traveled to many small communities and gave presentations on the benefits of mining to ordinary Canadians and the risks they faced if Canadian mining expertise moved internationally. The program was highly successful with over 30,000 postcards of support having been sent to the Prime Minister in support of the Canadian mining industry, several communities adopted resolutions in support of the mining industry, and generated media coverage with a focus on the benefits of mining in Canada.

Even though the idea of canvassing and educating the community to determine its growth aspirations and concerns seems simple enough, it is rarely done. One method of developing a more inclusive process is through the introduction of impact and benefit agreements that require consensus of the community and the negotiation of terms and conditions of development acceptable to them.

3.6 Impact and Benefit Agreements

Impact and benefit agreements (IBAs) represent one approach to structuring community and industrial relations in the mineral sector. They are potentially a mechanism for promoting resource development in a manner that contributes to the sustainability of the local environment and economy, and the social and cultural fabric of affected communities (Keith, 1995; O'Reilly and Eacott, 1998; and O'Reilly, 1999). IBAs have become a significant component of settled

Aboriginal land claim treaties globally, and include well known decisions such as the Mabo Judgment in Australia (Reynolds 1993; O'Faircheallaigh 1999) and the Gwich'in and Sahtu in Canada (Keeping, 1999).

IBAs encompass a variety of arrangements and instruments of agreement. They generally provide opportunities for communities to derive economic benefits from natural resource development projects that affect them, and to participate in the management, monitoring and mitigation of social, cultural, economic and environmental impacts (see Box 3.2)

O'Reilly and Eacott (1998: 1) describe IBAs in the following terms:

> IBAs are intended to ensure Aboriginal communities benefit from mining projects and, where they contain compensation provisions, to ensure that those communities are compensated for the negative impacts of mines on their communities, their land, and their traditional way of life.

O'Reilly and Eacott fail to recognize the potential of the IBA as a tool of sustainability, but rather focus on compensation issues.

Box 3.2 Reasons for the Empowerment of Aboriginal Peoples

- The settlement of comprehensive land claims.
- Favorable court decisions which empowered Aboriginal peoples in setting the terms and conditions of development within their traditional territories,
- The recognition by community leaders and governments that resource-based economic development offers opportunities to alleviate some of the pressing social and economic problems that many Northern Aboriginal communities face, and
- A general trend in government policy to promote economic and employment development through private sector activity and public/private partnership approaches.

3.6.1 Origins of Impact and Benefit Agreements

Impact and benefit agreements and related agreements have evolved. In the past, agreements were rooted in government policies that focused on achieving Aboriginal economic and employment development objectives through non-renewable resource development. Agreements were negotiated

between government and resource development companies, with terms and conditions imposed under leases, licenses and other approvals. These agreements focused on employment quotas or targets for Northern communities and Aboriginal peoples. Often, these agreements were reached in the absence of representatives of affected communities. Pierce and Hornal (1994) remark that this model was applied with mixed success in the North, but ultimately failed to provide a solution to increase Aboriginal employment.

The structure and content of IBAs have also evolved. IBAs may now include provisions covering a wide array of matters. Items covered in the more comprehensive of these agreements include: preferential employment and business contracting opportunities, training and education (including apprenticeships and scholarships), equity participation, revenue sharing, cash compensation, social and environmental monitoring and/or mitigation measures, archaeological site preservation, access to facilities and infrastructure, information exchange, agreement management, and dispute resolution mechanisms.

3.6.2 Social and Economic Considerations

IBAs and related agreements respond to Aboriginal concerns about the impacts of resource development projects on the environment, local economies and the social and cultural structure of communities, and address socio-economic conditions of specific Aboriginal communities. Aboriginal perspectives on non-renewable development identify many socio-economic considerations, which IBAs need to address.

Aboriginal perspectives on non-renewable resource development are multi-dimensional and vary from one community to another. However, several themes run through Aboriginal positions and statements on resource development.

An Aboriginal community's position on a particular development may be shaped by a variety of factors, including the proposed scale of operation, the company involved and its environmental and community-relations track record,

historical experience with and current predispositions towards non-renewable resource activities, the nature of Aboriginal land and resource ownership and the status of Aboriginal title, as well as local social and economic circumstances. Aboriginal perspectives are also shaped by local priorities, values, culture, and traditional patterns of land and resource use.

Aboriginal people have a profound and spiritual sense of stewardship towards their traditional lands and resources which underpins an important point: Aboriginal peoples want to be active participants in decisions concerning all aspects of resource development taking place on or near their lands. Cassidy and Dale (1988: 138) point out the following:

> Native peoples want control over non-renewable resource management. They see control as direct decision making about development and management and not as the indirect giving of advice to other decision-makers.

Aboriginal people want to participate as decision makers and economic beneficiaries. They do not want to bear an unequal portion of economic, social, cultural and environmental costs. This leads to a second and related point: Aboriginal peoples are not necessarily opposed to development, and in many instances embrace the opportunities provided. However, Aboriginal communities are concerned with how such development will proceed and how or if they will participate and benefit from it (Cassidy and Dale, 1988).

Significant negative impacts may result from the introduction of an industrial wage economy in communities that socially, politically and economically are structured around a traditional, renewable resource-based economy. These may flow from the establishment of new forms of power, leadership and authority that can destabilize traditional structures and relationships among men and women, and different age and economic groups, contributing to social differentiation and conflict within Aboriginal communities (Connell and Howitt, 1991 and Elias, 1995).

Non-renewable resource development takes place in a context characterized by an uneasy co-existence of modern and traditional economies and associated lifestyles within Aboriginal communities. Modern wage economies bring wage employment and the use of imported technology for the extensive exploitation of non-renewable resources. In contrast, the traditional economy relies on extensive use and occupancy of land by Aboriginal peoples in traditional pursuits such as hunting, fishing, trapping and gathering. Aboriginal communities must weigh the practical implications of this uneasy co-existence in making decisions about the type of economies they will engage in and encourage within their communities (O'Reilly and Eacott, 1998).

The pressure that communities and community leaders face in trying to find the right mix between externally-driven wage and industrial economies and traditional local economies is intensified by the complex interaction of other variables often beyond their immediate control (e.g. world markets, international sanctions) (Ellana et al., 1998: 2) (Box 3.3)

Box 3.3 The Needs of an Aboriginal Economy in Transition

- Address high levels of unemployment, low incomes, inadequate infrastructure and weak business/economic prospects;
- Meet the needs of a large youth population;
- Diffuse tensions that may exist between youth and elders who may be strong proponents of traditional land use; and
- Address social problems that exist in some communities, and protect culture, language and traditional values.

Source: Ellana et al., 1998: 2

The Yellowknives Dene, in stating their position on development to the environmental assessment panel reviewing BHP's diamond mine proposal, articulated some of these problems, and indicated that they may not be the sole concern of Aboriginal communities (Yellowknives Dene First Nation, 1996) (Box 3.4)

Box 3.4 A First Nation Perspective

The leadership in a First Nation community must walk a delicate balance: we must try to provide jobs for our members and keep developing our community's economy. At the same time, we must protect the land and our culture for future generations. We must make sure that any potential social impacts from any development are predicted and steps taken to prevent them or to reduce their effect on our families. We expect mining companies who hope to profit from resources taken from our lands to listen and care about the same concerns. A mining company must walk with the same delicate balance that a First Nation leadership walks.

Source: Yellowknives Dene First Nation, 1996

The complex interplay of socio-economic issues is highly relevant in the consideration of why IBAs are negotiated, how they proceed and what may be covered in the resulting agreements. Kennett (1999: 16) notes the following:

> From the Aboriginal perspective, socio-economic and cultural factors explain the attention in IBAs to issues such as wage income, training, economic development, sharing in the direct (i.e. cash) benefits from mineral development, protection of cultural values, compatibility of mining operations including direct employment with traditional economic activities and lifestyle, and protection of the land base from environmental damage. In sum, the Aboriginal interest in IBAs directly reflects the potential for both negative and positive impacts from mining.

3.6.3 Legal and Policy Considerations

Ker (2000) and Kennett (1999) have extensively reviewed the IBA in terms of the legislative, regulatory and policy framework within which it operates. In some jurisdictions, Impact and Benefits Agreements are part of granting of land tenure instruments, such as surface leases by governments or the approval of operating licenses, permits and other authorizations. Socio-economic agreements have traditionally been made between resource developers and governments as a matter of policy rather than in fulfillment of specific statutory requirements. A policy rationale for government promotion of IBAs, or

alternatively, the imposition of IBA negotiations as a precondition of project approvals, also exists (e.g. Nunavut).

Although most land claims agreements do not make their recommendations mandatory, they do provide a strong foundation for their negotiation. Resource development projects may not obtain the necessary approvals from Aboriginal landowners, governments and regulatory authorities in their absence.

3.7 Strengths and Weaknesses of the IBA Instrument

Aboriginal communities in general are often characterized by their lack of economic vitality, low levels of environmental integrity and poor social and cultural health and well being (Franks, 1987 and Flanagan, 1998). Initiatives and elements of current IBAs and related agreements are intended to promote improvement of these conditions and provide for the equitable distribution of benefits derived from non-renewable resource development on their land.

In current IBAs, a prominent feature is the distribution of financial gains from the operation itself. These gains are usually realized in the form of lump sum cash payments, profit sharing plans and surface access fees. These arrangements can have a positive impact on the economic vitality of the Aboriginal community through increased employment levels and incomes. Communities also benefit from the expanded range and level of skills and work experience of the local labor force, and enhanced business capacity and expertise gained through contracting arrangements (O'Reilly and Eacott, 1998). It is important to capture the human resource and business capacities that are potentially available for future community development. A particular problem associated with this new found flow of economic wealth is its equitable allocation among different demographic, gender and economic groups.

The environmental provisions of IBAs and other environmental agreements generally are concerned with providing opportunities for Aboriginal participation in review and monitoring activities. They establish mechanisms and processes for the exchange of information or advice concerning

environmental planning and management through special joint committees. In some instances, IBA terms may incorporate objectives and commitments concerning the use of traditional and local knowledge in environmental planning, monitoring, and mitigation.

IBAs and related agreements do not generally include comprehensive provisions for monitoring and mitigation of social and cultural impacts, especially at the community level. Companies may not perceive their responsibilities as extending into community, social and cultural development. Some companies, however, have committed to specific social development measures when these target individual employees, for example, through employee support and counseling programs.

Finally, many Aboriginal communities lack the skills, training, formal education and business capacity to allow them to maximize participation in non-renewable resource development. IBAs are primarily focused on providing opportunities for participation through employment and contracting. Some agreements provide for corporate sponsorship for educational programs.

Table 3.4 summarizes the strengths and weaknesses of the IBA structure.

IBA Feature	Strengths	Weaknesses
Economic Vitality	Ability to deliver economic benefits to Aboriginal communities.	May contribute to heightened tensions between different community groups.
Environmental Integrity	Provides basis for Aboriginal community participation in environmental impacts review, monitoring and assessment (environmental stewardship).	Do not provide specific mechanisms or procedures for ensuring successful integration of traditional knowledge.
Social and Cultural Wellbeing	IBAs raise important public policy issues concerning appropriate roles and responsibilities for all actors for the monitoring and mitigation of social/cultural impacts.	As currently structured, IBAs do not provide a strong basis for social and cultural impacts of resource development.
Capacity Building	To contribute to diversification in local economy (traditional basis). Local and regional committees provide for public, Aboriginal and other stakeholder participation.	Primarily concerned with providing opportunities for participation, rather than positioning Aboriginal people to maximize these opportunities.

Table 3.4 Strengths and Weaknesses of Current IBA Structures (Ker, 2000)

3.8 Conclusion

The definition of sustainability is a subject of considerable discussion in the literature, with much of it focused on the definition of sustainable development. For the current research, sustainability involves social equity, economic viability and a healthy physical environment. To achieve these goals, institutions must continue to evolve in order to grapple more effectively with the dilemma of balancing economic growth and maintenance of environmental quality. Mining has long been regarded as an unsustainable endeavour. However, there is an evolution of mining companies' attitudes towards the environment as comprising more than just the biophysical, to encompass social

impacts, and therefore mining now may be perceived as a contributor to sustainable mining communities.

This chapter has illustrated the transition from the 'traditional' development models reminiscent of earlier times of the offering of 'trinkets and beads' to a far more sophisticated recognition of economic partnerships, traditional knowledge and a greater respect for the biophysical environment. A large part of the impetus for this shift has been due to local community activism, and in the case of Canada's Arctic, the settlement of outstanding land claims. With these settlements, cultures and communities have become exposed to 'Southern' material values and the transition away from quasi-traditional lifestyles and dependence on social welfare to a wage economy. These Aboriginal communities are being exposed to social and economic pressures that, without guidance and support from the outside, have the potential to self destruct.

As part of the Nunavut Land Claims Agreement (NLCA), those lands under the new territorial jurisdiction were divided among three regions and administered by regional Inuit associations (RIA). In the current research area of Kitikmeot, the Kitikmeot Inuit Association or KIA administers all land issues in the region. Also, as part of the NLCA, any industrial actor proposing development on Inuit lands must negotiate an Impact and Benefits Agreement with the RIA (e.g. KIA). The Impact and Benefit Agreement is a mutually acceptable, binding agreement between industry and the KIA, identifying expectations from both parties and outlining a suite of benefits that would flow to the regional beneficiaries of the NCLA. Although there are inherent weaknesses in the IBA structure, it still represents the best current method to commit industry to providing certain benefits for the beneficiaries for at least the term of the operating mine. It was originally envisioned that the IBA may be a tool to contribute to the sustainability of the affected communities, by virtue of the holistic nature of its elements.

The political ecology of mineral development in Canada's North is complex, involving an unequal distribution of decision-making power. The

following chapter examines the conceptual framework of political ecology and a discussion of the nature of power in the development of natural resources.

Chapter 4: Political Ecology and the Distribution of Decision-Making Power in Canada's North

4.0 Introduction

In this chapter, I examine the conceptual framework of political ecology and the distribution of decision-making power in Canada's North as it relates to natural resource development. This section begins with a discussion of the history and evolution of natural resource development in Northern Canada. The history of the Aboriginal experiences with natural resource development highlights the unequal distribution of decision-making power and the emerging political ecology.

The following section examines political ecology as a conceptual framework and defines two types of power (systemic and instrumental), and how they are used to influence decisions.

Political ecology itself is a lens though which an examiner can assess the interactions between stakeholders or 'actors' operating within the politically charged environment. The actors typically include various levels of government, interested representative groups outside of the government realm with the interest of preserving and protecting the interests of grass roots communities (e.g. NGOs), and an industrial actor who wishes for development and is subject to the pressures of profitability, etc. Each of these actors has needs, desires, priorities and a given set of tools with which they exert themselves in the political ecology arena. The interactions between actors can be graphically illustrated to show the type of power exchange and interpretations of outcomes.

4.1 Historical Experience of Aboriginal Communities and Resource Development in Canada's North

This section describes the political ecology of natural resource development that affects Aboriginal communities. The evolution of the relationships of the

actors, and the shifting attribution of decision-making power, provide the basis of the current research.

The 1950s and 1960s saw considerable growth in exploration, staking, and mineral production in Canada, particularly in Northern regions. During these times, Aboriginal involvement in the mining activities was limited. Nonetheless, Aboriginal peoples and communities began to experience the environmental and social impacts of poorly regulated mining and other resource developments in their traditional territories, over which they had little or no control (NRTEE, 2001).

Large-scale mining developments in the 1960s and 1970s were characterized by a lack of foresight and consideration of environmental and socio-economic impacts on Aboriginal communities. Direct Aboriginal participation in mining in this period was limited, and in some cases was characterized by discriminatory employment practices. When Aboriginal people did participate in mining operations, they did so primarily in low skilled, low paying positions. Most were barred from higher positions by their lack of formal education (NRTEE, 2001).

The evolution to larger scale mining operations in Canada, especially in the North, was paralleled by increased politicization among Aboriginal peoples, and an assertion of their Aboriginal and treaty rights. Typically, Aboriginal people and communities took a strong anti-development stance or participated in mining activities only marginally (Ker, 2000).

During this time, government policy focused on achieving Aboriginal and Northern economic and employment development objectives through non-renewable resource development. Policy objectives were implemented through agreements negotiated by government with mining companies and through the imposition of terms and conditions for resource development under leases, licenses and other approvals. Arrangements between government and individual mining companies were established, for the most part, in the absence of consultations with affected Aboriginal peoples and communities. This model was applied with mixed success in several mining operations, but failed to

provide a good solution for increasing Aboriginal involvement in mining operations (Department of Indian and Northern Affairs, 2004).

Throughout the 1980s and into the early 1990s, there was a shift to a more open attitude and approach on the part of Aboriginal people and communities to resource-based economic activity, as evidenced by the introduction of early versions of benefit agreements (e.g. Placer Dome's Dona Lake Project in 1987). This may be attributed to a variety of factors, including the constitutional entrenchment of Aboriginal and treaty rights in 1982, favorable court decisions, a willingness by governments to negotiate power sharing, and settlement of some Aboriginal claims (Elias, 1995). On the other hand, Aboriginal people tended to take a public stance that emphasized traditions of conservationism, resources use, and a commitment to protecting renewable resources. The Yellowknives Dene exemplified this point during the public hearings process for BHP's Ekati diamond mine. The Yellowknives caused a significant delay in the granting of the water permit until BHP negotiated a social participation agreement with them (Kennedy, 1999).

The primary decision-making groups with respect to non-renewable resource development in the Canadian North today are Aboriginal communities and mining companies. Governments take a back seat to establishing the terms and conditions for resource developments affecting Aboriginal rights and interests.

4.2 Power and Mineral Development

One of the challenges facing those institutions which adopt and plan for sustainability is how best to introduce policies that bring about short-term benefits to industry as well as delivering longer-term benefits to society while maintaining environmental health. Political institutions are the actors related to sustainability and must balance economic performance and environmental and other considerations in a competitive world. They must also manage the pressures applied to them by NGOs and ENGOs.

Impact and benefit agreements (IBAs) may prove to be a useful instrument for promoting sustainable Northern communities in mining regions. However, the utility of this tool depends very much on the configuration of dynamic power relationships between actors and stakeholders and their biophysical, social and economic environments. An exploration of the relative power and influence of various actors, therefore, provides important information and insight about the effectiveness of the IBA mechanism for fostering sustainability. As discussed above, political ecology is a useful tool to explore the relationships between the way in which various groups might wield power and the impact of those activities on both the socio-economic and the biophysical environment. It is worthwhile, therefore, first to define what is meant by "power".

While "power" is a highly contested term, it is generally referred to in terms of either force (coercive power) or exchange (economic power) where the economic resources of one actor can be used to alter the behaviour of another actor.

While political scientists often differentiate between power and influence (the latter being less coercive), it is important for the purposes of this thesis to understand the role that systemic power or influence can play in terms of influencing the overall configuration of the distribution of power among all actors examined within a particular system.

Foucault (1978: 94-96) sees systemic power as:

> the multiplicity of force relations immanent in the sphere in which they operate and which constitute their own organization: as the process which, through ceaseless struggle and confrontations, transforms, strengthens, or even reverses them; as the support which these force relations find in one another, thus forming a chain or a system

A systemic perspective of power would suggest that IBAs are of little utility in changing dominant paradigms and would hold out little hope that Northern people in peripheral positions of power would be able to retain

important values (i.e. traditional values) if those values could not be accommodated within a capitalist system. A coercive or exchange perspective, however, represents a more direct cause-and-effect relationship between actor groups and would suggest that different actors can wield power in a number of ways.

Political ecology would recognize that many types of power can be at work in any given situation; it would accept that the broader capitalist system establishes an inequitable system of power, influence and distribution of benefits, while recognizing that some victories can be achieved by less powerful groups given favourable circumstances (Foucault, 1978).

It is this recognition that in the inequitable distribution of power, particularly in cases where the future of a larger community or impacted biophysical area is at stake, a complex system of interrelationships can develop.

4.3 The Emergence of Political Ecology as a Conceptual Framework

Blaike and Brookfield (1987: 17) were the first to define political ecology in the following manner:

> the phrase 'political ecology' combines the concerns of ecology and a broadly defined political economy. Together this encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself.

Paulson et al. (2003) provide a comprehensive intellectual genealogy of the origins and evolution of political ecology.

The politicized environment as conceptualized by political ecology is measured by three basic characteristics: dimension of an environmental event, scale of impact of the environmental event, and distribution of power among actors (Bryant and Bailey, 1997).

The dimension refers to the temporal effect of the environmental event, whether it be a daily occurrence as in the case of industrial activity, episodic as might be the case with a climatic event, or systematic which would concern

events that are progressive or cumulative and which may not be immediately recognized by those affected. The scale refers to the spatial (local, regional or global) aspect. The actors operating within the sphere of any environmental issue tend to be more influential within a particular spatial unit, but may also have some influence or impact at the margins of adjacent spatial units. Walker (2003) is critical of the current trend in the literature towards the narrowing of the focus of inquiry suggesting that the impacts of broader systems at work are being pushed into the background. McCarthy (2002) notes that many political ecology scholars restrict their analysis to third world scenarios, whereas issues endemic to those regions also exist in some developed nations. The Canadian North is one such example. Robbins (2002) also recognizes that human/environmental interactions transcend the boundary between developed and lesser-developed regions and supports the notion of 'looking up' and examining the systemic aspects of issues.

Power, as used in the description of the politicized environment, refers to the ability of any actor to control or manage its own interactions therein.

The following Venn diagram illustrates a generic set of interrelationships that exist in matters requiring decision making for natural resource development matters (Figure 4.1). The diagram highlights a case where the government had the largest influence over all actors in the scenario.

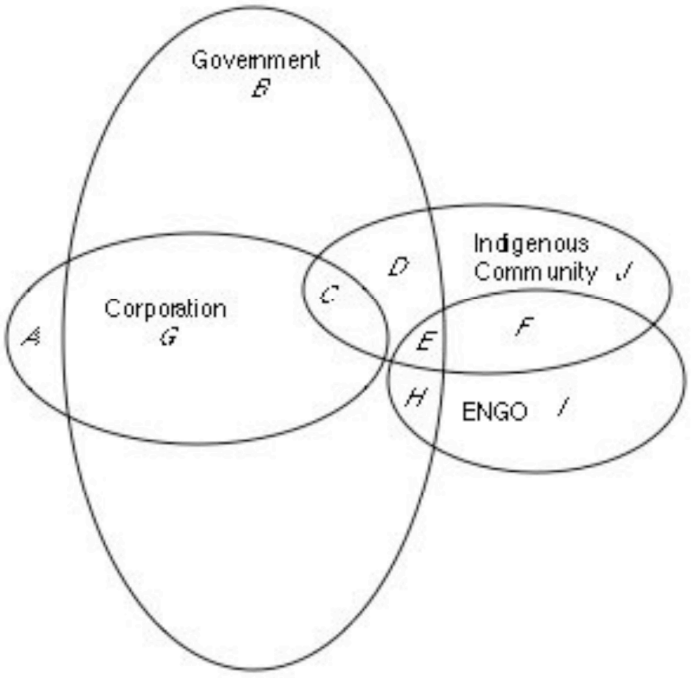

Figure 4.1 Loci of Interest for various stakeholder groups in mineral development (after Ali, 2003: 4)

Table 4.1 examines the regions and gives description of the interaction.

Venn Diagram Regions	Context of the Interaction
A	Corporate interest only: maximizing profits from operations outside the country
B	Government interest only: policies of importance to constituencies outside the dispute
C	Common interests among community, corporation and government: employment and labour benefits. A portion of the community feels the compensation offered by the company is adequate. Potential for splinter groups within the community
D	Common interests between the government and the community only (excluding corporate or ENGO interest) welfare benefits, political representation.
E	Common interest among ENGOs, government and community (excluding corporate interest: environmental protection through state-level economic analysis.
F	Common interest between ENGOs and community (excluding government or corporate interest): environmental protection based on normative concerns (value-based).
G	Common interests between corporation and government: strategic economic development concerns for the state, exogenous to the region.
H	Common interests between ENGOs and government (excluding community and corporation): other environmental lobbying efforts in which the ENGO is involved outside this conflict area (but within the country), which the government endorses
I	ENGO interest only: based on a broader vision of the ENGO's charter; accountability to international headquarters and to the resolution of other disputes outside the country.
J	Indigenous community's interest only: issues of cultural significance.

Table 4.1 Explication of Loci in Venn diagram (Ali, 2003: 5)

4.3.1 Challenges Associated with Political Ecology: Barriers to Consensus

Political ecology has several challenges associated with its use. By its very nature, political ecology is required to answer the following questions. Who makes decisions? Who possesses the relevant knowledge? Who is responsible for these decisions? And finally, who is affected by these decisions? Political ecology acknowledges the unequal and disproportionate distribution of power among actors. Related to this point are the conflicts of interest that arise within

each actor group and among the actor groups. The complex effects of the interrelationships between the actors create further cause for conflict, change, and uncertainty. Finally, there is a question of legitimacy of interests, objectivity, and the intrinsic value each actor places on the environment that is difficult to resolve.

Eckersley (1998: 334) characterizes an additional challenge or limitation to the political ecology of natural resource development as the "challenge to reconnect democratic and ecological concerns". He presents five "deficits" of political ecology:

1. Limited scope of formal representation on behalf of the "new environmental constituency", namely future generations, non-human species and persons living outside the territory of the polity (i.e. representation deficit).

2. The narrow time horizons of political deliberation, which can create pressure for expedient rather than prudent political decisions in relation to many ecological problems (i.e. time horizon deficit).

3. Limitations in knowledge and understanding of complex ecological problems (i.e. knowledge deficit).

4. The partisan and competitive bargaining processes of democratic will formation, which are not conducive to the protection of collective information such as environmental protection (i.e. the political rationality deficit).

5. The compartmentalized and discretionary nature of much environmental law and administration, which impede a concerted and integrated response to ecological problems (i.e. the implementation deficit).

Vayda and Walters (1999) see a limitation of the political ecology lens as having an undue focus on the environmental or natural resource politics rather than the series of complex events that cause environmental change. Their approach (i.e. Eventalism) examines the environmental event, then the complex interactions that led to the event.

Although the above are challenges, political ecology does allow the researcher to map the roles of the actors and to begin to understand the cumulative interactive effects of their operation.

4.4 Actors and Their Influence in Mineral Development

Table 4.2 is a generic representation of an actor matrix for a mineral development project. The individual actors have impacts and associated costs that span three spatial scales. In some instances, the power of the actor may increase with a broadening reach (e.g. multilateral institutions) or may decrease (e.g. grassroots actors). The Venn diagram above is one way of illustrating the nature of the interrelationships.

Actor	Local Scale			Regional Scale			Global Scale		
	Contribution (and potential benefit)	Impact (costs)	Resolution	Contribution (and potential benefit	Impact (costs)	Resolution	Contribution (and potential benefit)	Impact (costs)	Resolution
State	Mining by state agencies; policies that encourage extraction by others (e.g. business)	Potential revenue loss	Typically the leading actor (i.e. mining policy)	Policies promoting large-scale operations	Revenue loss, social unrest; politically severe impact for small states	Key role (with other actors) in devising new land-management practices	State manufacturing and energy production; policies encouraging business	Potentially great impact for poor states	Cooperation and agreements between states
Grassroots	Permanent reduction in mineral inventory	Loss of livelihood; elimination of way of life	Usually excluded from official efforts, but 'participation' occasionally sought	Over exploitation of marginal land	Devastating (death and destruction of livelihoods)	Usually excluded but more participation sought today	Relatively small	Potentially great for those worst affected, but unable to respond	Resolution
Business	Medium to large mining operations	Negligible	Growing role through sustainable practices	Large production operations and infrastructure	Potentially reduced profits	Sustainable practices; Green Business	Operating in a less regulated environment	None yet, but reduced profits and access to new deposits	Voluntary guidelines; respond to state policies
Multilateral Institutions	Technical advice and consultancy to sustain economic activity; structural adjustment programs	Limited to criticism of their role	Technical advice and consultancy tying loans to green activities	Technical advice and consultancy; loans supporting export oriented production	Criticism only	Technical advice and support new management practices	Advice and loans to states and industry	Limited criticism	Input in global negotiations between states
ENGOs	None	No costs but may increase funding available to this actor	Support grassroots actors; lobby other actors (especially the state)	None	No costs but increased revenue due to 'crisis' situation	Potentially leading role	None	No costs (may slightly increase funding)	Public education campaigns; lobby states and businesses

Table 4.2 A Typical Actor Matrix for a Mineral Development Scenario (modified after Bryant and Bailey, 1997: 35)

Table 4.2 highlights the scope of the political ecology landscape. There is a flow to the distribution of decision-making power to some actors and

similarly a flow of the benefits to others, often at the expense of still other actors. The following sections discuss the role of each political ecology actor along with a discussion of its relative possession of decision-making power concerning natural resource development in Canada's North. The actors involved include the state, multilateral institutions, industry, non-governmental organizations and grassroots actors.

4.4.1 The State

The price of order is a sovereign state with a monopoly on the means of coercion within a given territory (Bryant and Bailey, 1997).

The modern state is generally a part of the global capitalist system, and has distinctive economic interests that derive from its position within it. It is important to note that the interests of the state and capitalists do not always coincide. The ability of the state to enforce its will in the face of opposition from business, multilateral institutions, or any other opposing actor is a clear example of its capacity to make self-determinant decisions for its citizens.

As indicated above, the state finds itself in the position of being the promoter of the development of the nation, while at the same time having the mandate to protect the environment. As Walker (1989: 32) states, there is "an inherent, continual potential for conflict between the state's roles as developer, and as protector and steward of the environment on which its existence ultimately depends".

Bryant and Bailey (1997) argue that the price of order is the monopoly of the means of coercion within a given territory. Ophuls (1977: 163) supports this argument with the following statement:

> Ecological scarcity in particular seems to engender overwhelming pressures towards the political system that are frankly authoritarian by the current standards, for there seems to be no other way to check competitive overexploitation of resources and to assure competent direction of a complex society's affairs in accord with steady-state imperatives. Leviathan may be mitigated, but not evaded.

The state, in its role of guardian of the nation's environmental resources, can attempt to control the access of the other actors to a diversity of environmental resources by simply monopolizing a valued resource. The state can institute exclusionary policies intended to exert control over selected actors in pursuit of their interests. The state has the exclusionary power to determine who exploits and what resources are exploited.

This power of exclusion is linked to the marginalization of weaker grassroots actors, leaving them vulnerable, and in particular, to share a highly unequal proportion of the costs and benefits associated with environmental problems. Industrial actors, particularly powerful transnational corporations, may possesses privileged access to environmental resources, which further marginalizes the grassroots actors by determining the location and manner in which they carry out their own subsistence livelihoods.

The state's power manifests itself in the formal use of financial incentives and extensive marketing campaigns designed to attract large transnational corporations. Such incentives may include preferential access to the environmental resource, financial opportunities such as limited taxation and import/export duties and tariffs, and focused security measures intended to ensure limited domestic interference in their operations. Furthermore, many impoverished nations have accepted the view that industrialization may be the only way to emerge from their desperate situation and thus become reluctant accomplices to any negative biophysical, social or economic outcomes.

In the case of the state, weaker actors exert resistance in several ways, including the illegal exploitation of environmental resources by grassroots actors (Bryant and Bailey, 1997) and civil disobedience. Grassroots actors often align themselves with non-governmental organizations that may be more sophisticated in managing the media and political lobbying techniques.

The state often also finds itself subject to the actions of powerful external multilateral institutions. The 1980s were characterized by the heightened level of insolvency of the economies of many developing nations. This solvency crisis was largely a result of the inability of developing nations to

service sovereign debt to the multilateral financial institutions, the IMF in particular. Consequently, these institutions exercised their right to assist in the restoration of a country's economy and change the government's role in the economy. The redistribution of power as a result of actions of multilateral institutions created a new suite of political winners and losers and drastically altered the distributive politics of those countries (e.g. Snider, 1996).

4.4.1.1 The State Actor: the Territory of Nunavut

The Nunavut Land Claims Agreement provides for C$1.1 billion in financial compensation to be paid between 1993 and 2007. In addition, the settlement allows for approximately 1.9 million square kilometers of land and water (Nunavut Settlement Area), within which title to 355,842 square kilometers of Inuitmiut-owned land, including mineral rights to 35,257 square kilometers, was included in the new territory. Under the agreement, the new territory is entitled to a share of federal government royalties from oil, gas and mineral development on Crown lands and equal representation of Inuit with government on lands and resources management decision-making boards. Finally, policies developed in conjunction with the Inuitmiut ensure that federal government contracts awarded for Nunavut-destined projects result in increased participation of Inuit firms. Training and education are to be provided when needed, and the resulting labor force and contractor firms are to reflect the appropriate proportion of the Inuitmiut in Nunavut. The territory of Nunavut is distinct (e.g. Aboriginal self-governing) in its political structure and political approach.

One approach taken by Nunavut is the establishment of a department intended to deal specifically with land and wildlife issues (i.e. Government of Nunavut, Department of Sustainable Development). The mandate of the Department of Sustainable Development is to manage environmental conditions and biodiversity through good science and Inuit Qaujimanituqangit or traditional knowledge. As part of this management mission, the Department is focusing on the development of healthy communities that support sustainable

economies that ensure the wise use of resources in a manner to protect and enhance the environment now and for future generations. The Department's mandate also includes provision of support for people and Inuit organizations to develop and use their capacities to enable them to participate fully in decisions concerning development and the pursuit of sustainable livelihoods in both the traditional and wage economy.

4.4.2 Multilateral Institutions

The public mandate of multilateral institutions is to promote social and economic development through financial assistance. Although multilateral institutions play an important role in shaping the global capitalist economy through their application of both systemic and coercive power, at the level of this research, their influence is rarely felt directly. In the context of Nunavut, however, the territory is reliant on mineral development, which in turn operates within a global industry. That industry is influenced by multilateral institutions that help shape the principles, norms, rules and procedures that inform international trading regimes. Although somewhat tangential to this thesis, it is important to keep this indirect influence in mind when considering the relative influence of various actors, such as mining companies, that are more directly involved.

4.4.3 The Private Sector

Throughout this dissertation, reference is made to the global capitalist system and economy. The global capitalist system is relevant to the extent that it influences pre-existing social and economic orders such as those of traditional indigenous peoples, and along the way, transforms and adapts to location-specific political, economic, social and ecological conditions. A second relevant characteristic of the global capitalist system is that businesses base their activities and market approach on accumulation. The drive to acquire capital has transformed relations between people and the environment. Capitalists have environmental resources, equipment and the labour of others

that allow them to realize profit through value-added production of these raw materials. The power and subsequent wealth accumulated by capitalist endeavours stem from the ability to secure the raw materials, labour, transportation and access to market as cheaply as possible. Finally, the combination of capitalist enterprises operating within the global capitalist system has led to social and ecological contradictions. O'Conner (1994: 5) sees these contradictions as the "appropriation of the earth's fecundity as a natural resource in the service of accumulation, and a running-down of this resource" and suggests that environmental conservation and the global capitalist system are incompatible. Capitalist enterprises have historically operated to eliminate or ignore most traditional local environmental management practices and knowledge, and to integrate peoples and environments into a larger system over which they have no control. The net impact of the global capitalist system on grassroots communities in particular is the loss of an ability to maintain an adequate livelihood independent of powerful outside actors.

The nature of the role of business within the global capitalist system encourages some businesses to cooperate with certain actors and to come into conflict with others. Businesses have commonly established close relationships with the state in pursuit of their respective strategies. This relationship has not been without its tensions, even though these two actors often have similar interests. The need for business to obtain environmental resources and labour as cheaply as possible tends to place these two actors in opposition with the grassroots actors, who from the viewpoint of businesses, are seen as obstacles to trade in resources and labour. From the perspective of most grassroots actors and ENGOs, businesses are seen as potential opponents because of their motives.

4.4.3.1 The Industrial Actors in Nunavut

Twenty mineral exploration and development organizations are operating in Nunavut in 2005. Of these, two have entered the IBA process (Miramar Mining and Tahera Diamonds), of which only Tahera has completed

the process. Table 4.3 identifies the current mineral operators in Nunavut. The industrial actors hold significant systemic decision-making power.

Mining Cycle Phase	Company	Project Name	Commodity
Mining	Breakwater Res.	Nanisivik	Lead, Zinc, Silver
	BHP Billiton Diamonds	Ekati	Diamonds
	Aber/Kennecott (RTZ)	Diavik	Diamonds
Development	Baffinland	Mary River	Iron ore
	Blackstone Ventures	James River	
	Committee Bay Resources	Committee Bay	Gold
	Cumberland Minerals	Meadowbank	Gold
	Cumberland Minerals/Comaplex Minerals	Meliadine West, East	Gold
	Coronation Minerals	Coppermine	
	Muskox Minerals	Muskox	Platinum, Palladium
Exploration	Commander Resources	Qimmiq, Bravo, Dewar Lake	Gold
	Diamonds North Resources	Victoria Island, Amaruk, Kidme	Diamonds
	Comaplex Minerals	Roche Bay, Fox, Rankin Inlet	Gold
	Hornby Bay Minerals	Coronation Diamond and Uranium	Diamonds, Uranium
	Miramar Mining	Hope Bay	Gold
	NDT Ventures	Melville	
	Pure Gold	Hydra, Perseus	Gold
	Shear Minerals	North Slave	Gold
	Sherwood Mining	Elu	
	Starfield Resources	Ferguson Lake	
	Stornoway Diamonds	Melville, Churchill, Victoria, Coronation	Diamonds
	Tahera	Jericho	Diamonds
	Wolfden Resources	High Lake, Ulu	Copper, Gold

Table 4.3 Mineral Operators in Nunavut in 2005 (www.infomine.com)

4.4.4 Environmental Non-Governmental Organizations: Influence in Northern Mineral Development

Today, few political observers dispute the notion that civil society and non-governmental organizations (NGOs) play an influential role in the establishment of important policies and decisions. The size and number of non-governmental organizations have burgeoned since the 1970s. This growth indicates the increasingly active role of NGOs in the management of various aspects of social and environmental well being (Bryant and Bailey, 1997). It is a public perception that states have contributed to, rather than mitigated, the poverty and environmental degradation that has played an important part in encouraging diverse groups in civil society to become more assertive and vocal about social justice and human rights issues.

ENGOs do not possess the power of the state and, unlike businesses they do not control sizeable capital. Nevertheless, ENGOs are powerful actors helping to shape environmental conflict and change. ENGOs draw on a "moral" capital that is absent from other actors (e.g. multilateral institutions, the state and businesses). Princen (1994: 34) suggests that ENGOs are distinguished from other actors and "reflect qualities of legitimacy, transparency, and transnationalism". The same author argues that ENGOs give the impression that they are unprepared to sacrifice environmental quality for the benefits associated with economic growth in the way states, businesses and multilateral institutions are willing to do:

> relative to actors in the government and business sectors, in the government realm, NGOs are perceived as defenders of the values that governments and corporations are all too willing to compromise (Princen, 1994: 34-35.)

ENGOs' purpose is to seek ways in which to solve environmental problems that ultimately provide them with a reserve of public goodwill (i.e. political capital) that they will be able to use politically to promote their causes. ENGOs exert political influence by influencing the shape of environmental

policies and practices of the states, businesses and multilateral institutions. ENGOs also exert their influence through direct action linked to projects proposed and operated by grassroots actors. By operating in this manner and by effectively bypassing the state and other powerful actors, ENGOs often can make a highly political statement that may have major implications for power relations particularly at the local level. However, the interests of ENGOs are not always compatible with those of the grassroots actors they seek to protect. To illustrate, a booming local economy in Nunavut was fueled by the seal fur industry, which soon came to an abrupt end. Protests and boycotts launched by the International Fund for Animal Welfare and Greenpeace (Herscovici, 1995) stopped all imports of seal products into Europe and the United States, the two largest markets for seal products. A third way in which ENGOs seek political influence is through well-coordinated and well-publicized media campaigns and participation at international symposia, which raise public awareness of their issues.

4.4.4.1 The ENGO Actor: Canadian Arctic Resource Committee

The principal ENGO examined during this research is the Canadian Arctic Resources Committee (CARC). CARC has been an advocate of a more sustainable Northern environment for the past 30 years since its creation in response to the Mackenzie Valley natural gas pipeline (Green, 2003).

CARC is a citizen's organization incorporated under federal law. Over 3,500 people from every province and territory, and many other countries, are supporters of CARC. The committee consists of individuals with different backgrounds, expertise, and political persuasions. But all share a long-standing interest in Northern Canada, and believe that everyone has a responsibility to treat the North with deliberation, care, and good stewardship. Individuals and private foundations that share the same passions and commitment to the North fund CARC (www.carc.org). CARC is based in Ottawa but has an office in Yellowknife, and a long and well regarded history of monitoring and intervening in the development projects in the North.

For three decades, with concerns rooted in equity and sustainability, CARC has supported Northerners in their struggle to achieve greater self determination through land-rights statements, Aboriginal self-government, and constitutional development. CARC became very involved with the IBAs when representatives of Aboriginal peoples from across Northern Canada traveled to Ottawa in April 1996 to share their experiences with mining issues at a workshop component of CARC's Northern minerals program.

The CARC is developing a plan for an area of 200,000 square kilometers that stretches from Great Slave Lake to the Kitikmeot. Known as the Slave Geological Province, the area is home to 30 mining projects in various stages of development; including two diamonds mines and a gold mine, as well as the proposed Bathurst Inlet port and road project.

CARC is funding the study with $400,000 received from an out-of-court settlement with Diavik Diamond Ltd. CARC took Diavik to court because of concerns that the project's environmental assessment did not provide a framework for evaluating and managing cumulative effects (www.carc.org).

CARC's current annual operating budget of about a million dollars comes from a long list of Canadian foundations, led by the Gordon Foundation whose focus is to develop public policy. CARC earns some money doing contract work for government, and the rest of the budget comes from CARC's members (www.carc.org).

CARC's mission remains the same now as when it first started. Its position on oil and gas development can be found in a statement of six principles published in October 2001. In words that could have been written 30 years ago, the document states: "Northerners must have a central role in any decision making round this potential development", including the right to say no to it (www.carc.org).

CARC's principles cover many topics: creating areas that will be protected from development, respecting Aboriginal rights, regulating land and water use with a well-funded management regime, increasing royalties and making sure the project brings a range of economic benefits to the North. One

principle asks for commitments from the United States to ratify the Kyoto climate change accord and protect the Arctic National Wildlife Refuge as a condition of exporting Canadian energy.

4.4.5 The Community and Grassroots Actors

A central theme in the field of political ecology is the political and environmental oppression of grassroots actors by more powerful actors, such as states or businesses. Grassroots actors are often at the losing end of environmental struggles in a politicized environment, one largely characterized by unequal power distribution, marginality and vulnerability (Bryant and Bailey, 1997).

Elliott (1999: 63) argues that grassroots actors are primarily concerned with survival in the short term and depend largely on the resources of the surrounding area. They face a further challenge, as they lack economic opportunity and potential for alternate livelihoods. Grassroots actors manage their environmental resources in a sustainable manner, not because they have a greater respect for the environment, but because their livelihoods depend on the maintenance of those resources.

As the capacity of local organizations and institutions responds to challenges concerning the imbalance of power, the actual and potential roles of grassroots actors and communities have received increased attention. At the local level, the expectations of political leaders, administrators, theorists and activists derive from diverse conceptions of development and social integration, as well as from opportunism to evade or put off the crisis of responsibility (Bryant, 1991). Communities differ widely from one another. They include elected local administrations, some long established, and others possibly based on neighborhoods, livelihoods, gender, religion, sports and other sources of self-identification (Bryant and Bailey, 1997). All of them struggle with their own urgent need to adapt or perish. All of them are confronting interlocutors, middlemen, would-be allies as well as would-be exploiters that are striving to invest them with new responsibilities, introduce them to new ways of life, and

make use of them for purposes that may or may not coincide with their own perceived needs.

The marginalization of grassroots actors is particularly significant in the case of women and indigenous minorities who bear a disproportionate share of the costs associated with its affects. Shiva (1988) argues that women usually have a closer relationship to the environment than men.

4.4.5.1 The Grassroots Actor in Nunavut

In Nunavut, a regional Inuit organization (RIA) represents the grassroots actor. It is the mandate of the RIA to administer the provisions granted to Inuit beneficiaries under the Nunavut Land Claims Agreement. For the purpose of this research, the RIA for the western portion of the territory, Kitikmeot Inuit Association, is the focus.

As indicated above, Nunavut is divided into three regions: the Qikiqtaaluk (or Baffin) Region in eastern and Northern Nunavut, the Kivalliq (or Keewatin) Region in the southern and central portions of Nunavut near Hudson Bay, and the Kitikmeot Region in central and western Nunavut (Figure 4.2).

Figure 4.2 Location Map Illustrating the Three Regions of Nunavut (Source: www.nunavut.com/nunavut99/english/map.html)

i. Baffin Region – (Qikiqtaaluk)

The Baffin region is located at the eastern part of the former Northwest Territories, including Baffin Island and the eastern High Arctic Islands. The Inuit population of the region is approximately 12,000 living in twelve coastal communities: Iqaluit, Lake Harbour, Cape Dorset, Hall Beach, Igloolik, Arctic Bay, Resolute Bay, Pond Inlet, Grise Fiord, Clyde River, Broughton Island and Pangnirtung.

The region's economy is based upon renewable resource harvesting, including a commercial inshore and offshore fishery, arts and crafts, tourism, and the public and service sectors. Communities depend upon air service and spring sealifts for transportation and supplies. The Baffin economy is dominated by an informal system of barter or exchange of goods and services to improve the well being of the individual, family and community. Baffin has experienced mineral development with the now closed Nanasivik mine, which was owned and operated by Breakwater Resources. In 2005, there is a strong focus on the development of a new iron ore project by Baffinland Resources. Although this region does not have the same level of mineral endowment as Kitikmeot, it has the potential for significant mineral exploration and development.

ii. Kivalliq Region (formerly Keewatin)

The Kivalliq region lies on the western coast of Hudson Bay and includes Southampton Island. Just over 6,000 Inuit live in seven communities: Rankin Inlet, Repulse Bay, Chesterfield Inlet, Baker Lake, Coral Harbour, Whale Cove and Arviat.

Renewable resource harvesting is a primary economic activity and includes a caribou and arctic char processing plant. Tourism has grown substantially and there is growing interest in mineral exploration. The public sector is a major employer. Rankin Inlet was created as the result of the once producing (1957-1962) nickel operation operated by the North Rankin Nickel Mines Ltd. In 2005, Cumberland Resources is developing its multimillion-ounce Meadowbank project, west of Baker Lake. Cumberland and Comaplex Minerals also are developing the Meliadine West project immediately North of Rankin Inlet.

Rankin Inlet would benefit greatly from new mine development in terms of jobs and economic revitalization of its cottage industries. However, there are objections to the idea of new mine development in

the region from regional hunters and trappers organizations. With all of the recent exploration activity in the region, the local caribou herds have moved further away from the settlements, making hunting more difficult for those who still maintain some elements of a traditional lifestyle. Peter Kolit, a resident of Rankin Inlet, is quoted in an article by Mosha Folger (2003) as follows:

> "I have to go an extra 10 or 20 miles out to find caribou. We know [the gold and diamond prospectors] are leaving them alone, but the choppers are flying too many times daily."

Kolit claims mining companies are, to an extent, exploiting the land and the Inuit of the area.

> "It seems like the Qallunaat are taking advantage of our land. We're the ones who live here. We've lived here forever and we're not going to move south to retire." (Peter Kolit quoted in Folger, 2003)

Kolit believes mine developers from the South lack the understanding of traditional Inuit lifestyles that could lead to greater problems in the future:

> "If you have a boss who's not born up here it makes it harder for us to get out to hunt. If he was born here, going to retire up here, he'd probably understand. But Southerners don't understand our situation. They have a totally different view." (Peter Kolit quoted in Folger, 2003)

According to the statements above, Inuitmiut in the other regions are weary of Southern-based companies coming to their region to develop mineral resources.

iii. Kitikmeot Region

The westernmost region of Nunavut has an Inuit population of 4,000 and includes the Boothia Peninsula and Victoria Island. The communities are Cambridge Bay, Kugluktuk, Umingmaktuuq, Bathurst Inlet, Taloyoak, Gjoa Haven and Pelly Bay. As well as renewable resource harvesting for commercial char fishery and musk ox, the region has considerable mineral wealth which is being explored and developed. In particular, the Bathurst Inlet road and port infrastructure project has the potential to rapidly advance economic development in the region, while providing an important land link to the South.

The Kitikmeot Inuit Organization (KIA) was established to defend, preserve and promote social, cultural and economic benefits for the Inuit of the Kitikmeot Region. Under its direction, the control and accountability of the Kitikmeot Corporation and the Kitikmeot Economic Development Commission have the sole intention to administer the funds derived from the Nunavut Land Claims Agreement and any revenues from IBAs. The KIA has invested wisely and has been successful in developing a strategic relationship with the business community at large. One example of the success of the KIA's operating plan is an equity ownership and partnership with the Nunasi Corporation.

The Nunasi Corporation is a wholly owned Inuit development corporation that represents the Inuit people from all three regions across Nunavut. Nunasi's mandate is to create value-added benefits such as training, employment and other economic opportunities for the Inuit of Nunavut. At the same time, it is directed and operated as an on-going business endeavor to achieve expectations of profitability and positive returns for its shareholders. The Inuit Tapirisat of Canada established the Nunasi Corporation in 1978, well before the settlement of the Nunavut Land Claims Agreement, to demonstrate the viability of Inuit-owned and managed businesses to the rest of Canada and abroad. A

particularly interesting feature of Nunasi is its willingness to sacrifice profitability to the benefit of the shareholder's environmental, cultural and social well being.

The Nunasi Corporation has developed a portfolio of wholly owned business and joint ventures which represent many of the characteristics of sustainable economic diversification beyond purely natural resources, particularly mining, dependent pursuits. Table 4.4 highlights the business portfolio of Nunasi Corporation.

Wholly owned subsidiaries (100% owned by Nunasi)	
Baffin Optical Ltd.	a retail optical outlet in Iqualuit which services the optical needs of the Baffin Region
Nunasi Helicopters In	Northern helicopter services
Arctic Spirit Sportswear	retailing sports clothing with a Northern motif
Nunasi Properties Inc.	real estate holdings

Joint ventures with Nunavut Inuit organizations and Inuit owned businesses:	
Top Of The World	providing holiday and corporate travel services to Northern clients
Larga Baffin Home	a residence in Ottawa, for patients traveling for medical treatment
Larga Kivalliq Home	a residence in Winnipeg, for patients traveling for medical treatment
Nunavut Construction	undertaking infrastructure work for Nunavut
Nunavut Petroleum	oil and gas holdings
Nuna Logistics	building roads and infrastructure for the mining industry in the Western Arctic
Pan Arctic Inuit Logistics	operating and maintaining the sites that make up the North Warning System
Canadian North Airlines	providing jet passenger and air cargo services
Weldco-Beales Manufacturing Inc.	manufactures heavy equipment attachments and cranes
SRI Homes and SRI International	manufactures high quality modular homes
Uqsuq Oil	purchases and distributes fuel for the towns of Iqaluit and Resolute Bay
NorTerra Group	holding and management operating investments of a group of companies jointly owned by Nunasi Corporation and Inuvialuit Development Corporation
Northern Transportation	providing marine transportation of cargo and fuel
NORTRAN	a subsidiary of Northern Transportation providing marshalling and expediting of sea lift services
Kituna Corporation	engages in expediting and maintenance of contracts and heavy construction and haulage projects
Other Joint Ventures:	
NASCO and ARDICOM	providing electronic digital communication services to communities in the NWT
Northern Learning Company	providing professional training opportunities for all Northerners
Polar Vision Centers	a full service optical company
Larga Ltd.	a residence in Edmonton, for Northern patients traveling for medical care
Nunasi Environmental	provides environmental assessment services

Table 4.4 KIA's Nunasi Corporation Businesses (Nunasi Corporation, 2002)

The extensive nature of the Nunasi businesses illustrates the potential for secondary and tertiary economic development of the Kitikmeot Region.

Although KIA represents a model RIA, the association remains very powerful relative to the community at large and the industrial actor. Decision making is concentrated in the hands of a minority of community elites who control key resources, such as land, jobs and business development opportunities with an implied alliance with local functionaries of the territorial government.

The KIA encounters permanent tension between its needs to have autonomy and to represent its beneficiaries and their dependence on a regular inflow of capital development opportunities (e.g. mineral development). A further conflict develops with the community at large because not all residents are beneficiaries of the land claims agreement. In this section I have highlighted the different levels of awareness and on-going development in the three regions. It is apparent that the Kitikmeot region has been the most successful in moving the development agenda forward. That being said, many challenges exist within the region, remain unaddressed, and pose impediments to the Kitikmeot region developing sustainable mining communities.

4.4.5.2 The Community as an Actor in Nunavut

Not all members of Northern communities are beneficiaries of the Nunavut Land Claims Agreement. In the hamlet of Cambridge Bay, approximately 20 per cent of the population is excluded from the benefits of the agreement. This portion of the population excluded from receiving benefits consists of non-Inuit people. The Hamlet is under the administration of the territorial government, and services such as health, education, social services, etc. are under the territorial government umbrella. Hamlet infrastructure and operating costs are borne by the government of Nunavut.

The community holds the least amount of decision-making power in this arrangement. The KIA is currently the largest employer and revenue generator in the region, operates in isolation relative to the Hamlet, and few benefits other than employment wages enter the local economy. In Inuit communities, social peace typically depends on acceptance of the traditional distribution of power and avoidance of issues that might bring conflict into the open.

4.5 Conclusion

From the discussion above, natural resource development in Canada's North is positioned in a complex web of stakeholders with differing motives, goals and objectives, and founded in a rich history that dates back to the early 1950s. Since that time, the political playing field has shifted and decision-making power has been redistributed. This transition from an industry-dominant position to one of a more balanced approach has been gradual. This transition is largely due to settlement of long outstanding, Aboriginal land claims, and due to the realization by many groups that they have much more power than previously recognized. This power has been used in confrontational circumstances, but more commonly as a tool to be included in the discussions concerning land use, and impacts resulting from mineral development on their lands.

The concept of power is very complex, with many shades and variations. Two types of power are recognized to exist when reviewing the actors involved in natural resource development: systemic and instrumental. These types of power do not exist in exclusion; in fact, it appears that both modes often occur at the same time, but to varying degrees.

The presence of these power modes contributes to the choice of political ecology as the conceptual lens for this research, since political ecology is the analysis of the unequal distribution of decision-making power related to environmental concerns. We have seen that there are several actors or stakeholders in a political ecology review, and each exerts its own mode(s) of power to different degrees to cause often-complex interactions. It is these interactions that cause conflict and the impetus for change.

One change that can be observed from these interactions is the shift in direction and strength (vectors) of decision-making. In the case of communities, these power vectors can either lead to a sustainable future or not. Power is the means of change, and political ecology is the method of predicting where that change might occur. However, to measure change, a set of criteria representing best operating practices must be developed.

The following chapter develops a set of criteria for assessing one potential tool for sustainable mining communities that responds to issues of the distribution of decision-making power.

Chapter 5: Development of Sustainable Mining Criteria and Its Application in Northern Canada

5.0 Introduction

Chapter 3 argued that principles should include biophysical integrity, social vitality and economic sufficiency. Chapter 4 discussed the nature of power and the political ecology of natural resource development. Given that the development of sustainable mining communities is a politically charged endeavour, a defined set of suitable criteria should be developed against which any mining operation can be measured. These criteria should be represented in an IBA that is oriented towards sustainability.

In the first section of this chapter, I reflect upon the nature of mineral development on Aboriginal lands and identify those elements of sustainable communities relevant to them. The following section presents criteria that reflect not only values originating from Aboriginal community issues, but also insights from a review of sustainability indicators from earlier chapters. These criteria are applied to the IBA model to test its ability as a tool to evaluate sustainability.

Holistic corporate policies can reflect a company's commitment to the principles of sustainability. These policies would need to incorporate more than just the biophysical environment but also the affected people and their culture. The encouragement of Aboriginal partnerships and cooperation reflects the company's desire to work within a community as opposed to being tangential, which has often been the case historically. Training and education form the base for a community wishing to embark on a more sustainable path. The company that includes relevant training and educational programs in the home community is responding to the community's needs, concerns and aspirations for the future.

A company committed to employee and community well being works with community members beyond just the political elites, and works to support and enhance existing support infrastructure reflecting the culture and traditions

of the community. Community capacity building and enhancement beyond the influence of the mineral development allows for the development of secondary and tertiary economies with potential to extend well beyond the life of the mine. Finally, effective community participation and information disclosure allow the community to assess both the positive and negative impacts of the operation on both the biophysical and social environments.

The following section highlights some of the important issues relevant to natural resource development on Aboriginal lands, and how they need to be reflected in any criteria of sustainable mining in the future.

5.1 Mineral Development on Canadian Aboriginal Lands: A Context for Sustainable Mining Criteria

The introduction of mining in indigenous areas creates not only important potential benefits but also numerous challenges. Some benefits are the same as those generally associated with mining: employment, income generation, tax payments for local and regional governments, and everything that can be done with public revenues in terms of social expenditures, infrastructure and community development. But indigenous communities also have the possibility of capturing some spin-off benefits from the expenditures of mining enterprises on locally purchased inputs.

First Nations peoples may benefit significantly in future decades by systematically developing relevant mining skills so that they can have a large measure of control and influence over the future of Northern mining activities. Ultimately, this should include partial or complete ownership of some mine enterprises as is the case at TeckCominco's Red Dog Mine in Alaska. At Red Dog, NANA Regional Corporation is the Aboriginal body that owns the land and holds an equity stake in the operation. I visited the operation during my employment with Teck during the early 1990s (MH, 1992) and saw a level of cooperation between the Aboriginal organization and the company that was based on mutual respect and shared values. NANA and TeckCominco became partners in the operation through a unique agreement consisting of a 4.5 per cent

royalty payment and an escalating equity ownership beginning at 25 per cent and increasing annually at five percent until the company and NANA share equally in the operation's profits (NANA Regional Corporation, 2004, Alaska Division of Mining, Land and Water, 2005, TeckCominco, 2005).

On the other hand, mining can lead to adverse social, economic and biophysical impacts for indigenous peoples. Mining activities and the relocation of outsiders into these areas, for example, may introduce transient mining personnel who may bring with them alcohol, different patterns of consumption and foreign lifestyles. This was the case at Rankin Inlet in Nunavut. The Rankin Nickel mine operated during the 1950's for five years. During that time the Canadian Federal Government was undertaking an aggressive program of relocation of Inuit peoples (MacDonald, 1998). During site visits to the Rankin Inlet area (MH, 1993, 1994, and 1995), I observed the incomplete rehabilitation of the old Rankin Nickel mine site with evidence of acid rock drainage and scrap metal left on the tundra. These relics of abandoned operations as well as current or future operations can disrupt community life and traditional ways of living, with adverse impacts on indigenous societies generally. There may also be negative effects upon the economic activities of indigenous peoples. For instance, hunting, herding, or foraging areas risk being disturbed or destroyed. Rivers may be polluted and fishing activities damaged. The environmental impacts of mining may also affect the health of indigenous peoples directly through air and water pollution, and indirectly through their impact on fishing or other economic activities.

If there are significant net benefits for indigenous communities, it is likely that these communities will support and participate in environmentally sound mineral development activities in their territories or in those territories adjacent to their communities. However, it is apparent that indigenous peoples will not support mining projects in Canada unless such projects offer net benefits, meaningful community participation, and a demonstrated respect for the environment. In the words of Billy Diamond, Grand Chief of the Cree (Ritter, 2000: 8):

> The more experienced mining companies realize that, for the most part, Indigenous Peoples and the Cree in particular are NOT anti-developmental. We welcome the economic benefits, training and technological transfer that are associated with large resource projects. But we do insist on one criteria[on]. First and foremost, all aspects of the partnership must be co-authored and co-managed by all the partners (from the Cree Mining Conference address August 24, 1999).

Historically, indigenous communities were non-participants in negotiations with governments and/or private corporate ventures concerning the terms and conditions under which natural resources would be extracted. Thus, for many years, their claims were ignored. The legal position of the First Nations people in Canada changed in the 1990s. The Supreme Court of Canada recognized native land claims based on treaties that had not extinguished title to land or resources in many areas of Canada (Odawa and Ojibway of Ontario in Borrows, 1992; Crane, 1994; Nunavut in Merritt and Fenge, 1990; Gray, 1994; Asch and Zlotkin, 1997; Bankes and Sharvit, 1999). This meant that the process of allocating natural resources or laying claim to land titles often was a tripartite process, where indigenous communities are at the negotiating table and are empowered to make decisions which help shape the projects.

Ultimately, the indigenous communities may assume full control over some territories or natural resources. In the 1990s, the Nisga'a in Northern BC were granted a land claim that partially recognizes its territorial claim. By virtue of accepting it, their distinctive rights as natives were extinguished but they gained control over the lands and natural resources in their historic territory (Simpson, 1998). This claim was approved by Parliament in October 1999, and the legislation supporting the claim was approved in December 1999. Many other land claims are either currently before the courts or in process. It is likely that many will be recognized as legitimate. This will have important consequences for the bands involved and for the larger non-native community.

The establishment of Nunavut as a self-governing territory in the Eastern Arctic is also a step in this direction, specifically to administer their lands and

develop them in the best interest of their beneficiaries. This is a central point in the current research as, although Nunavut remains part of the Dominion of Canada, it enjoys elements of self-government and consequently is the primary government actor in the political ecology of mineral development in this part of Canada's North.

5.1.1 Sustainable Mining Criteria

The development of sustainable mining criteria is still in its infancy. Some analysts such as Hancock (1998) are focusing on criteria and processes for developing indicators and systems monitoring and reporting on social, economic and environmental performance. However, the concept of sustainable mining at first glance seems to be an oxymoron. How can the development and extraction of a non-renewable resource be sustainable? Furthermore, in order for mining companies to adopt a business plan that is significantly different from historic approaches, a set of communicable and measurable indicators is needed.

The concept of sustainable mining was largely born out of work in Australia (e.g. Ecologically Sustainable Working Group, 1991). One definition emerged from this early work:

> ...ensuring that the mineral raw materials needs of society are met, without compromising the ability either of future societies to meet their needs, or of the natural environment to sustain indefinitely the quality of environmental services (such as climate systems), biological diversity and ecological integrity (Ecologically Sustainable Development Working Group (ESDWG), 1991).

Natural Resources Canada (NRCan) links sustainable mining to two distinct but interrelated cycles: the mining cycle and the product cycle. The mining cycle looks at the process of exploration through extraction and closure, whereas the product cycle considers the original need (not desire) for the commodity being mined, its further refinement and finally its recycling or

ultimate disposal. The mining cycle is the focus for this research. NRCan defined sustainable development for the mining sector as:

> …finding, extracting, producing, adding-value to, using, re-using, recycling and, when necessary, disposing of mineral and metal products in the most efficient, competitive and environmentally responsible manner possible. NRCan recognizes that these activities must be carried out in consultation with, and respecting the needs and values of, other resource users and maintaining or improving environmental quality for present and future generations (Natural Resources Canada, 2004).

To assist in the implementation of sustainable development practices in the mining sector, NRCan (Natural Resources Canada, 2004) developed six major objectives:

- Integration of the concept of sustainable development in federal decision making affecting the minerals and metals industry.
- Ensuring the international competitiveness of Canada's minerals and metals industry in the context of open and liberal global trade and investment framework.
- Advancement of the concept of sustainable development of minerals and metals at the international level.
- Establishment of Canada as a global leader in promoting the safe use of minerals and metals, and their related products.
- Promotion of Aboriginal involvement in minerals and metals related activities.
- Provision of a framework for the development and application of science and technology to enhance the industry's competitiveness and environmental stewardship (NRCan, 2004).

Hancock (1998) believes that the most effective sustainability criteria will be part of a life-cycle input/output indicator system created with a range of

primary determinants (e.g. sustainability goals of environmental, social and economic performance), each supported by potential indicators.

Hancock (1998) proposed a series of questions to address when developing a set of sustainability criteria. These include:

- Who are the indicators for?
- Are they to form a holistic set that crosses socio-economic and environmental issues?
- What interpretation of sustainable development is to be used?
- Who will choose the indicators?

The set of criteria for sustainable mining developed as part of this research is directed at the industrial actor. The mining company that embraces sustainability as an element of best practice must recognize other impacts upon a community beyond the biophysical. The concept of sustainability needs to be communicated in terms of economic sufficiency, social well being and biophysical integrity of the affected system (Robinson et al., 1990, Glauser et al., 2005).

It is recognized that many developed countries function in a liberal democratic society, and the likelihood is low that there will be revolutionary change of the scale required to dislodge the current practice of export-oriented natural resource development. By setting a standard understanding of sustainability, one that can be accepted by both industry and a local community, the terms of reference should be more palatable and workable going forward. An important aspect of this acceptance is understanding the context in which all actors operate in Northern Canada.

5.2 Criteria Directed Towards Northern Canadian Aboriginal Communities

The discussion above highlights the sensitivity of mineral development on Canadian Aboriginal lands. Chapter 3 discussed the evolving definition of

sustainability from the simplistic Bruntland version through clearer but rigid pillars to 'spheres of concern' that 'knit' the pillars together. Based on these definitions and the context of mining on Aboriginal lands in the Canadian North, the following criteria were developed. These criteria include:

- Holistic Corporate Policies
- Aboriginal Partnerships and Cooperation
- Training and Education
- Employee and Community Well Being
- Community Capacity Building and Enhancement
- Community Participation and Information Disclosure

Each of these criteria is described below.

5.2.1 Holistic Corporate Policies

An industrial actor (i.e. the mining project proponent) that adopts strong corporate policies regarding sustainable mining practices is generally one that has membership in an internationally recognized standards organization (e.g. ISO). These corporations embrace a set of guidelines on how they operate and they also possess a corporate vision and exercise it through formal operating policies.

Common elements of such policies include:

- People - developing skills and rewarding achievement;
- Community - living the principles of environmental responsibility;
- Culture - creating an action-oriented, entrepreneurial outlook;
- Principles - acting with integrity, honesty, fairness and respect.

One company for example, Placer Dome, has taken the need for strong corporate sustainability policies to a new level by publishing its first annual

sustainability report, *It's About Our Future* in 1999. Placer's report represents one of the first attempts by a Canadian mining company to produce a comprehensive annual review of its efforts to use more sustainable operating ideologies.

Table 5.1 provides the report structure and the topics addressed.

Report Section	Major Topics Addressed	Indicator Sets
1. Sustainability and Our Future	• Policy framework: sustainability policy, strategic performance objectives, code of business conduct, program to rejuvenate corporate culture • Accountability: sustainability corporate governance • Global sustainability challenges • Future directions: commitments on priority issues	
2. Economics	• Profitability and strategic business plan, lowering costs, research, growth, exploration and acquisitions to ensure 10 years of reserves • Economic benefits: wages, local hire, training, infrastructure, local purchase, taxes and royalties	• Operating costs • Gold reserves • Contribution to the local, regional, national and international economies
3. We are Placer Dome: Employees	• Core values: ethics, learning, trust, teamwork • Openness, recruitment, recognizing exceptional	• Number of employees and contractors • Safety statistics: injuries • Safety awards

	employees, employee development and training, tenure, youth employment, working safely	
4. Vibrant Communities	• Traditional community benefits, changing expectations • Communication and consultation • Respecting cultures • Building relationships with communities • Case studies: native employment at Donlin Creek (Alaska), community relations at Las Cristinas (Venezuela), public health at Misima (Papua New Guinea), exploration exit at Tiawa (Niger), mine closures (various) • Tailings spill at Marcopper (Philippines): river system rehabilitation, compensation payments, sustainable development projects, lessons learned	
5. Placer Dome in Nature	• Variations in conditions faced across the Placer Dome system, uniqueness of each site • Broadening the Placer Dome perspective: taking a longer view, factoring implications for people and ecosystems throughout the full mining life cycle	• Temperature range and precipitation by mine • Issues by mine • Water use by mine • Acid rock drainage and metal leaching potential by property • Cyanide use by mine • Cyanide discharge by mine • Land reclaimed by mine • Recycling programs by mine

	• Issue identification and management • Sustainability priority: surface and groundwater quality • 1998 water use, water conservation at Osborne Mine • Sustainability priority: acid rock drainage and metal leaching • Sustainability priority: tailing management • Sustainability priority: cyanide management • Improving cyanide management at Golden Sunlight • Submarine and riverine discharge: Misima and Porgera • Sustainability priority: closure, the Equity Silver Model, planning for closure, costs of closure • Recycling • Environmental Management, Risk Assessment and Management • Performance measurement: continuous improvement through audits and reviews, data management, laboratory quality assurance and control • Reaching for efficiencies • Incidents, learning from accidents and non-compliance • Environmental costs and awards	• Audits and reviews, 1996-98 • Environmental incidents by mine • Placer Dome Group environmental costs and by mine • Environmental awards

6. Property profiles	• Site overview • Sustainability objectives • People (employees), community, economy, nature	

Table 5.1 Placer Dome 1999 Sustainability Report Topic and Indicator Sets (Source: http://www.placerdome.com/sustainability/reports.html)

The idea of bringing together the wide range of topics under one cover is without precedent in the Canadian mining industry. The report, however, falls short in terms of how environmental performance should be measured. Moreover, Placer Dome selected a limited number of vague indicators. One reason for such deficiencies may be the lack of qualitative or quantitative data, as they either did not exist or suffered from quality issues (T. Petrina, Placer Dome President and CEO, pers. com., 2002).

Another negative aspect of the report was that no consideration was given to the needs of individual communities in terms of tracking change, or to determine how sharing of the findings might be possible.

5.2.2 Aboriginal Partnerships and Cooperation

A company that follows a sustainable business plan will respect and value Aboriginal partnerships and seek the benefits of cooperative aspects of the proposed operation. Co-management structures are often common. Key to the success of such partnerships is a continuing dialogue with the community to understand its needs and requirements.

Co-management of resources allows Aboriginal groups a structure and a process through which they can participate in a meaningful way in the development. Feit (1988: 74) presents a thorough definition of the co-management concept:

> [Co-management] is the direct exercise of effectual managerial and regulatory practices with respect to wildlife and land. The legitimacy and authority for such practices are determined at the

> local level by reference to community-based systems of knowledge, values and practices. Furthermore, they are especially embedded in local practices and knowledge with respect to worldview, property rights, social authority, and the definition of the sacred.

From the Inuit perspective, co-management of resource development is a core theme deeply entrenched in the Nunavut Land Claims Agreement. A prominent local community leader, Charlie Lyall, made the following statements in a presentation

> First, Inuit will not be passive participants in development. The only way we can escape unemployment and poverty is to develop the Northern economy, we insist on being preferred partners in development. Mining companies must come to understand that access to mineral resources should have an economic value and that in Nunavut it is the Inuit who control access.
>
> Second, we will take a business approach to development. We are not asking for handouts or charity. It is important that Inuit develop the business expertise to take part in mining deals and the business development which come along with them. If necessary, we are quite prepared to hire that expertise. In either case, we intend to come to the bargaining table prepared to defend our interests. (Charlie Lyall, Presentation to the Canada Forum on Mineral Exploration and Development in Nunavut and the Canadian North, November 4, 1993)

Statements like Lyall's reinforce the need to establish strong partnerships and foster the required cooperation in order to develop natural resources on Aboriginal lands.

5.2.3 Training and Education

The company with a sustainable operating outlook establishes programs for employee training, long-term training and existing skills upgrading, and improvement of literacy, as well as provides scholarships to prepare their Aboriginal employees for positions that require greater technical or managerial

expertise. The provision of culturally relevant education for Aboriginal learners is critical to help them achieve their aspirations for a sustainable future.

An example of a multiparty program established by a partnership of Aboriginal groups, mining companies and government is the Mine Training Society (MTS). The MTS is a non-profit partnership consisting of the Yellowknives Dene First Nation, the Dogrib Treaty 11 Council (Tli Cho Government), the Lutsel K'e Dene Council, the North Slave Métis Alliance, Diavik Diamond Mines Inc., De Beers Canada Mining Inc., BHPBilliton and the Northwest Territories' Department of Education, Culture and Employment. The society's mandate is to provide skills development and training for Aboriginal peoples of the NWT for long-term employment in the mining industry. Training programs include specially tailored courses in basic skills, apprenticeship, underground mine training, mining technology and administration, mill operations, construction, heavy duty equipment operations and trades assistance.

Whether training and education programs are developed in concert with other government programs or on an individual basis, it is important to develop transferable skill sets that reach beyond the operating life of any mine.

5.2.4 Employee and Community Well Being

The company with a sustainable business plan is active in terms of labour relations, employee benefits and incentives as well as respects the cultural needs of its Aboriginal employees. During my employment with Echo Bay Mines in the mid-1990's, pioneering steps were taken to accommodate the aspects of Aboriginal lifestyles, such as having signage posted in both English and the local dialect, development of a buddy system pairing experienced Inuit workers with new Aboriginal employees to allow for more effective level of communication, flexible work schedules to allow Inuit employees to take advantage of annual hunts timed to caribou migration, char runs etc. Echo Bay recognized its responsibility to minimize its impact on traditional lifestyles.

The following sections discuss two other important issues associated with sustainable mining in the Canadian Arctic: fly-in, fly-out commuting and integrating traditional lifestyles in the workplace.

5.2.4.1 Long-Distance Commuting, or "Fly-In, Fly-Out Mining"

In the last two decades, virtually no new mining communities have been constructed to accompany new mine projects in Canada. Every new project has involved transporting or flying the workers to the site for shifts of varying periods. This arrangement is referred to as "long-distance commuting," or "fly-in, fly-out mining" (Shrimpton and Storey 1992: 190).

Long-distance commuting avoids many of the difficulties of single-sector mining towns (Shrimpton and Storey 1992: 195):

> First, the cost of constructing accommodations of a barracks/hotel nature is low compared to that of a full community. Such accommodation is not considered "home" so that the range of services required is also smaller than a full dedicated mine community. Moreover schools and family facilities are unnecessary. Second, the risk of major loss of the investment in the community for the enterprise and the public sector should the mine fail prematurely is also avoided. Third, the mining company has greater flexibility in deployment of workers over the course of the mineral market cycle. Indeed the workers and their spouses may have greater opportunity to find full or part time employment when they are located in a larger town or city rather than dwelling permanently in the mining town. Fourth, the human and economic costs of community closure, which would accompany a mine shut-down are avoided by long distance commuting. Fifth, because this arrangement seems to be reasonably satisfactory to the workers, job turnover and perhaps absenteeism are lower for the long distance commuting option as well.

Various consequences arise from this pattern of mining, both for the development of local communities and regions, as well as for families. On the positive side, the long-distance commuting option provides employment for workers from older established mining towns, thereby helping maintain such

communities. On the negative side, employment opportunities may be lost to residents of communities closer to the mine site. Furthermore, the stimuli to small businesses provided by the consumer demand by mineworkers may migrate to the towns of origin of the commuting miners. This may be desirable or undesirable, depending on the circumstances.

It is likely that mining will continue to move further and further into the Northern areas of most provinces, Labrador, Nunavut and the western Arctic. Indeed, because of the occurrences of diamonds, a growing mining boom in Nunavut and the western Arctic looks increasingly possible. As this occurs, fly-in, fly-out mining may be of increasing benefit to Northern communities and to the indigenous peoples of the North. Established indigenous communities could serve as the major labour sources for the future mines in these areas. Workers would commute from their communities to dispersed mine sites. A number of factors could make this happen:

- all of the communities are now equipped with air transport facilities;
- there is an economic advantage in their location in terms of commuting within the region;
- indigenously owned airlines serve the region; and
- the new types of "Impact and Benefit Agreements" stipulate that large and growing proportions of the employment opportunities must go to the Inuit and other First Nations peoples.

5.2.4.2 Integrating Traditional Lifestyles in the Workplace

A major aspect of the Nunavut Land Claims Settlement was to give control back to the Inuitmiut. The intent was to ensure that they could combine traditional learning with Western education. Another aspect of the land claims settlement was an attempt to right the wrongs of previous generations and move forward on the terms set by the Inuitmiut (Fowler and Trouton, 2003). It was hoped that success would be realized through the settlement and permit the Inuitmiut to deal with the rest of Canada as equals.

Many challenges face the Inuitmiut today, rooted in the desires of early Europeans to have the Inuit conform to Western ways. One historic example was to coerce or persuade these once-nomadic people, through a variety of means, to move to live together in groups and stationary communities, forcing them to live in houses built of material of which they had no understanding. To compound this, the transition into a wage economy arising from investment in mining metals and diamonds added further to that pressure (Fowler and Trouton, 2003).

Numerous social issues generally exist in these communities. The youth often suffer from low self-esteem and lack of hope for the future. This is particularly the case with girls as young as twelve years old, where their families do not support the notion of their finishing school. Although there is continuous development of new or improved infrastructure, often the contractors hire from outside of the Nunavut region. Cases of abuse are often hidden behind a wall of silence (Chris King, Economic Development Officer, Hamlet of Cambridge Bay, NU, pers. comm., 2004). A large portion of the community feels this despair, because the community members' need to rely on traditional ways of 'living off the land' is decreasing, and members of the community have not embraced or are not fully participating in the 'Southern' economy (Chris King, Economic Development Officer, Hamlet of Cambridge Bay, NU, pers. comm., 2004).

It is critical that any mining operation considers flexibility and adjustment for those Inuit employees, and responds positively to their need to reclaim their lost heritage. Competing priorities lead to frustration with having to conform to standards and procedures foreign to them (Chris King, Economic Development Officer, Hamlet of Cambridge Bay, NU, pers. comm., 2004).

5.2.5 Community Capacity Building and Enhancement

The terms 'community capacity building', 'community development' and 'community empowerment' describe a process that increases the assets and attributes which a community is able to draw upon in order to improve

livelihoods. The need is twofold: (1) build capacity where none exists, and (2) enhance what capacity already exists. The literature dealing with Aboriginal health issues and developing the capacity of communities to manage health care is expansive (e.g. Goodman et al., 1998).

Labonte and Laverack (1999: 14) define capacity building as the increase in community groups' abilities to define, assess, analyze and act on health (or any other) concerns of importance to their members. The capacity of a group also depends on the resource opportunities or constraints (ecological, political and environmental), and the conditions in which people and groups live. Laverack (2001) identified and interpreted nine domains for community empowerment/ community capacity building, which represent goals that the community should strive for to establish a sustainable path. Although these domains or goals were originally intended for developing health care capacity, they appear appropriate for any community facing substantial change and preparing for a sustainable future. These domains include:

- Improving stakeholder participation
- Increasing problem assessment capacities
- Developing local leadership
- Building empowering organizational structures
- Improving resource mobilization
- Strengthening links to other organizations and people
- Enhancing stakeholders ability to 'ask why'
- Increasing stakeholder control over program management
- Creating an equitable relationship with outside actors

5.2.6 Community Participation and Information Disclosure

Despite decades of experience with negotiating IBAs in Canada, there is little literature available about their content, the factors that determine their success or failure, and the extent to which communities have been able to implement them. This is largely because many IBAs are treated as confidential, which

prevents First Nations from learning from each other's experience and avoiding costly mistakes. In order for communities to have a meaningful participation in the decisions which affect them, appropriate information disclosure is needed.

5.3 Conclusion

A set of conditions that renders a set of criteria useful includes the ability to reflect the cultural context for which it is intended, being sensitive to change over time, being feasible and measurable, and being suitable to identify trends either towards or away from sustainability. The criteria developed above may achieve all of these qualities, and reflect elements of criteria for developing sustainable mining communities.

The criteria for developing sustainable mining selected for evaluation are:

- Holistic Corporate Policies
- Aboriginal Partnerships and Cooperation
- Training and Education
- Employee and Community Well Being
- Community Capacity Building and Enhancement
- Community Participation and Information Disclosure

The criteria appear to fully reflect the characteristics of sustainability which should be represented in an IBA model. The following chapter applies these criteria to existing IBAs.

Chapter 6: Impact and Benefit Agreements: Sharing the Benefits of Natural Resource Development in Canada's North

6.0 Introduction

In Chapter 5, I developed criteria for sustainable mining and inclusion in impact and benefit agreements. These criteria relate to a commitment to both a long-term and the more traditional, short-term perspective, and a holistic focus on the sustainable future for the community.

The introduction of a mineral development project into a community leads to a complex series of changes that, at a minimum, create uncertainty for the residents and have the potential to create conflict. IBAs historically have been used to establish a negotiated agreement between the industrial actor and the RIA, on behalf of the beneficiaries of land claims agreements. The IBA has evolved as part of the land claims' settlements and has provided the local communities with a voice regarding the terms and conditions of any development on lands under their administration. In other cases, IBAs have been implemented, whether intentionally or not, as a proxy for a land claims settlement such as the case of the Dona Lake mine in Northern Ontario.

In this chapter, the sustainable mining criteria developed in Chapter 5 are applied to compare and contrast IBAs. An examination of these agreements reveals an evolution in the overall complexity of the IBA structure, both in terms of the content of the agreement and the spirit and manner with which these agreements are negotiated.

6.1 Managing the Partnership

Mitchell (1997: 12, 2004: 6) states that change, complexity, uncertainty and conflict often are central in integrated resource and environmental management (IREM). In many cases, these four characteristics pose both opportunities and threats for members of the global ecosystem and specifically, grassroots communities. These characteristics also cause actors to recognize and build

upon their strengths, while protecting themselves against the weaknesses often inherent in their position in the politicized environment.

An important aspect of IREM is the establishment of partnerships and participation by members of the locally affected communities in the decision-making process. Mitchell (1997: 174) points out that establishing close relationships with the local actors is more than being politically correct. Rather, it is an effective method for better resource and environmental management over the medium- and long-term.

The development of an IBA in this context embodies many of these themes of IREM. These include partnerships and participation of indigenous peoples, without the restriction of necessarily being Aboriginal or First Nations; the incorporation of traditional ecological knowledge; providing for alternative dispute resolution mechanisms; and, monitoring the behavior and performance of the actors. From the local community perspective, IBAs provide the opportunity for self-determination as it pertains to the environment and the development of their natural resources to their mutual benefit.

Furthermore, the IBA structure allows for a mechanism of transition in the case of disruption of traditional lifestyles (e.g. hunter-gather). The response to this transition can be complex and has been examined extensively by others (Brody, 1982). Historically, there has been resistance on the part of the grassroots community to adopting a mainstream market economic model. Today, however, there appears to be an emergence of a mixed subsistence/cash socioeconomic system. Under these conditions, cash production involves simple commodity production utilizing resources immediately available and elements of traditional knowledge. The production unit harvested the same resource, whether the product is destined for market or domestic consumption.

The essential elements of an IBA beyond the boundaries of Aboriginal land claims for application in any local community tend to include many elements addressed in the four core themes of Mitchell (1997) and make the economic transformation less intrusive. These elements include:

- Recognition of local rights and sovereignty;
- Employment – percentage targets and hiring policy;
- Training and scholarships;
- Contracting and business opportunities;
- Up front cash payments – compensated for land use loss +/- mineral lease payments;
- Protection of wildlife and the environment;
- Royalties payable on mineral production; and
- Possible financial participation in the project via assumption of equity or debt.

The following section examines the IBA as an approach to develop sustainable mining communities.

6.2 An Approach to Sustainable Mining Communities

The IBA mechanism reflects many elements that researchers have identified as essential to the pursuit of sustainability. These include: (1) a new form of civil society as demonstrated in the negotiated partnership between the mining company and the local community; (2) a recognition that the rights of the vulnerable can be achieved by the realization of their collective responsibilities; (3) a willingness in formal governance to open up opportunities for various informal governance structures; (4) a sense that social maintenance and ecological care are in alignment with economic activity; and (5) the establishment of a local identity that binds the community (O'Riordan and Svedin, date unknown).

The IBA could be used as a tool of IREM and also as an instrument of political ecology. As an IREM tool, the IBA incorporates many of the place-based issues for effective resource and environmental management. IBAs also ameliorate the disparities identified through the conceptual lens of political ecology. The IBA effectively redistributes some of the decision-making power

and, as a result, the community becomes empowered and to some degree, master of its own future.

6.3 IBAs in Canadian Mining

The following section highlights the evolution of the IBA mechanism in Canadian mining. As discussed above, little is documented with respect to content, the factors that determine their success or failure, and the extent to which communities have been able to enforce them. The following section examines the development of IBAs as part of the settlement of Aboriginal land claims.

6.3.1 Development of IBAs as Part of Aboriginal Land Claims

Treaties and land claim settlements represent change. Yet, even the most innovative and forward-looking communities are wary of changes that can lead to substantial shifts in material, political or social conditions. The modern treaty process began in the 1960s, when national governments began to acknowledge the legitimacy of Aboriginal demands for land settlements. The first of the modern treaties in Canada was the James Bay and Northern Quebec Claims Settlement Act in 1976.

The prospect of a major energy development spurred the settlement of the Aboriginal land claims in Northern Quebec. The provincial government's plan for a massive hydroelectric development faced strong opposition from the First Nations. Ultimately, the Cree and Inuit agreed to the James Bay and Northern Quebec Act, which formed the basis for the James Bay hydro project.

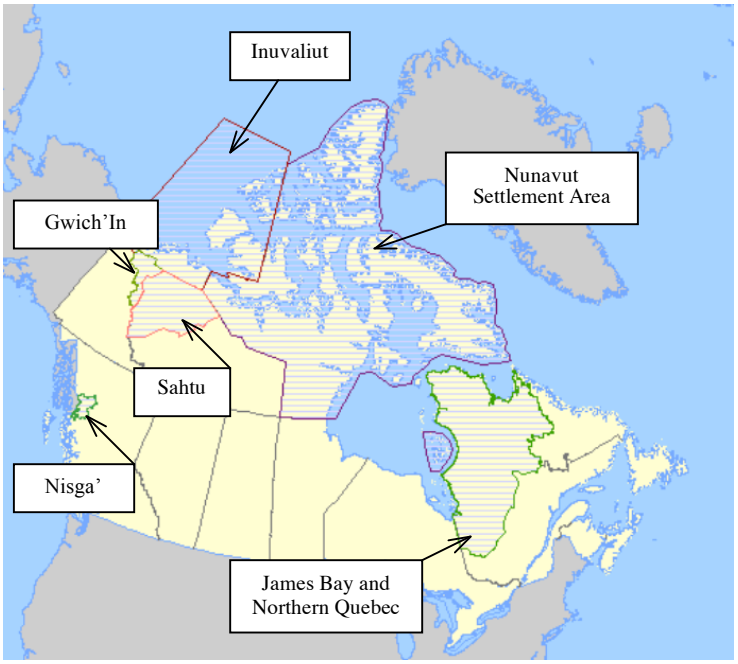

Figure 6.1 Location Map of Settled Comprehensive Land Claims in Canada

The settlement provided the indigenous peoples with direct ownership of 14,000 square kilometres, and exclusive harvesting rights over an additional 150,000 square kilometres. The Cree and Inuit received preferential access to resources over a one million sq. km. area. Cash payments totaled $225 million, with the Cree receiving $135 million and the Inuit the remaining $90 million. One of the key elements of the agreement was the establishment of the Hunters and Trappers Income Security Program, a settlement-funded support program for Native harvesters (Department of Indian and Northern Affairs Canada, 1993). The agreement also ensured Aboriginal participation in resource management and government service delivery. As the first of the Canadian modern treaties, the James Bay and Northern Quebec Agreement established the level of expectation for other land claim negotiations. The agreement specified that the indigenous peoples were entitled to (Department of Indian and Northern Affairs Canada, 2004b):

- Full ownership of certain lands in the area covered by the settlement;

- Guaranteed wildlife harvesting rights;
- Guaranteed participation in land, water, wildlife and environmental management throughout the settlement area;
- Financial compensation;
- Resource-revenue sharing;
- Specific measures to stimulate economic development; and
- A role in management of heritage resources and parks in the settlement area.

Following the settlement of the James Bay and Northern Quebec land claim, several other claims were settled (Table 6.1).

Aboriginal Land Claims 1978 - 2004
Northern Quebec Agreement – January 31, 1978
Innuvialuit Final Agreement – June 5, 1984
Gwich'in Agreement – April 22, 1992
Yukon Transboundary Agreement - 1992
Nunavut Land Claims Agreement – May 25, 1993
Sahtu Dene and Metis Agreement – May 29, 1993
Vuntut Gwich'in First Nation – May 29, 1993
Teslin Tlingit Council – May 29, 1993
Champagn and Aishihik First Nations – May 29, 1993
Nacho Nyak Dun – May 29, 1993
Nisga'a Agreement-in-Principle – 1996
Little Salmon/Carmacks First Nation – July 21, 1997
Selkirk First Nation – July, 1997
Akaitcho Treaty 8 Framework Agreement – 2000
Dogrib Comprehensive Land Claim and Self-Government Agreement-in-Principle - 7 January 2000
Voisey's Bay Interim Measures Agreement – 2002
Labrador Inuit Land Claims Agreement – 2003
Kluane First Nation Agreement – 2003
Tlicho Land Claims and Self-Government Agreement - 25 August, 2003
Tsawwassen First Nation Agreement-in-Principle – 2004

Table 6.1 Aboriginal Land Claims since 1973 (modified after Wolf, 2001)

6.3.2 IBAs Outside of the Land Claims Realm

IBAs or socioeconomic impact agreements are typically integral parts of a land claims agreement. However, they can also occur outside of them. Mining companies and Aboriginal people across Northern Canada and Alaska have negotiated a number of such agreements. IBAs have become more comprehensive, addressing not only employment and business opportunities but also social and cultural issues, and providing financial benefits. An example is the Whitehorse Mining Initiative Accord (WMA). Direct participants in the WMA consultation numbered around 150 persons, drawn from six major groups. These included: mining industry executives; federal government officials and officials from several provinces and territories; labour unions representing mining workers; environmental groups; and Aboriginal peoples. These six groups were identified as the prime "stakeholder" groups, as each had a stake in the outcome, namely the future of the mining industry in Canada. (McAllister and Alexander, 1997). Although the WMA outcomes did not specifically include IBAs, many of the WMA's recommendations for improving relations between Aboriginal people and the mining industry are now negotiated through IBAs.

Table 6.2 highlights IBA agreements for mine development projects in Canada for the period 1987-2000.

Project	Project Owner(s)	Aboriginal Groups
Dona Lake, ON (1987)	Dome Exploration (now Placer Dome)	Osnaburgh Indian Band, Windigo Tribal Council, Government of Canada and Government of Ontario
Musselwhite, ON (1992)	Placer Dome Inc.	Windigo, Cat Lake, Shibogama, North Caribou Lake, Kingfisher, Wunnumin Lake FirstNations
Raglan Nickel, QB (1995)	Falconbridge Limited	Nunavik Makivik Corp.
Kudz Ze Kayah, YT (1996)	Cominco Ltd.	Ross River Dene
Ulu, NT (1997)	Echo Bay Mines Ltd.	Kitikmeot Inuit Association, Nunavut Tungavik Corporation
Meliadine, NT (1997)	WMC/Cumberland/Comaplex	Nunavut Tungavik Corp., Kivalliq Inuit Association
Brewery Creek, YT (1997)	Viceroy Resource Corp.	Tr'on dek Hwech'in F.N.
Ekati, NT (1998)	BHP/Diamet	Akaitcho treaty 8 Council, Dogrib Treaty 11 Council, North Slave Metis Association, Inuit of Kugluktuk
Voisey's Bay, NF (1998)	Inco Limited	Labrador Inuit Association, Innu Nation
Diavik, NT (2000)	Rio Tinto/Aber Diamond Mines	Yellowknife Dene, Dogrib Treaty 11 Council, North Slave Metis Association

Table 6.2 Canadian Mining IBAs (1987-2000) (modified after Wolfe, 2001)

The following section examines a selection of IBAs relative to the sustainability criteria.

6.4 Review of Selected IBAs Relative to the Criteria

Aboriginal communities and organizations have increasingly become involved in the negotiation and implementation of Impact and Benefit Agreements. In the following section, I examine some of these agreements relative to the criteria established in Chapter 5. A selection of agreements is evaluated regarding to what extent each meets community aspirations, and, finally and perhaps most importantly, the extent to which each establishes precedents

which influence the broader indigenous groups and their ability to achieve sustainability.

The agreements chosen for this review represent the evolution of the IBA agreement and their 'sustainability' components over time.

As indicated earlier, access to the original agreements is limited, as the companies consider the documents confidential. Descriptions of the following agreements are based on publicly available documents and materials made available by the respective companies.

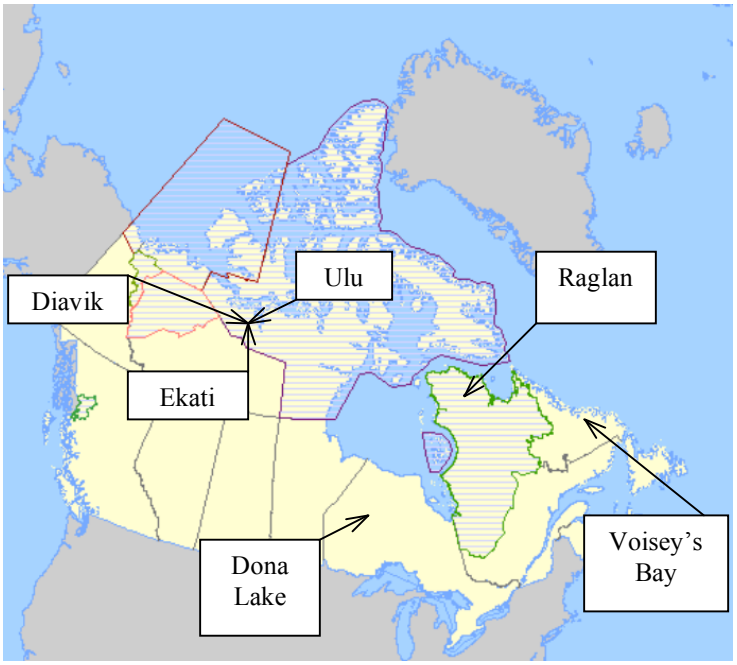

Figure 6.2 Location Map of IBA Mines Reviewed

6.4.1 Dona Lake Agreement (1987) between Dome Exploration (Canada) Ltd., Osnaburgh Indian Band, Windigo Tribal Council, Government of Canada and Government of Ontario (mine closed in 1993 - agreement no longer in effect)

The Dona Lake project is located in Ontario and not in Nunavut. The Dona Lake Agreement between Placer Dome and two local Aboriginal bands represents an example of the unequal decision-making power exerted by an industrial actor over local Aboriginal groups.

The Dona Lake Mine was located near the community of Pickle Lake in Northwestern Ontario. The region has a rich history of mining, dating to the late 1800s.

The Dona Lake Agreement was signed after negotiations among Placer Dome, the Osnaburg Indian Band and the Windigo Tribal Council in 1987. The First Nations' groups were not included in the original project approval process and the agreement was negotiated after the project was approved.

The overall agreement comprised five sub-agreements as follows:

- Human Resource Development Needs
- Traditional Economic Activities
- Economic and Business Development
- Social, Cultural and Community Support
- Resourcing its implementation

Only two of the agreements were ever completed. This methodology of sub agreements makes the process far more complicated, as each requires its own set of resources, negotiating team and financing to complete.

6.4.1.1 Holistic Corporate Policies

At the time of this agreement, Placer Dome did not have a formal environmental policy. Placer Dome produced its first sustainability report in 2000. As noted in Chapter 5, one of the elements of a holistic corporate sustainability policy should be a reconciliation of performance against an established target.

6.4.1.2 Aboriginal Partnerships and Cooperation

The first collective agreement at Dona Lake was reached through a process of interest arbitration, in which one of the key issues was whether basic employment equity provisions for the hiring, promotion and training of First Nations employees should be included in the agreement.

The arbitrator ordered that the employment equity plan belonged in the collective agreement between the company and the United Steelworkers of America union. The Dona Lake agreement provided the following. In hiring, promotion, transfer, layoff and recall from layoff, First Nations employees would be given preference as long as they had the ability to perform the work, regardless of seniority. The company would also develop special work schedules to accommodate First Nations employees wanting to engage in traditional economic activities while continuing employment. In addition, First Nations employees were entitled upon request to a leave of absence to engage in traditional economic activities (such as hunting, trapping and wild rice harvesting) of up to three months per calendar year. Where the rights of First Nations employees under the provisions conflicted with non-First Nations employees, the rights of First Nations employees would prevail. The rights and benefits provided to First Nations employees under the provision were recognized as a special program within the meaning of section 13(1) of the Ontario Human Rights Code (Doelle, 1992, Department of Indian and Northern Affairs Canada, 2004a).

The company would endeavor to provide transportation under the Dona Lake Native Employee Agreement among the mine, Pickle Lake and Osnaburgh, part of which was to be funded under the terms of the collective agreement.

6.4.1.3 Training and Education

Training is a critical issue in ensuring that a community benefits from the presence of any new employer, especially one with employee requirements as specialized as the mining industry. Mining is not a low-tech, low-skill occupation. Whether the issue is the ability of First Nation's people to take advantage of negotiated employment opportunities or the extent of benefits from an operation in the wider community, the issues are similar.

Training in a remote area does not just happen. This is one of the reasons why the Steelworkers Union made the commitment to the development

and inclusion of industry-wide training standards and programs (United Steelworkers, 2004).

6.4.1.4 Employee and Community Well Being

Some hiring of First Nations people was from outside the geographic area of the mine. This effectively reduced the employment opportunities for people in the communities directly affected.

Because skilled trades people were hard to attract to the area, preference was given to Aboriginal employees in the allocation of benefits such as housing in Pickle Lake. Because the First Nation's people were significantly under represented in the skilled trades group, however, they were effectively excluded from these benefits.

Transportation also emerged as a problem. There was no public transportation between the nearby reserve and the mine site, and very few of the people on the reserve had cars. This proved to be a significant barrier for First Nations employment at the site.

The impact of employment at the mine on the community emerged as a problem from a number of different reasons. Mining activity brought cash income into a community in which cash income had been in a very short supply. While this might have created positive opportunities, the community lacked the infrastructure to take advantage of them. As a result, increased cash income in some cases exacerbated problems which existed in the community before the mine was developed (e.g. domestic violence and substance abuse).

At the same time, the new jobs created by the mine generated their own tensions. Mining industry jobs are high paying, even by general Canadian standards. In remote communities, there is a huge gap between pay levels in the mines and those in other parts of the community economy (Kuyek and Coumans, 2003). This can – and in Dona Lake did – lead to tensions in the community with which First Nations people had great difficulty dealing.

The union also learned some important lessons in the process, about how to make the labor relations culture sensitive to the culture of the First Nations

community, and about how to support traditional lifestyles in an agreement. At Dona Lake, the agreement turned out to contain a much narrower definition of the basis for annual extended traditional leaves of absence than was really appropriate in the community.

Doelle (1992) made the following observation regarding the failures of the agreement:

- The agreement had called for a construction employment target of 55 Aboriginal employees; no records were kept;
- During operations, there was an employment target of 30 Aboriginal employees; a maximum of 10 was reached in 1988;
- Provisions for off-time to pursue traditional activities were burdened with many conditions which deterred the Aboriginal employees from actually taking advantage of the opportunity;
- Training programs were unsuccessful, leaving students unprepared for mine employment;
- Twelve Aboriginal people entered the apprenticeship program but none completed it.

Based on the literature (Doelle, 1992), the Dona Lake IBA did not provide sufficient economic and social benefits to the First Nations community. The development of local business was a failure, with few actually receiving any benefit. The employee quota system was never achieved and hence was a failure. Overall, the signatories to the agreement underestimated the level of local resources, expertise and experience required for the local community to benefit from the mine development.

6.4.2 Raglan Agreement (February 28, 1995) between Makivik Corporation and Falconbridge Ltd.

The Raglan Agreement covers an underground nickel/copper mine with 17 million tonnes of reserves in Northern Quebec. Concentrate from the mine is

shipped to Sudbury for smelting and on to Norway for refining. The mine opened in February 1998 and is in full operation, employing approximately 300 workers. It has an anticipated life of 15 to 20 years.

The James Bay and Northern Quebec Agreement (JBNQA) does not require negotiation of IBAs and the project is not on Inuit-owned lands. However, Falconbridge needed a deep-water port facility for shipping concentrates and was concerned that an Inuit offshore claim recognized by the federal government could affect the project. A memorandum of understanding between the company and the RIA, outlining a set of principles on the environment, employment, training, and compensation, formed the basis for negotiations for an IBA. Makivik sought social and economic benefits, including participation of Inuit in the mining project.

Some highlights of the IBA include:

- Inuit would receive $14 million plus 4.5% of mine profits, estimated at $60 million over 15 years.
- Detailed project descriptions trigger re-negotiation if the project deviates from original specifications.
- An implementation committee has three Falconbridge representatives and three Inuit. Makivik also got agreement to have a representative appointed to the mine's Board of Directors.
- A joint committee oversees training programs.
- Inuit enterprises, such as Inuit Air, are given preference for contracts and Inuit communities or individuals have entered into joint ventures with companies to seek contracts with the mine.

6.4.2.1 Holistic Corporate Policies

Falconbridge has adopted both a corporate code of ethics and a corporate sustainable development policy, which includes product stewardship, life-cycle assessment, and stakeholder involvement. By adopting a more holistic approach

to sustainable mineral development, the company committed itself to following the approach.

Makivik Corporation, one of the signatories to the Raglan Agreement, is an interesting model of an indigenous corporate entity. Its genesis is in the James Bay and Northern Quebec Agreement, signed in 1975, which provided for the creation of an Inuit corporation to be the legal entity to receive and administer the compensation monies and oversee the implementation of the JBNQA. Makivik Corporation was established by provincial legislation on June 23, 1979 pursuant to the signing of the JBNQA. Makivik is the recognized Inuit Party to the Agreement. It is a non-profit organization owned by the Inuit of Nunavik. Its central mandate is the protection of the integrity of the JBNQA, and focuses on the political, social, and economic development of the Nunavik region. It has a five-member Executive and a 16 member Board of Directors, all of whom are elected by the Inuit residents of Nunavik. In addition, a six member Board of Governors is appointed by the Executive and Board of Directors to serve as a Council of Elders.

6.4.2.2 Aboriginal Partnerships and Cooperation

Employment for Inuit in the two closest communities to the project was granted and priority of contract for Inuit businesses is a major aspect in the Raglan Agreement. As well, the Raglan Agreement also provides for a three part compensation package. First, a guaranteed $10-million is to be paid over a 15 year period, and continuing thereafter at $800,000 per year during the life of the project. Next, $4,125,000 is to be paid over 15 years, and continuing thereafter at $275,000 per year during the life of the project. Also, revenue sharing is based on 4.5 per cent of net operating revenues, the payment of which is anticipated to commence in the sixth to seventh year of operation of the mine (estimated at $70 million over the life of the project).

6.4.2.3 Training and Education

Initially, the Raglan Employment and Training Technical Committee was set up to create training and employment programs. These programs augmented the existing education and training initiatives provided through the Kativik School Board and the Kativik Regional Government. These programs included stay-in-school programs and scholarships designed to provide the minimum level of education for entry-level jobs at the mine.

Cross-cultural training became a priority in order to provide a broad understanding of both Inuit and Southern culture, with a focus on communication, team building and conflict resolution. Non-Inuit managers complete their cross-cultural training in the villages of Kangiqsujuaq and Salluit in order to participate in the Inuit community and meet Inuit leaders.

6.4.2.4 Employee and Community Well Being

The Raglan Agreement establishes employment targets (priority of employment for Innu) as well as concrete, realistic strategies for training and the development of necessary skills in order for Inuit to take advantage of priority of contract or employment provisions.

Exceptions from the strict firearms policy are made for Inuit employees for hunting and fishing. They are also given access to a freezer and the kitchen complex to store and prepare their country food.

6.4.2.5 Community Capacity Building and Enhancement

The revenue generated by the investment capital has been dedicated to promoting the welfare and economic advancement of the Inuit. Grants have been made to Inuit non-profit (e.g. furniture assembly, Illuapiit structure, and housing) and cultural organizations, and revenue-generating facilities have been built in each of the 14 Nunavik communities. Also, Falconbridge makes contributions and operational profit-sharing payments to an Inuit trust fund. Over the anticipated 18-year mine life, $70 million will be contributed.

6.4.2.6 Community Participation and Information Disclosure

Community participation is essential to ensure input into the project as a whole. In the context of IBAs, the criteria relative to community participation could include guarantees of mine employment. There are, however, both pros and cons to employment quotas. Makivik believes goodwill on the part of the company is probably the best guarantee of fair treatment. Raglan does not set a quota for Inuit employment; there have never been more than 20 per cent Inuit employees.

There are some implementation problems. Makivik has conducted both environmental and social studies on mine impacts. A water quality study found nickel concentrations of 68 parts/billion, a level exceeding the Quebec standard of 25 parts/billion. Social impacts include a high rate of turnover of Inuit employees -70 per cent compared with 15 per cent among non-Inuit employees -and the fact that Falconbridge is not hiring older Inuit.

The Raglan Agreement represents a comprehensive IBA for the residents of the Makivik region. The agreement is flexible in terms of hard employment quotas, unlike other companies (e.g. Echo Bay and KIA, see below). This flexibility has become a common element of recent IBAs in order to avoid conflict and default.

6.4.3 Ulu Agreement (1997) between Kitikmeot Inuit Association and Echo Bay Mines Ltd.

The Ulu project was a proposed underground gold mine with 1.5 million tonnes of reserves at 0.374 troy ounces of gold per tonne. As a satellite operation away from the main Lupin Mine, its ore was to be trucked over a 100-km winter road to the Lupin gold mine in central N.W.T.

By 1996, the Lupin gold mine, which opened in 1982 and employed about 45-50 Kitikmeot Inuit, was no longer extracting sufficient gold to be cost effective. The Ulu project would extend Lupin's life by six to seven years, so the Ulu IBA, signed in September 1997, was important for jobs at Lupin. Lupin had not required an IBA because it is located outside Kitikmeot Inuit land and

began production before the Nunavut Land Claim Agreement; Ulu required an IBA because it is located on Inuit-owned land.

Echo Bay Mines committed to maintaining a good working relationship with the Kitikmeot Inuit Association (KIA) and needed Inuit cooperation to move forward with Ulu. The KIA encouraged Echo Bay to speak to and consult with the smaller communities. Representatives from KIA and from the affected communities, an advisor, technical experts, and, where needed, lawyers were involved in negotiations.

I was responsible for the team that designed, negotiated and executed the IBA during my tenure as Director of Corporate Development, Western Hemisphere for Echo Bay (MWH, 1993-1996). It was questionable whether Echo Bay required an IBA for the Ulu project as it could have been considered a satellite or extension to the Lupin operation which was not on Inuit land but rather under the jurisdiction of NWT. It was decided to go the IBA path as a gesture of good faith and support of the NCLA and the affected communities. As indicated above, Echo Bay had developed strong goodwill with the communities that provided the Inuit workforce. The Lupin mine provided free transportation to the home communities, flexible schedules so that the Inuit labour force could take advantage of the traditional hunting and fishing cycles and provided several community development programs.

Negotiations of the IBA included extensive community meetings and information sessions where members of the KIA and the Echo Bay negotiating teams were available to answer questions from the public. The principal issues raised by the public focused primarily on jobs and the mine's impact on traditional pursuits. The issue of jobs was more often raised by elders who had deep concerns for the future of their youth. They recognized that their world was changing and had experienced, first hand the negative impacts of under- or lack of employment opportunities. The issue of the biophysical impact was raised more by the younger generations that for the most part still rely on the land to supply their protein needs.

From Echo Bay's perspective, it was not difficult to include many of the elements requested by the KIA into the final agreement. Most of the elements were already in place, and what was not operating, was easy to include.

One aspect of the negotiations that took the most effort was the negotiations of land use royalties and use of surface construction materials such as gravel from eskers for road building. The KIA, although heavily represented by ex-DIAND, non-Inuit, had difficulty understanding the economic impact of their royalty demands. In a case similar to the Uzbekistan example referred to earlier, the concept of acceptable economic return to our shareholders had to be continually reinforced. At its conclusion, an acceptable level of royalty burden was achieved.

Some highlights of the IBA include:

- creation of Inuit business and industry;
- development of an Inuit content formula for contracts;
- financial assistance and advance payments from Echo Bay for small businesses;
- social and educational program assistance from Echo Bay; and
- establishment of an implementation panel.

This first IBA negotiated under the Nunavut Agreement established some important principles for future negotiations:

- Major developments on Inuit-owned lands would add "value" to affected community/regional economies.
- IBAs would be considered a strategic and long-term economic development tool to help build corporate capacity for Inuit.
- IBAs should be considered an instrument for fostering goodwill and should provide the foundation for Inuit and developers to "work together" from project inception, through production, and finally to abandonment.

- An "Inuit content" factor in considering and evaluating tenders for mine services meant there would be a strong incentive for all potential contractors to maximize Inuit participation.

No implementation issues arose with the Ulu IBA because Lupin was temporarily closed in April 1998 because of low gold prices.

The Ulu IBA is a landmark negotiation and settlement. This IBA was the first to be negotiated under the impending Nunavut Land Claims Agreement that had not been signed at the time of negotiation. The principles by and spirit in which the priorities of the agreement were negotiated accurately reflected what the newly formed Inuit organization wished for their constituents' future. From the perspective of the company, the members of the negotiating team, including the current researcher, found the process tremendously enriching. The opportunity to be the first to formally integrate the local Inuit into the mine planning process was remarkable.

6.4.4 Ekati Agreement (1998) between Kitikmeot Inuit Association and BHP Diamonds Inc.

The Ekati Diamond Mine was Canada's first diamond mine. It is located about 300 km North of Yellowknife. The project area contains over 121 kimberlite pipes - all located underneath small lakes - of which at least six contain high-quality diamonds. Diamond production began in 1998. The kimberlite is excavated from an open pit with shovel and truck, and transported to an 18,000 tonnes per day processing plant where it is crushed. Diamonds are separated with X-ray fluorescence sorters. Tailings are stored in a large impoundment.

6.4.4.1 Holistic Corporate Policies

BHP Diamonds Inc. is an active member of The Mining Association of Canada and participates in various committees and workshops on issues such as regulatory reform. It has a membership in The Global Mining Initiative (GMI).

A new company policy, Working Responsibly, reflects its position on health, safety, environment and community relations.

BHP has been a leader in terms of its corporate policies on the environment, embracing the fact that the environment extends well beyond the biophysical to include the social.

6.4.4.2 Aboriginal Partnerships and Cooperation

BHP Diamonds Inc. has confidential Impact and Benefit Agreements with four affected local Aboriginal groups. BHP provides priority recruitment, employee training and business opportunities for Northerners and Northern Aboriginal people. It has 600 employees, of whom 80 per cent are Northern residents, and 42 per cent are Northern Aboriginal people. BHP has a Socio-Economic Agreement with the Government of the Northwest Territories to monitor social and economic benefits and impacts created by the mine. It also has an Environmental Agreement with the Government of the NWT, the Government of Canada and the signatory Aboriginal groups to monitor and advise on the environmental impacts of the mine. Through discussions with the Aboriginal groups who historically shared the Lac des Gras area (Dogrib Treaty 11 Council, Akaitcho Treaty 8, North Slave Metis Alliance and the Inuit of Kugluktuk with the Kitikmeot Inuit Association), voluntary IBA's were entered into with each group for employment, training, scholarships, community involvement, business opportunities, environmental mitigation, cultural sensitivity and traditional knowledge studies.

6.4.4.3 Training and Education

The following are highlights of the BHP training and education programs with respect to their IBA:

- Scholarships are awarded as part of the confidential Impact and Benefit Agreements;
- On-site Workplace Literacy Training Program;

- Summer student employment – preference is given to those who are BHP scholarship recipients;
- Career fairs;
- Student tours of the mine;
- Participation on the Minister of Education's Mine Training Committee.

6.4.4.4 Employee and Community Well Being

Awareness and support was an important component in the success of environmental management. Consequently, an environmental awareness program has been developed at the Ekati Diamond Mine, and includes initiatives such as an orientation program, regular presentations, bulletin board notices, and poster presentations. The awareness program strives to assist Ekati employees to work in an environmentally responsible manner.

Rotation at the Ekati diamond mine generally is two weeks in and two weeks out, with some professional staff working four days in and three days out. Employees are flown to the mine site, as there is no road access, at no cost to them, from Yellowknife or eight other Northern communities.

An Employee Assistance Program is offered to all employees to provide employees and families with access to counseling services to help cope with personal and work-related problems.

Mandatory cross-cultural training is provided to all employees and permanent contractors. There is an on-site Aboriginal Employment Officer as part of the HR team to assist with the recruitment and retention of Northern Aboriginal employees.

The effectiveness of training and awareness programs, at all levels, is regularly evaluated to ensure that each employee's competence is appropriate for the level of responsibility and potential environmental risk in the area of work performance.

BHP Diamonds Inc. continues to meet with the local and Aboriginal communities as well as local people and the Government of the Northwest

Territories, as part of the ongoing commitments under the Socio-Economic Agreement.

6.4.4.5 Community Capacity Building and Enhancement

As part of the confidential Impact and Benefit Agreements and the Socio-Economic Agreements, preference is given to those represented by one of the Impact and Benefit Agreements and then to other qualified Northern businesses. BHP Diamonds Inc. has met and exceeded all targets for Northern business expenditures, with 78.7 per cent of all expenditures in 2000 going to Northern businesses (BHPBilliton, 2004). Throughout the exploration, development and construction of the EKATI Diamond Mine, BHP Diamonds Inc. met with members of the surrounding Aboriginal and local communities, conducted site visits for community residents, and encouraged discussion and information exchange on land use, potential employment and mine operations.

6.4.4.6 Community Participation and Information Disclosure

As part of the Socio-Economic Agreement, consultation is carried out annually with affected communities to explain the previous year's commitments with respect to Northern and Aboriginal employment, training and business opportunities.

Employee family days were implemented where each summer a number of planes with employee family members are brought to the mine for a tour. As of June 2005, over 500 employee family members had toured the mine. Donations and sponsorships for local community recreation infrastructure are provided through the Ekati Diamond Mine Community Partnership Program.

As a result of the remote location of the mine, employees are transported via aircraft to and from the site. Road access to Ekati consists of a seasonally operated winter road. The workforce at the Ekati Mine also varies seasonally. Ekati has a workforce of approximately 760 employees on a rotational basis. Of these, approximately 560 are direct employees, while the remaining 200 are contracted. During the summer, however, the workforce can increase by as

many as 100 people, due to summer employment programs, environmental monitoring, and management programs, as well as special engineering projects (BHPBilliton, 2004).

BHP faced a more complex negotiation of its IBA-like agreements as it dealt with Inuit and non-Inuit Aboriginal organizations. Each of the groups held its own values and priorities, and as a result this IBA stands as a model for multi-Aboriginal-party structures.

6.4.5 Voisey's Bay Project (1998) between the Labrador Inuit Association and INCO

Voisey's Bay incorporates open-pit and underground mining operations, an airstrip, and roads, with the potential to produce nickel, copper, and cobalt for 25 years. Its 150 million tonnes of ore are to be milled onsite and then shipped by ocean vessels for smelting and refining. It is proposed for an area with no previous major development; an environmental assessment was completed in mid-1999. INCO intends to construct and operate an integrated mine and mill/concentrator at the Voisey's Bay site, as well as a hydrometallurgical demonstration plant in Argentia, and a hydrometallurgical nickel/copper/cobalt concentrate processing operation also in Argentia. The total capital investment required for the project is estimated at $2.9 billion over the estimated 30-year life of the project (Canadian Environmental Assessment Agency, 1999a).

6.4.5.1 Holistic Corporate Policies

The Government of Newfoundland and Labrador, INCO Limited and the Voisey's Bay Nickel Company Limited have agreed to a Statement of Principles for the development of the Voisey's Bay Project. This Statement is the basis for the preparation of the final legally binding agreements to be entered into by the Parties (Government of Newfoundland and Labrador, 2004).

6.4.5.2 Aboriginal Partnerships and Cooperation

The agreement will not have a specific Inuit employment quota, but will seek to maximize opportunities. The expected employment level when the mine begins is 420 (total) and this number will probably triple with the underground phase. INCO has negotiated and will enter into IBAs with the Labrador Inuit Association and the Innu Nation. These agreements contain provisions relating to employment and business opportunities. The government entered into the following agreements with the Labrador Inuit Association and the Innu Nation: (1) Interim Measures Agreements that embody the Voisey's Bay Mine in the respective land claims agreements, and (2) Environmental Management Agreement (Voisey's Bay Environmental Assessment Panel, 1990).

6.4.5.3 Training and Education

The Innovation Centre that is to be built in conjunction with Memorial University will focus on education and research regarding mineral exploration, mining and metallurgical processing. INCO will spend $10 million on the facility and provide an annual endowment of $1 million over 10 years (INCO, 1999).

In 2005, there are 900 Labrador Inuit interested in working at the mine; most have the skills for the surface activities, but few have the skills for the underground work. A multi-party training agreement was signed, but in the absence of funding commitments, has not been fully implemented. Joint ventures with Inuit and the company have been successful during the exploration stage (e.g. Aivek Holdings which is an expediting service developed as a joint venture between the LIA and Inco.).

6.4.5.4 Employee and Community Well Being

The Project will create significant employment opportunities in the Province of Newfoundland and Labrador.

Innu and Labrador Inuit have worked out the principles of an overlap agreement. Because each is involved in numerous large projects, both are

negotiating separate IBAs and land claims agreements. As the Innu are in the midst of hydro development proposals and are trying to build a new community, bringing the agreement to signing is not a priority. During the various operating phases, the Project will create the following estimated employment levels: mine and mill/concentrator processing plant (400); research and development program (200); underground mine operations (800); and the hydrometallurgical processing plant (400).

6.4.5.5 Community Capacity Building and Enhancement

INCO has agreed to negotiate IBAs with both the Labrador Inuit Association (LIA) and the Innu Nation. An INCO Innovation Centre will be developed and operated in St. Johns in conjunction with Memorial University.

6.4.5.6 Community Participation and Information Disclosure

A Memorandum of Understanding for the environmental assessment of the project was negotiated in 2004 between Newfoundland, LIA, Innu Nation, and the federal government. INCO continues drilling exploration; however, a court order prevents it from building roads until the environmental assessment is finished. The company's environmental impact statement was found inadequate by the panel, but INCO addressed the inadequacies during 2005.

6.4.6 Diavik Diamond Mines Inc. (2000), with Yellowknife Dene, Dogrib Treaty 11 Council, North Slave Metis Association

The Diavik Diamond Mine is an unincorporated joint venture between Diavik Diamond Mines Inc. and Aber Diamond Mines Ltd. Diavik Diamond Mines (DDMI) is a wholly owned subsidiary of Rio Tinto plc of London, England. The mine is located on a 20 square kilometer island, informally called East Island in the Lac de Gras region, 300 kilometres Northeast of Yellowknife, NWT, located within the sub-Arctic barren lands (Canadian Environmental Assessment Agency, 1999b).

6.4.6.1 Holistic Corporate Policies

DDMI produces an annual sustainability report that recognizes economic prosperity, social well being and environmental stewardship. As part of the company's Value Statement, it clearly states its commitment to an active partnership with local communities as well as with government and NGOs.

Perhaps the most impressive portion of the report is the Annual Performance Review. In that section of the sustainability report, the company undertakes a reconciliation of actual performance versus targets set relating to environmental accidents, Aboriginal employment ratios, Northern spending, greenhouse gas emissions and planning for closure. This type of information disclosure demonstrates the company's commitment to partnerships on a fair basis.

6.4.6.2 Aboriginal Partnerships and Cooperation

DDMI expected to hire Northerners to fill at least 40 per cent of its construction work force, which is to average approximately a total of 800 workers annually over the two-year construction phase. DDMI also expects Northerners will initially fill at least 66 per cent of its mining operations work force and over time, employment will approach 100 per cent Northerners. The operation's work force is expected to average approximately 400 workers. It is also anticipated that at least 40 per cent of the operation's work force will be Northern Aboriginal. Direct annual wages to all employees during the 20-year mine life will be in the order of $30 million (DDMI, 2000).

6.4.6.3 Training and Education

DDMI is committed to training Northerners throughout the life of the mine. In developing its training programs, DDMI will focus on providing pre-employment training opportunities; enabling Northerners to gain access to jobs; facilitating employment advancement for Northerners; enabling Northerners to fill apprenticeship, technical, technological, supervisory, managerial and

professional occupations; and requiring all long-term contractors to the project to adhere to the goal of maximizing Northern employment.

The GNWT is committed to enhancing training opportunities with DDMI through a number of initiatives, including the provision of training allowances and support services, career counseling, and training program delivery.

DDMI will collaborate with Aboriginal people to encourage development and delivery of training programs. DDMI will consult with the Communities Advisory Board in the ongoing review and development of training programs.

DDMI and its joint-venture partner Aber recognize that increasing education levels in the North will improve community capacity and will lead to healthier communities. DDMI and Aber encourage Northerners to improve their education through a Diavik project scholarship policy aimed at students from the NWT and West Kitikmeot region of Nunavut. Diavik scholarships or bursaries are provided through five different avenues: members of the five neighboring Aboriginal group communities, employees and their dependents, high school graduates advancing to post-secondary education, graduates of the Northern College's pre-trades programs or those already in trades and technology programs, and those students in post-secondary programs not eligible for any of the above.

A unique, community-based training approach begun in 2000 is helping DDMI meet its hiring commitments. Training has been conducted in Rae-Edzo, Lutsel K'e, Kugluktuk, Wekweti and Yellowknife, producing over 100 graduates with new skills, largely in the construction trades. Many participants have found work with DDMI contractors.

Reasons for the program's success include:

- Using a partnership approach with Northern colleges, federal and territorial governments, Aboriginal and community organizations, and Northern contractors.

- Providing participants with both classroom training and hands-on, practical training on real and meaningful projects within and for the community.
- Building a team environment within which participants learn to work together and accomplish tasks as a group.
- Delivering training in the home communities of many of the students.
- Linking training program objectives with work force skill requirements at the Diavik project site, thus allowing program participants to take advantage of employment opportunities shortly after completion of their training program.

DDMI has undertaken community skill assessments in neighboring communities to identify potential employees and their job skills. These are entered into a community's skills database, which contains nearly 1000 names of people who have expressed an interest in working for DDMI. These are matched against contractors' requirements for workers.

DDMI also has developed a learning centre at the mine construction site. The Diavik Learning Centre complements similar centres established by Aurora College in Northern communities and will provide for a wide range of learning experiences, from improving literacy to information on upgrading trade skills.

6.4.6.4 Employee and Community Well Being

With construction accelerating, the Diavik project work force, consisting of site workers and employees at the Yellowknife offices, totals approximately 1,000 people (in 2004). This includes the construction work force at the Diavik project site and staff at Yellowknife offices. DDMI expects the construction work force will average 800 workers over the two-year construction phase. At the end of the second quarter 2001, Northern employment represented approximately 40 per cent of the work force.

6.4.6.5 Community Capacity Building and Enhancement

DDMI will use best efforts to ensure that the purchases of goods and services from Northern businesses during the construction phase will be at least 38 per cent of total purchasing. Total annual purchasing during operations is estimated to be $100 million. During operations, Northern purchasing will be at least 70 per cent of the total. In considering contract bids, DDMI will provide priority to Aboriginal and Northern businesses.

The criteria which DDMI will use to evaluate and award contracts for the project shall include, but not be limited to, normal considerations of cost competitiveness, quality, ability to supply and deliver goods and services, timely delivery, and safety and environmental record, as well as the degree of Northern and Aboriginal participation.

DDMI will take a number of measures to maximize project-related business opportunities for Northern businesses including preparing an annual business opportunities forecast to identify foreseeable procurement requirements, providing technical support and assistance in accessing sources of commercial capital, working closely with Northern communities to cooperatively achieve success in creating long-term business and employment opportunities and in increasing business capacity, identifying project components at all stages of development and operations that should be targets for a Northern business development strategy, facilitating subcontracting opportunities for Northern businesses, and identifying possible opportunities for joint ventures by Northern businesses, particularly by Aboriginal businesses.

DDMI's Northern Business Participation Policy is available on the Diavik web site. Under that policy, DDMI annually produces a Northern Opportunities Profiles publication that identifies business opportunities for the coming year. DDMI also maintains a Northern contractor and supplier database.

Each of the joint-venture partners (DDMI and Aber) retains the right to market its share of rough diamond production. The GNWT is promoting and supporting development of a secondary diamond industry (i.e. cutting and

polishing rough diamonds). Key to developing this nascent sector of the North's economy is the supply of rough diamonds to Northern cutting and polishing firms. DDMI has signed a memorandum of understanding with the GNWT under which it undertakes to enter into discussions with existing or potential NWT-based clients for the supply of rough diamonds from DDMI's share of the project's production.

In 2000, some $136 million (70 per cent) of DDMI's $187 million in actual project expenditures were with Northern businesses.

By the end of second quarter 2001, expenditures and contract commitments for the Diavik project were in excess of $720 million, of which approximately $580 million (80 per cent) had been awarded to Northern companies. Aboriginal joint venture companies (partnerships between Northern Aboriginal companies and non-Aboriginal companies) accounted for just over 80 per cent of the $580 million. This level of Northern participation in a mining construction project has not been reached before (Schuster, 2000).

6.4.6.6 Community Participation and Information Disclosure

DDMI has also committed to negotiating Participation Agreements with the five neighboring Aboriginal groups, including the Dogrib, the Yellowknives Dene, the Lutsel K'e Dene Band, the North Slave Metis Alliance, and the Kitikmeot Inuit Association. In 2000, Participation Agreements with Dogrib Treaty 11, Yellowknives Dene First Nation and the North Slave Metis Alliance were completed.

Participation Agreements are cooperative agreements between the company and each Aboriginal group that address employment and business opportunities for that group. To facilitate the achievement of mutual objectives, the Aboriginal group agrees to maintain and make available to DDMI, on an ongoing basis, an up-to-date human resource inventory and a business registry for its membership. In addition, each Participation Agreement calls for the creation of a joint implementation committee to outline responsibilities, tasks and timelines for reaching project-related employment and business

development targets. The Aboriginal group agrees to employ a representative to liaise with DDMI on these and other social development issues.

6.5 Elements Common to IBAs Reviewed

Several elements and themes in IBAs were similar from one agreement to another. Perhaps the most consistent theme was that Indigenous people generally gave priority to environmental protection over compensation issues. This is consistent with the perception that the traditional way of life, or at least maintaining an attachment to the land, has remained a priority consideration in IBAs over the past decade.

(1) *Significance of Land Claims*

Resolved land claims tend to allow the parties to more fully negotiate an Impact and Benefit Agreement without overhanging issues such as land title. In the Raglan Agreement, the fact that the James Bay and Northern Quebec Agreement had been signed meant that the Aboriginal partners were better able to bring the industry to the negotiating table.

By way of strategy, some Indigenous people in Canada have used unresolved disputes over minerals/land in order to halt the development of a project. For example, the Indians of the Quebec Association and the Northern Quebec Inuit Association filed an interlocutory injunction to bring a temporary halt to the massive hydroelectric project in the James Bay area. The injunction was granted on November 15, 1973 and work on the project was temporarily halted. Four days later, the Premier of Quebec announced a decision to negotiate a settlement with the Cree and Inuit of Northern Quebec (resulting in the James Bay and Northern Quebec Agreement - a comprehensive land claim which initiated the establishment of Makivik Corporation which is now a signatory to the Raglan Agreement). Similarly, at Dona Lake, the community threatened to lobby the federal government in order to have the Dona Lake mine operation made subject to the Canadian Environmental Assessment Agency (CEAA), a consultative and scientific process, which could take months or

years to complete. These communities used this process and the delay it would cause in the development of the mine as a "big stick" in order to force the negotiation of an Impact and Benefit Agreement. Another example is the Yellowknives Dene delaying the issuance of the NWT Water Permit for two months until certain participation issues were resolved.

The federal environmental assessment seems to have been the major impetus behind the early Impact and Benefit Agreements (eg. The case of Miramar Mining and the negative NIRB report)(Business Wire, 2004, S. Briscoe, pers. com. 2004). This is largely because it was the only legislative vehicle which provided the opportunity for Aboriginal people to formally participate in resource planning affecting their lives, livelihood and community. As a result of the completion of more land and resource claims, there not only are more opportunities for Indigenous people and communities to participate in Impact and Benefit Agreements but there is a realistic possibility of royalty-sharing agreements.

(2) *Retroactivity*

Another observation is that few of the reviewed agreements adequately discussed the issue of retroactivity. Only one provided for retroactive compensation for loss of hunting rights during the development phase. Retroactivity is particularly important, as the development phase of an operation has the potential to have a greater single point impact on the community compared to the actual operation.

(3) *Realistic Agreements*

One of the major lessons learned as a result of the less than optimal performance of the Dona Lake Agreement is that provisions guaranteed by an Agreement must be realistic. In particular, the Dona Lake experience showed that where employment targets are set, the community must have the capacity to meet them. Improvement was exemplified by the Raglan, Diavik and Ekati agreements which provide for employment targets (priority of employment for

Innu) as well as concrete, realistic strategies for training and development of necessary skills in order to take advantage of priority of contract or employment provisions.

(4) *Monitoring and Modification*

Many Agreements did not contain a termination clause or a mechanism whereby negotiations could recommence if conditions of the original agreement changed. The end of the mine and the fulfillment of the environmental rehabilitation provisions have always been assumed to be the natural end to any of the agreements. It is only the most recent generation of agreements that contains an adjustment provision.

6.6 Discussion and Reconciliation of Common Elements Relative to the Sustainable Mining Criteria

Each of the IBAs described above was selected to represent unique structures or foundations under which they were negotiated and completed. Each is unique, whether comprising various sub agreements, negotiated among several parties with different priorities and values, or representing the first attempt at an IBA under a still to be completed comprehensive land claims agreement.

The most recent agreement signed contains the most enlightened elements, suggesting that the concept of sustainability is becoming more of a priority.

The following subsection provides a summary regarding how each of the IBAs reflects the criteria of sustainability developed in Chapter 5.

6.6.1 Placer Dome's Dona Lake IBA

Like the Ulu IBA, Placer Dome did not have a corporate policy for sustainable development or anything mentioning the environment at the time when the Dona Lake mine was in operation. This was changed in 2000.

The Dona Lake IBA was likely a giant step forward in terms of approaching sustainability. Based on the discussions above, however, it is clear

that it would be highly unacceptable today. The agreement was essentially the product of collective bargaining and arbitration rather than an outcome driven by sustainability principles.

The agreement was innovative for its time by including flexible work schedules so that Aboriginal employees could pursue traditional season-dependent activities and Aboriginal recruits were given priority for employment.

The agreement lacked any specific reference to training and education, employee and community well being (other than occupational health and safety provisions), and generally lacked any economic or social benefits for the Aboriginal community.

6.6.2 Falconbridge's Raglan IBA

Falconbridge produces an annual sustainability report similar to BHP and Kennecott, complete with annual performance relative to sustainability indicators. Unlike DDMI, the report does not set targets nor measure performance against them.

The Raglan IBA provides for a competitive advantage to Inuit businesses. Although there are cash payments as compensation, there is no provision in the IBA to help establish new businesses that have transferable skills or services beyond the life of the mine.

Falconbridge employs training and education provisions as well as promoting educational upgrading to qualify for mine jobs.

Although some flexibility is available to Inuitmiut employees in terms of scheduling, etc., the IBA does not reach into the community to promote and support sustainable social well being.

Falconbridge has opted in its IBA to contribute to a trust fund over the life of the mine (18 years). Over the contribution period, approximately $70 million will be accrued (principal only). This trust fund is intended to replace a formal capacity building program. This methodology does not reconcile with the ideal of sustainability insofar as lump sums of money allocated to the

community may be perceived as a cash hand-out. A structured and well-funded program of local economic development with an eye towards the future may be more appropriate.

Falconbridge does not set a quota for Inuitmiut employees, but rather leaves it to the RIA to use its best efforts to employ local people. The mine itself has never employed more than 20% Inuitmiut. The company provides operational information to the community. However, there was no mention of a monitoring or reporting mechanism on the performance of the IBA in its agreement with Makivik.

In summary, the Falconbridge IBA is adequate. However, it lacks elements to prepare the local community for a sustainable post-mining future.

6.6.3 Echo Bay's (now Kinross) Ulu IBA

At the time of negotiations for the Ulu IBA, Echo Bay did not have a formal sustainability report or a specific sustainability policy. The company did, however, have considerable experience working in the North and with Aboriginal people, particularly at its Lupin operation. The IBA itself was the original of the current structures and incorporated innovative ways of calculating Inuit content of potential suppliers and prioritizing their supply on that basis. The company provided financial assistance for the creation of new Inuit businesses, and focused on social and educational development of the Inuit workforce and the community as a whole.

6.6.4 BHP Diamond's Ekati IBAs

As mentioned above, the BHP corporate policy reflects a holistic attitude towards sustainable mining practices and provides for sustainable mining communities.

The Ekati IBA is the most comprehensive of those reviewed, largely because it involved four local Aboriginal groups, each with its own specific issues and priorities. The IBA provides for support of Inuitmiut-owned businesses and for development of new businesses.

BHP provides what has become the standard for training and education opportunities for their local communities.

Employee and community well being are a priority at the Ekati operation. The company conducts regular environmental awareness programs as well as cultural sensitivity training. BHP trains its employees to ensure that each employee's competence is appropriate for the level of responsibility and potential environmental risk in their area of work. This feature is particularly valuable as there has been criticism of underemployment and insufficient training for certain jobs and responsibilities in the mining industry (S. Briscoe, pers. comm., 2005).

BHP has met or exceeded all targets for Northern business expenditures and is focused on giving local businesses priority for the supply of goods and services. This is key to encouraging self-sufficiency and progress towards a sustainable future.

Ekati conducts site visits for community residents and encourages discussion and information exchange on issues of land use, potential employment and mine operations. This is very important to introduce the community to the operation on the ground as opposed to abstract maps and diagrams at community meetings. The experiential nature of this discourse builds trust and incorporates the company into the community.

The Ekati IBA stands apart from all of the others reviewed because of its comprehensive nature; because of the four local parties.

6.6.5 INCO's Voisey's Bay IBA

The Voisey's Bay IBA is probably the weakest of the recent generation of IBAs in terms of its commitment to sustainability. INCO produced its first sustainability report in 2004. The report lacks any sense of sustainability performance indicators or any reconciliation of actual to targets set. The only 'measurable' identified for each of the regions in which it operates is the amount of money donated.

INCO views itself as creating employment, which is not the same as developing sustainable opportunities with respect to the criteria. The training offered to local employees is site specific and is not geared for transferability once the mining project closes.

The company sees its role in the community as 'generating hope'. It is unclear for what the company is building the community's hope. The company otherwise includes the usual suite of occupational health and safety provisions, but nothing is exemplary.

INCO has contributed to community capacity building though the development of the INCO Innovation Centre at Memorial University. Conceptually this is an interesting addition to the IBA. However, it is unclear how the community at large is to benefit and how this affects the community's ability to develop sustainable capacity for the future.

INCO has a specific information disclosure mechanism included in its IBA.

6.6.6 Kenecott/Aber Diamonds' Diavik IBA

Diavik Diamond Mining Inc. negotiated what might be considered the most comprehensive IBA. DDMI has an exemplary holistic corporate sustainability policy that recognizes economic sufficiency, biophysical integrity and social well being. The company designed its IBA to be a model on which all other IBAs would be based. The company refers to its agreement as a participation agreement rather than an IBA. The Diavik IBA was negotiated among five different Aboriginal groups with expectations of high levels of community participation in training, jobs and new business creation. The company created a new type of socio-economic monitoring agreement with the five Aboriginal groups to monitor the social impacts of the operation. This is a new step that improves the information flow and can address issues and concerns as they arise as opposed to dealing with them after the fact.

The company also has been innovative through development of a community-based training program. Training is conducted in home communities and consists of an equal mix of classroom and hands-on training.

Diavik also initiated training partnerships with Aurora College for process plant training, and for instrumentation technicians. Jobs were guaranteed at completion.

Diavik again took an innovative approach to local business development and community capacity building and enhancement. The company hired a Business Development Manager, a position not normally part of a mining operation. This job is to formalize a Diavik Business Policy, and then to help the company identify contracting opportunities and the Northern companies to take advantage of them. The company also developed an innovative outsourcing program. Instead of completing a task with a Diavik workforce, local contractors would supply their own workers with the intent to encourage business development.

Diavik is also focused on employee and community well being. This priority is expressed through a series of typical community support initiatives, donations and sponsorships. The company also sponsors the Aboriginal Skills Employment Program, which is a partnership among Aboriginal groups, government and industry to inject $40 million into Aboriginal training for the mining industry between 2005 and 2009.

DDMI has demonstrated an exemplary commitment to the sustainability of Northern Aboriginal communities through its outstanding IBA.

Table 6.3 illustrates the evolution of companies in terms of including important elements of a sustainable mining operation over time. The table identifies which companies included elements of the criteria into their IBAs at the time. It is important to note that the relative rankings or scores are measured against the earlier definition of the elements. This kind of evaluation has limitations insofar as it remains subjective, and is intended to serve as a modified “inventory” of included elements.

Although companies such as Placer Dome and Kinross lacked the vision in the early days of IBA development, they have advanced their corporate thinking along more sustainable lines recently.

Company Name	Holistic Company Policies	Aboriginal Partnerships and Coordination	Training and Education	Employee Participation and Community Well Being	Community Capacity Building	Community Participation and Information Disclosure
Placer Dome	**N**	**N**	**Y-**	**N**	**Y-**	**N**
Falconbridge	**Y+**	**Y+**	**Y+**	**Y-**	**Y+**	**Y***
Kinross (Ex-Echo Bay)	**N**	**Y**	**Y+**	**Y**	**Y+**	**Y-**
BHP	**Y***	**Y***	**Y***	**Y***	**Y***	**Y***
INCO	**Y+**	**Y+**	**Y**	**Y**	**Y-**	**N**
Diavik	**Y***	**Y***	**Y***	**Y***	**Y***	**Y***

Scores: Y*= Exemplary, Y+ = Good, Y=Satisfactory, Y-=Unsatisfactory, N=Element Not Present

Table 6.3 Summary of Sustainability Criteria for Companies in Case Descriptions

Since 1987, there has been a proactive response by both industry and Aboriginal groups to the changing priorities associated with the environment, and also recognition that sustainability and sustainable development are a high priority. Early attempts at negotiated agreements between these actors show an emerging will to find a mechanism that addresses both the needs of the Aboriginal community for an alternate source of income (i.e. other than social assistance and subsistence living) and the desire of industry to help. It is arguable that this first meeting of the minds was involuntary and perhaps in response to a settled or outstanding Aboriginal land claim, rather than an altruistic moment of conscience on the part of industry. Nevertheless, the IBA

document has evolved into a comprehensive piece of negotiated art, that in its barest form shows a commitment on all sides to define and understand clear goals and to act upon them as partners.

6.7 Political Ecology of Sustainable Mining Criteria as Illustrated by IBAs Reviewed

Based on the review of IBAs in this study, there is an apparent evolution of IBA elements and overall intent from the initial agreement at Dona Lake to the Diavik or Ekati agreements. This evolution is perhaps most apparent through the inclusion and increasing levels of Aboriginal participation in the structuring and negotiation of each agreement. This is best exemplified by comparing the Dona Lake IBA where no Aboriginal consultation or inclusion was attempted, and the Diavik and particularly the Ekati agreements, where the proponents went beyond the legislated approach. These latter two companies voluntarily included Aboriginal groups in separate agreements and even went so far as to create or invent new agreements that provided a voice for communities that would not otherwise be included. The result is that the Aboriginal community and organizations seem to hold more power than the industrial actor and determine how this actor will operate.

The following section looks at the criteria for sustainable mining, as applied to current or past IBAs.

6.7.1 Holistic Corporate Policies

Holistic corporate policies are initially indicative of a company's recognition of more than just economic performance, but inclusive of the environment and all of its components. The political ecology implications of holistic corporate policies are fundamental, insofar as the industrial actor willingly recognizes more than just the opportunity to generate profits, from whatever means necessary including exercise of instrumental power.

The first IBA reviewed was for Dona Lake. Dome Exploration (now Placer Dome) had no corporate consideration for the indigenous community,

but rather took the more traditional or "paternalistic" approach to mineral development as discussed in Chapter 4. The industrial actor, in cooperation with the provincial government, set the terms and conditions for the ultimate agreement. The decision-making power was clearly in the hands of the industrial and, to a lesser extent, the government actor.

Falconbridge embraced a more holistic view of mineral development for Raglan, possibly due to the conflict that arose through Hydro Quebec of the James Bay Project (McCutcheon, 1992).

Echo Bay did not have a holistic corporate policy *per se*. However, it did have extensive knowledge of working in the North, and valued the relationship with its Inuitmiut partners and invited them into limited decision making opportunities.

BHPBilliton (BHP Diamonds) took a tremendous leap forward in developing an inclusive and holistic corporate policy that treated members of the affected communities as partners in the operation.

INCO had a holistic corporate policy that was inclusive, but on a comparative basis still showed strong industrial power and influence, typical of more traditional approaches.

Finally, the Diavik-owner corporate policy is the most sophisticated and inclusive, and represents the most devolution in terms of decision-making power.

6.7.2 Aboriginal Partnerships and Cooperation

Aboriginal partnerships and cooperation, from a political ecology perspective, give the local communities and their agents access to forums of decision-making, through inclusion. In the relationship between industrial actor and Aboriginal community, the ability to work together, in a mutually beneficial manner through cooperation, creates a more equal share of decision-making power. This criterion may be the first indication of an industrial actor adopting a more sustainable approach to mineral development and mining.

The Dona Lake IBA approached partnerships and cooperation in a marginal way, with each successive IBA through to the Diavik agreement including more mechanisms to develop not only economic, but also other partnerships intended to enhance the social well being of the community as well as preserving biophysical integrity.

6.7.3 Training and Education

Training and education allow the affected community to develop its own skill sets and tools to pursue a future beyond the life of the mine. Through training and education, participants gain power organically, for the first time, as opposed to having it granted to them. This is an important feature from a political ecology perspective as power earned may be more effective in the long-term than power granted.

All IBAs contained some elements of training and education with increasing opportunities. I believe that this is a fundamental component of IBAs based on the idea of teaching someone skills that can serve for a lifetime (i.e. the Chinese proverb: Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime).

6.7.4 Employee Participation and Community Well Being

This criterion from a political ecology perspective recognizes the grassroots community's cultural needs as well as appropriate labour relations. By recognizing these elements, the industrial actor accommodates the communities to carry out whatever traditional activities they are accustomed to.

As with training and education, all IBAs included provisions for the employees and home community to carry out their traditional endeavours. Again, like the section above, each IBA included more sophisticated elements over time.

6.7.5 Community Capacity Building and Enhancement

Community capacity building and enhancement has a similar political ecology profile as does training and education (i.e. the fish proverb). The organic development of power through self-developed capacity is more effective than donations and hand-outs.

IBAs from Ulu onward included provisions to assist and encourage development of affected community capacity building and enhancement. These mechanisms included preferential letting of supply and service contracts, on-site business development schemes and offsite institutional development, such as INCO's Innovation Centre at Memorial University of Newfoundland.

6.7.6 Community Participation and Information Disclosure

Information gives the community and grassroots actors data on which they can base their decisions. The political ecology "power" stems from those actors who wish to release this information and to what extent they are willing to face any backlash. Until recently, the terms and conditions of IBAs have remained confidential and not even the most affected members of the community have known what was contained in them and how it was going to affect their lives. The only opportunity these actors had to voice an opinion was sporadic community consultation meetings and NIRB hearings. Their input at these hearings is only part of the submissions by other actors. The potential for their opinion and views to get lost is high.

The Dona Lake IBA did not provide for any input from the Aboriginal actors, whereas the Ulu IBA process involved a limited number of community consultation opportunities. From that point forward, each successive IBA provided more opportunities for Aboriginal input and participation. To some extent this is due to the size of the proposed project and the requirement for more extensive public hearings under the CEAA.

6.8 Conclusion

This chapter has examined several past and present IBAs that represent an evolution not only in terms of the criteria, but also in how the evolution of these elements has shifted the distribution of decision-making power. I have illustrated that shift by examining programs and IBA elements that are executed directly with the grassroots community. In such cases, the industrial actor divests itself of increasing levels of decision-making power in determining their future, and hence enhances the opportunity for communities to pursue a more sustainable future fuelled from the benefits of mineral development.

The recognition of local rights and inherent sovereignty over the natural resource empowers the local community and provides a basis for an effective partnership and a visioning of the project as equals. Although this baseline relationship is very prevalent in Aboriginal communities where there is a strong attachment to the land, it naturally follows that any local community that derives its livelihood from that land has a similar attachment.

The following chapter examines Tahera Diamond's IBA with the KIA for its Jericho project, using the same criteria employed above. Results from interviews are incorporated to enrich and highlight the unequal distribution of decision-making power and the political ecology of mineral development in the Hamlet of Cambridge Bay.

Chapter 7: The Jericho Diamond Project IBA: The Political Ecology of Mineral Development in Cambridge Bay

7.0 Introduction

In Chapter 6, I reviewed the evolution of IBAs by applying a set of sustainability criteria (see Chapter 5) to a selection of past and current agreements. These agreements show a progression from a 'traditional' style of industry participation to the more complex, multi-party form illustrated by the Diavik Diamond Mines IBA. The Diavik IBA was a "high water mark" in terms of inclusion of sustainability elements as well as of cooperation and understanding of local environmental issues and concerns. On September 9, 2004, Tahera Diamonds and the Kitikmeot Inuit Organization signed the most recent, "state of the art " IBA in terms of the criteria developed in Chapter 5. In this chapter, I examine the Jericho IBA relative to the mining community sustainability criteria developed in Chapter 5 in order to determine what progress has been made in terms of IBA development since the release of the Diavik IBA as a tool of sustainability along with its relevance to the political ecology of the Hamlet of Cambridge Bay. Key informant interviews (discussed in Chapter 2) conducted in Cambridge Bay, Nunavut and elsewhere over the period of September 6-13, 2004 enrich the examination of this IBA document and illustrate deficiencies that remain with the IBA mechanism.

Photograph 7.1 Signing of the Jericho Diamond Mine IBA at Cambridge Bay, Nunavut September 9, 2004 (Photograph by Michael Hitch, September 9, 2004)

7.1 Jericho Diamond Project Summary

Tahera Diamond Corporation plans to construct and operate the Jericho Mine near the North end of Contwoyto Lake in West Kitikmeot, Nunavut. Tahera Diamonds is a Canadian exploration company engaged in the exploration for and development of diamond deposits in Canada's Nunavut and Northwest Territories. The company is headquartered in Toronto, Ontario.

The Jericho Diamond Project, located approximately 400 km Northeast of Yellowknife, NWT, is wholly owned by the Tahera Diamond Corporation. Seven kimberlites in two separate kimberlite clusters have been discovered to date within a 30 km radius of the Lupin Gold Mine.

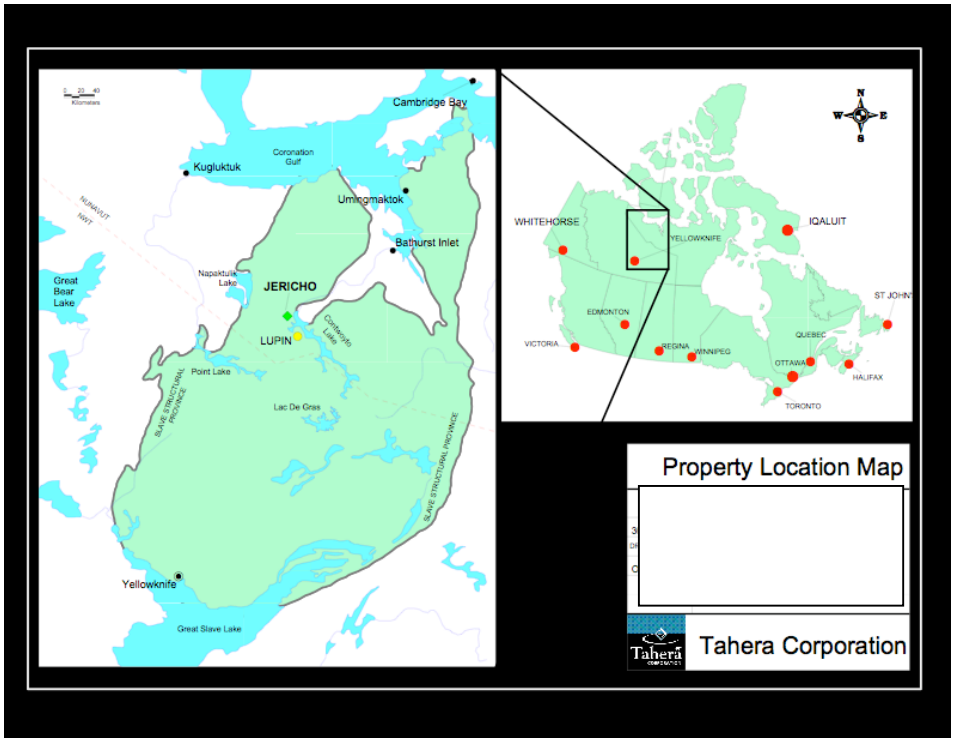

Figure 7.1 Jericho Diamond Project Location Map (Source: Department of Indian and Northern Affairs Canada, URL: http://www.ainc-inac.gc.ca/nu/nuwork/pi/jp/pdn/index_e.html).

Photograph 7.2 Project Site Visit (Photograph by Michael Hitch, 2000)

Photograph 7.3 Near Bird Lake at the Jericho Diamond Project (Photograph by Michael Hitch, 2000)

Operations initially will be an open pit followed by underground mining. Ore will be mined eight months of the year and processed year round. Ore will be transported over an ice road in winter months. Current resource estimates of the mine are sufficient to have an eight-year minimum mine life and employ a total of approximately 105 to 175 people (including employees and contractors) with approximately fifty per cent being on site at any given time.

Tahera has been actively searching for diamonds in Nunavut for the past seven years.

Tahera is the first company to make its IBA available to the public and has set a precedent for future project proponents to do the same.

7.2 Impact and Benefit Agreement Summary

Table 7.1 summarizes the Jericho IBA. It is fortuitous for this research that due to new Canadian securities regulations, material contracts, such as an IBA, must be filed with the relevant regulators and be considered a public document. According to the Company, however, several schedules were omitted from its filing, as they were considered too sensitive and confidential (e.g. cash flow, costs, royalty calculations, etc.).

Employment and Training	Recruitment	• Tahera will undertake an analysis of all jobs required for the development and operation of the mine. • Tahera will provide a listing of qualifications and skills required to perform job responsibilities as well as performance indicators to measure job performance. • Tahera will work with the Kitikmeot Inuit labour force to identify skills and qualifications available in the region. • Tahera with the assistance of the Implementation Committee, will prepare and maintain a Labour Force Development Plan within one year of a construction decision. • KIA will provide Tahera with the pertinent Kitikmeot Inuit human

		resource data available.
	Training and Development	• Tahera, along with public education and training institutions, will offer Inuit opportunities for training aimed at maximizing employment for Inuit. • Tahera will cover the costs incurred by participants of these programs. • Tahera will provide four (4) apprenticeship positions and one (1) management/supervisory trainee position. • Tahera will establish and maintain programs for orientation, job safety, skills training leading to certification, career path planning, supervisory or management training and selected external training programs that lead to skilled or supervisory positions. • Tahera will sponsor pre-employment training opportunities aimed at increasing qualifications among Inuit communities to enable access to positions and training programs offered by Tahera. • Tahera will provide job placement counseling for Inuit employed at the project within two years of the end of the 10-year life of the IBA agreement. This program is for employees with a minimum of two years service.
	Inuit Education Opportunities	• Tahera will establish a scholarship program for Inuit student attending post-secondary programs in a mining-related field (total value of $10,000 per year). • Tahera will undertake annual community meetings to discuss labour needs, skills and qualifications required for employment, training opportunities available to prepare for mine employment and educational support programs for development of qualifications. • Tahera and KIA will work towards developing and implementing off-site educational programming related to the mining industry for Kitikmeot high

		schools. • Tahera will provide educational upgrading programs and opportunities for Inuit wishing to upgrade their basic educational levels.
Employment Opportunities		• All positions at the mine shall be open to Inuit with the ability, work skills, experience, and necessary qualifications required by the position. • Tahera will consider ability, skills and experience as an equivalent to formal qualifications. • Tahera will use its best effort to achieve an Inuit employment goal of 60% by Year 5 of the mine life. • Job postings are reserved for Inuit in the region for 10 days before the Company may recruit outside the region. • The work rotation will be two weeks in/two weeks out with both parties will affording sufficient time away from the work site for the Inuit to pursue traditional lifestyles. • Points of hire will include Kugluktuk, Cambridge Bay, Gjoa Haven, Taloyoak, Kugaaruk and Yellowknife from which Tahera will provide transportation for its Inuit employees. • Tahera will provide Human Resource Expediters in the point of hire communities to maximize employment candidates. • Tahera will make efforts to ensure that its Contractors and any Subcontractors adopt a hiring policy consistent with Tahera's. • Tahera commits to requiring Inuit to have a minimum of Grade 10 for all entry level positions. • Tahera will develop a career path counseling program to meet the specific needs of Inuit employees. • Inuit that do not speak English, will be given reasonable opportunity to qualify for jobs where lack of knowledge of English will not compromise safety.

		• All signage and postings will be multilingual.
Employee Support System		• Tahera will provide and support drug and alcohol rehabilitation programs and money management workshops. • Tahera will promote inter-cultural dialogue and provide cross-cultural orientation and training for all employees and Contractors. • Tahera will institute an Employee and Family Assistance Program (EFAP). • Tahera will serve country food at the project. • Tahera will provide at its cost, communication infrastructure for Inuit employees to communicate with their spouses and families.
Economic Development and Business Development Opportunities	Business and Contracting Opportunities	• Tahera recognizes that Inuit businesses should have opportunities to provide commercial services to the project. • Tahera will provide extended time frames for Inuit business to prepare and negotiate contracts. • Inuit business will be given sufficient time to produce bid bonds where required. • Tahera will evaluate all proposals, tenders, or direct negotiations for contracts on the basis of Inuit content.
Access to Facilities and Roads		• Tahera will not unreasonably withhold access to the project to the KIA. • Tahera must mark the boundaries of the project in the field. • Tahera must not withhold the provision of gasoline to Inuit harvesters active in the area. • Tahera must not withhold requests for emergency shelter and food made by Inuit harvesters active in the area.
Research and Development		• If joint research is undertaken, the costs of the joint research and development activities will be shared by both parties.
Abandonment and Reclamation		• Tahera will carry out abandonment and reclamation efforts as per the terms and conditions of any land use permits, water licenses or surface leases granted to

		them. • The KIA will attempt to harmonize conditions in its Land Use authorizations with permits and leases issued by the Department of Indian and Northern Affairs for portions of the project on Crown Lands and reclamation provisions included in any water license issued by the Nunavut Water Board. • KIA has the first right of offer on any equipment, buildings or materials considered surplus by Tahera at anytime during the operation.

Table 7.1 Jericho IBA Summary

As indicated earlier, this IBA represents the most comprehensive to date. However, the following analysis will show that deficiencies remain in this IBA, and that those issues remain unaddressed by both the company and the KIA. The following section examines Tahera Diamonds and the Jericho Project relative to the criteria developed in Chapter 5.

7.3 Holistic Company Environmental Policy

In Chapter 5, this criterion for mining community sustainability highlighted four elements that should be included in a corporate sustainability policy.

- People – developing skills and rewarding achievement
- Community – believing the principles of environmental responsibility
- Culture – creating an action-oriented outlook
- Principles – acting with integrity, honesty, fairness and respect

These elements require a commitment by the company to act in a responsible manner to instill trust with the affected community. To illustrate the importance of this, while one community respondent strongly supported Southern companies coming into the community, he also emphasized the need to work with the Inuit beyond the token level. He commented:

> I've seen too many potato companies that have nothing at stake. One or two Inuit will benefit from the booze and the drugs and the free flowing money. However, with real Inuit companies, we insist on training for Inuit and employment.[1]

One community member believes Southern companies fail to get to know the local community, particularly the elders. This respondent thinks Southern company staff should spend more time in the community and become active participants. She commented:

> Sometimes I wish they got to know the people first and to understand what it is like up here and see how much we rely on our land for food.

Tahera spent over four years conducting public meetings and consultations. One industry representative attributes much of the success in negotiating the Jericho IBA to the continuous and careful explanation of the project and of Tahera.

Photograph 7.4 Tahera presents its Environmental Impact Statement (EIS) to the Nunavut Impact Review Board (NIRB), regulators, and other interested parties in Cambridge Bay, January 5, 2004 (Source: Tahera Diamond Corp.)

[1] A potato company is a slang term for a company that appears to be Inuit. However, it is largely managed behind the scenes by non-Inuits.

The same respondent indicated another key to success was keeping the individuals who presented at these meetings and during consultations the same in order to establish trust and continuity. In contrast, one observation during the interviews was that no Inuit representatives were on the proponent (or company's) side of the negotiations. The inclusion of an Inuit would have been beneficial in terms of understanding and clarifying the subtleties and innuendos in a cross-cultural negotiation. A KIA representative cited a positive case where the proponent company (Inmet Mining for the Izok Lake project) hired a local Inuk from a local community to participate in negotiations and to act as a liaison between the company and the community.

An industry representative indicated that in order to establish the level of trust with the community required to operate effectively, it was important not to build the expectations and hopes of the community beyond what the company was able to provide. The same respondent accused many of the smaller exploration organizations of making outlandish promises of jobs and economic rewards that were not realistic at that level of project development.

Tahera's corporate community and environmental policy contains well-defined and illustrated examples of all four of the essential elements of a sustainability declaration mentioned above.

Box 7.1 Tahera Diamond Corporation's Community and Environmental Policy

- Comply with all applicable laws, regulations and standards; uphold the spirit of the law; and where laws do not adequately protect the environment, apply standards that minimize any adverse environmental impacts resulting from its operations;
- Communicate openly with government and the community on environmental issues, and contribute to the development of policies, legislation and regulations that may affect Tahera;
- Ensure that its employees and suppliers of goods and services are informed about this policy and are aware of their environmental responsibilities in relation to Tahera's operations;
- Ensure that it has management systems to identify, control and monitor environmental risks arising from its operations and to prevent environmental impacts prior to their occurrence;
- Conduct research and establish programs to conserve resources, minimize wastes, improve processes and protect the environment;
- Take appropriate corrective actions should unexpected environmental impacts occur. Appropriate actions will be taken to prevent reoccurrence of such unexpected impacts.

Source: www.tahera.com/community.html

The company's policy focuses on community sponsorship of activities and events that affect the youth, education and health of the community at large. The company's policy explicitly acknowledges the needs of the community and makes a strong, measurable commitment to the biophysical environment. The policy, however, lacks any explicit sustainability targets and a reconciliation of performance against those stated objectives.

7.4 Aboriginal Partnerships and Cooperation

Mineral development brings change to traditional ways of life. The challenges of bringing about positive changes and minimizing the negative influences motivate Aboriginal communities to pursue partnerships with the industrial proponent. This criterion centers on the company's support of initiatives to enhance Aboriginal involvement in mineral and metal activities, including examining potential incentives for the company to work with the Aboriginal

community, promoting joint ventures between Aboriginal businesses and non-Aboriginal mineral developments, and improving Aboriginal access to capital.

While jobs and wealth creation could be the underpinnings of prosperous, self-reliant communities, many Aboriginal communities have limited economic opportunity and capacity, and have difficulty accessing the tools they need in order to build economic self-reliance. There has been a lack of diverse economic and business opportunities available to Aboriginal people, businesses and communities. Most Aboriginal businesses are small, serving local and regional markets, and have difficulty accessing broader markets. Minerals, metals and related sector activities have the potential to provide royalties, direct and indirect income, business partnerships and spin-off opportunities for local and regional businesses.

A KIA representative sees joint ventures and the establishment of new companies as a key element of a sustainable future for the residents of Kitikmeot. The same person commented, "the possibilities are endless with a reasonable, self-derived income and any excess would go towards developing small, Inuit-owned businesses". This criterion is similar in many ways to a commitment to capacity building and enhancement discussed below.

Tahera's IBA includes several provisions for the development and support of locally-owned and operated business, including extended time frames for local businesses to prepare and negotiate contracts, extended time to prepare bid bonds, and a will to evaluate all proposals, tenders etc. on the basis of Inuit content.

7.5 Training and Education

It has been recognized by Aboriginal people and industry that a lack of necessary training and formal education is a major barrier to increasing Aboriginal participation in mining.

Recent IBAs provide for comprehensive education and training opportunities to attract qualified employees. Under these agreements, Aboriginal communities have secured benefits such as employment, education

and training, which provide valuable skills that can be transferred to other mining companies and economic sectors. This facet of the IBA is the highest priority at the KIA and in the community at large. A KIA representative's vision for the community includes higher levels of education, employment beyond just mining, and a mobile population. This respondent sees education as the key to a sustainable future for his community. The KIA representative also sees immediate benefits arising from training. He commented: "we are seeing more people going into post secondary education, staying through high school and this has stimulated interest in areas like geology". A community member, who is well informed about the needs and interests of the youth of the community, recognizes that a new mining operation would allow for further education and training in mining-related skills, although she sees little benefit for herself.

Not all community responses were positive. One community representative acknowledged that training and education are critical to the development and future of the community. However, he would like to see the Southern companies limit the number of Southern-based employees brought to the North. Another issue for this respondent was that mining companies tend to hire all of the qualified people in the community first rather than training new people from the onset. This leaves the community short of qualified employees and the community suffers. One solution this respondent suggested was to develop a job-sharing program, in which the employee will work on the mining project for two weeks at a higher wage and for two weeks for the Hamlet at the customary lower wage.

These kinds of creative approaches are required when, for example, an IBA calls for 60 employees from a community with a population of 1,600: half of the population is under working age. This leaves a very small pool that can actually fill those positions. However, in the case of the Robert's Lake Project of Miramar Mining, which has a very short mine life, the company could not afford to take the time to train new employees and needed skilled employees from the community.

A community member's view of the community post-mining situation is bleak. This respondent sees the end of a mine's life as leaving a large part of the community without jobs, and without the ability to take back the jobs they had before, leading to situations of high depression and potentially other negative impacts. "We need to prevent that from happening", a community member commented. He feels that the best way to prevent these kinds of impacts is through cross training of people. One example he cited related to drill assistants. With drill assistants, the main task they perform is to manage drill pipe. He believes there are no transferable skills. He believes that the community as a whole needs to be training, or cross-training, these people in other positions. He believes this is the benefit of job-sharing techniques.

Tahera's IBA includes many provisions for the training and education of potential employees of the mine. These concessions include assisting public educational institutions in providing training opportunities aimed at maximizing Inuit employment, including covering the cost of these programs, developing an apprenticeship and supervisor training program, and sponsorship of pre-employment training in order to increase qualifications for those Inuit who are interested in positions and training offered at Jericho. The education commitment of Tahera extends to providing upgrading programs to those Inuit wishing to upgrade their educational levels.

7.6 Employee and Community Well Being

It is only over the past three versions of IBAs that consideration of employee and community well being has been addressed. It is well recognized that the introduction of a new mine development and a transition to a wage economy has benefits, but there also are negative impacts.

The KIA as an entity is focused on the economic development of the Kitikmeot region in any way it can. As discussed earlier, the region is endowed with tremendous mineral wealth and therefore there is a natural attraction to mineral development. However, the transition to a wage economy and Southern employment structures may run contrary to traditional family culture.

A community member commented "there are office buildings in Toronto with more people in them than the entire population of the Kitikmeot". He feels that Southern companies need to understand the sorts of challenges that Northern communities face. A conclusion is that current business models often are not applicable in the North, and sometimes unusual structures are required. Another example of the flexibility this person suggested relates to drilling companies that work on a six-week in, two-week out rotation. For the average Inuitmiut, six weeks away from home is far too long and detrimental to the family structure. If drilling operations are to hire Inuvutmiut, then companies need to adjust their shift schedules and other kinds of work commitments and conditions so that the Inuvutmiut can succeed rather than not return to work after the first rotation.

One shortcoming of current IBA structures is the lack of inclusion of both the grassroots members and representatives of the local Hamlet in the negotiating process. The IBA structure and process takes place strictly between the RIA and the industrial proponent or company. The Nunavut Impact Review Board or NIRB does not have a major role to play in IBAs. Historically, part of the role of the Board is to assess how far the company has progressed since negotiations were completed with the RIA. In mid-2005, the Board wanted to impose some kind of skeletal structure to measure or at least identify the socio-economic impacts from the IBA. The goal is to provide the Board with the ability to make better decisions when assessing the appropriateness of such agreements and report back to the minister and proponent. There is no government agency or inspectors that monitor socio-economic impact. Therefore, NIRB has taken on that role in order to establish conditions and follow through with monitoring to determine how effective the IBA has been.

There is a need for the RIA, the company and the board to work together in order to align interests and to develop an understanding of relative values, motives, and responsibilities, develop the contents of the IBA, and consider the direction of the agreement. When asked if the embedded feedback and monitoring mechanisms are appropriate in recent IBAs, a territorial government

official responded that for the most part yes. However, in her view, the Board never sees the complete IBA document, just what the RIA and proponent choose to share. Historically, projects were only audited every five years and many changes to the community can occur in that time. With the IBA mechanisms, the RIA can react more quickly to negative change and install more wellness programs and educational programs to rectify problems encountered.

The same respondent's concern was that the agreements do not cover all the issues a community might face with development. In that sense, if the health and wellness programs cannot keep up with the issues that arise as a result of development, "it will not be a very happy place". Abuse will rise, along with problems regarding drugs, alcohol, health in general and all types of issues associated with rising incomes. If there is nowhere else for these trained people to utilize their new skills, things would likely become desperate for them. This same person continued, saying that "if no money is set aside to deal with these issues, that is a big problem". When asked if some provision for this kind of after-care would be appropriate for IBAs, the respondent commented:

> If I had my way an IIBA would go beyond just the Inuit Associations. It would go out and incorporate health, education and justice departments of the Government of Nunavut. Those that are on the ground working the system, including the GN and the municipalities somehow need to be tied into the IBA. This separate agreement with the government and municipalities, is currently absent and not all of the issues that the community faces are captured by the KIA IBA.

A community member viewed the local community at risk as a result of exclusion from the IBA process. The Hamlet has no role in structuring or negotiating IBAs. It currently is pushing to be included in an 'official' capacity. Currently, IBAs are restricted to the RIAs and the RIAs do not deal with many issues that other Aboriginal bands would deal with. For example, only in Nunavut, the Hamlet is a municipal representative of the Territorial Government of Nunavut (GN) and the RIA (e.g. KIA) are representatives of the

Aboriginal beneficiaries of the Nunavut Land Claims Agreement. In other Aboriginal communities, the Band is both the municipal government and the Aboriginal representative. In Nunavut, the RIAs do not administer programs such as education, health or wellness, which is not the case in Aboriginal communities outside Nunavut. The Hamlet does not receive any funding from the RIAs to provide those services to the Inuit people.

The IBAs are based on employment and royalties, and skill development, but lack any discussion on the other issues that are the responsibility of the Hamlet or Territory. Attempts have been made to include the Hamlets in the process. However, a community member felt the trend is towards a separate social benefit agreement with the industrial proponent and the Hamlet. The same person further commented, "the KIA has said that they don't want to be involved in those issues and it is not their responsibility". Furthermore, he added "they have refused to participate in the process to incorporate the Hamlet, Territory and KIA under one agreement". This respondent believed that the KIA wants to keep the benefits negotiated on behalf of the Inuit confidential. The same respondent suggested that this confidentiality was being used as an instrument of power over the members.

The Hamlet has been applying pressure on the federal Department of Indian Affairs and Northern Development to consider the social aspects of development when assigning land use and water permits. The Hamlet has no significant leverage over the industrial proponent to include social components to their IBAs. The only pressure the Hamlet can use is political pressure (e.g. NIRB). If the proponent were unwilling to deal directly with the Hamlet, then the Hamlet is prepared to make a statement to NIRB that it is opposed to the project going forward. That said, NIRB's mandate under the Nunavut Land Claims Agreement cannot impose conditions solely on socio-economic issues. Conditions require the social impacts to be environmental in nature. A community member commented, "this gives the impression that environmental issues are of a higher priority and the socio-economic impacts are not as important when developing the resources of Nunavut".

Tahera's IBA provides the standard drug and alcohol counseling and rehabilitation programs and extends employee support to include money management workshops. To manage any cultural disconnect that may occur between non-Inuit employees and contractors, the company has committed to cross-cultural orientation. An interesting feature of Tahera's IBA is the commitment to provide country food at the project and also to provide for internet and email facilities to communicate with families off-site.

7.7 Community Capacity Building and Enhancement

One of the specified sustainability criteria used to assess the IBAs is whether they provide for the development or enhancement of community capacity and help it to move to a sustainable future beyond the life span of the mine. This criterion is related to the establishment of Aboriginal partnerships and cooperation in many respects, such as fostering secondary and tertiary business activity that can operate outside of the operations of a mine. Many Aboriginal businesses and the community at large would benefit from further development of business expertise and access to, or awareness of, coordinated business support and advisory services. A community member emphasized the need for the development of senior-level representation of Inuitmiut in specific positions within the work force that can contribute to the development of an improved vibrant community economy.

A KIA representative's vision for the community is to have a strong economic base with spin-off benefits such as training and education. He values the preservation of culture and hopes over time IBAs can address social issues that come in part from overcrowding, lack of employment and things to do, and lack of motivation and goals. A strong economic base will contribute to a strong social community. This respondent sees the key to the community's success and future through economic activity:

> Up here you can't expect to generate economic activity the same way you do down South. We don't have agriculture, so a lot of what can be done down South can't be done here. We need other

> driving forces, such as mining, tourism, and hunting. We need to utilize existing resources whether fish or animals on the land. However, there is limited down-stream processing opportunities and we need outside sources to be the driver behind economic development.

As mentioned earlier, Tahera's IBA makes provisions and sets up conditions whereby Inuit-owned and operated businesses can develop and have a distinct advantage over Southern businesses in servicing the mine's needs.

7.8 Community Participation and Information Disclosure

As defined in Chapter 5 and discussed in the previous section, community participation and the plain and full disclosure of information concerning the potential or current mineral operation are critical to have an informed and vibrant community. This goal involves community engagement and transparent corporate organization and policies. As a result of changes to Canadian securities regulations, material contracts, such as an IBA, must be filed with the relevant regulators and be considered a public document. The Jericho IBA is the first to be made public, although the company did withhold some portions regarded by it as confidential.

Prior to the conclusion of negotiations of an IBA, the corporate proponent must carry out extensive public meetings and presentations. In the case of Tahera, an industry representative and his organization had spent the previous four years visiting communities to explain not only the elements of the Jericho project but also the parent company. This respondent commented about what made the process so successful. They employed a strategy of openness, made it very clear that the company wanted to work with the communities, and made an explicit point of explaining what the opportunities might be in terms of training, employment, etc. Furthermore, the respondent made it a priority to explain to the communities what Tahera was and the responsibilities it had to its shareholders. This respondent commented that the challenge was to educate the community about the concept of profit and other market influences on a company's operations.

It became apparent through the interview process that the KIA could also strengthen its communications processes regarding the terms and conditions of IBAs and the potential benefit flow to beneficiaries. As one example, an industry representative mentioned that the KIA has an open-door policy and that if any beneficiary had concerns or comments they were welcome to visit and discuss them. The problem, however, is that raising concerns in this matter is considered inappropriate behavior in the local culture and it would be more likely that the issue would go unaddressed. This problem raises the issue of inclusion and assimilation of traditional knowledge and being culturally sensitive to communication strategies used in the community.

One challenge that I encountered during the interview process was my inability to get representation from the elders. Several attempts were made to speak to this group, even to the point of having an interview with one elder who just would not answer any questions. Apparently, this is not uncommon, as in traditional elder circles they speak with one voice after much internal debate and discussion. It is very rare to elicit a response from an elder individual without the consent of the group.

Tahera's IBA has no specific provisions for community participation and information disclosure.

7.9 Discussion of Findings

The inclusion of interviews in evaluating the Jericho IBA was an effective tool, not only for specific issues or points but perhaps more for providing insight where otherwise it would have been impossible to obtain. The Jericho IBA, as the most recent, satisfies many of the sustainability criteria and takes an extra step towards incorporating added sensitivity to the Inuit culture.

There were several discrepancies, however, that need to be addressed in successive generations of IBAs. These elements include the introduction of more formal and established mechanisms to allow for enhanced community participation and information disclosure beyond just the pre-IBA consultations. The IBA structure itself should contain provisions for periodic monitoring by a

community body, independent of KIA or the company, as well as for regular community consultations by the company accompanied by the representatives of the KIA. Although the Jericho IBA makes many accommodations for flexibility in shift rotations to allow Inuit employees to participate in annual hunts, etc., there seems to be a lack of inclusion of traditional ecological knowledge in the ongoing operations at the mine. A potential solution would be to have a traditional committee that provides guidance on an ongoing basis to the operators as to changes in biophysical behavior and remediation activities.

The Jericho IBA also provides for the standard suite of business development opportunities for the Inuit of the affected communities. These elements are common to IBAs going back to the Echo Bay Ulu Project IBA from the early 1990s.

Tahera, the owner of the mine, has included general health and safety (Employee Well Being) provisions in its IBA, consistent with the past several generations of agreements. And, finally, Tahera's corporate policy is one of the better, well thought out and realistic of the corporate policies reviewed in terms of recognizing that mineral development in Canada's North is part of a larger complex system of individuals and institutions.

Perhaps the most important finding from this portion of the research is the need for clear boundaries within which the IBA must operate. As discussed earlier, the IBA is an agreement solely between two parties, the RIA and the industrial proponent (i.e. Kitikmeot Inuit Association and Tahera Diamonds Corp.), and is project specific. This research has highlighted a significant issue that limits the current IBA structure as a tool to promote a sustainable future for the affected community: the KIA, not the affected community, is the prime recipient of most benefits that accrue from the IBA. For example, KIA has set up and will manage a recruitment database and recruits will be vetted through it. Additionally, any compensation for environmental damage during construction and operation goes directly to KIA (e.g. Miramar Mining's tailings disposal in Tail Lake).

The philosophical basis of the KIA is to defend and protect the social, cultural and economic well being of the Inuit of the Kitikmeot Region. In practice, the Association deals with all issues associated with the Nunavut Land Claims Agreement. The organization was started 20 years ago, along with the other regional Inuit organizations, to arrive at a comprehensive land claims agreement. Now, its purpose is to implement parts of the land claims agreement. The members of the KIA include every Inuit beneficiary in the communities of the Kitikmeot Region or outside of the community in Kitikmeot. Any person who was originally from a Kitikmeot region community but now lives outside is still deemed to be a Kitikmeot Inuit beneficiary. A question then arises as to whether one has to be Inuit or just a resident. Discussions with a KIA representative clarified this point:

> Technically no, and in fact there are a few [non-Inuitmiut], but it is rare and not really intended. There are a few that are not registered as being Inuit and need to be enrolled, by way of a community committee. If any child is born or wishes to be enrolled, they submit an application to the committee of that community and they decide. If there is a situation where the family or parts of the family have been remote from Nunavut then the committee has to decide.

The essential point is that not all members of the community are beneficiaries of the Nunavut Land Claims Agreement. Therefore, they are not entitled to be a member of KIA and are not entitled to any of the benefits made available by the company. One KIA representative pointed out that there is a segment of the population that is Inuit but does not believe in the system, and believes it has been taken advantage of and that its voices do not count. These people, being Inuit but not members of KIA, are not entitled to benefit flows under an IBA. A KIA representative believes that the KIA works diligently to make sure that there is fairness in all it does for the majority of the people. When asked if there was an alternative for those who do not participate in the process, he responded; “not as such, but there is nothing holding them back,

depending if they can get the funding required for them to operate from the government".

The community that comprises the Hamlet of Cambridge Bay is approximately 80 per cent (1,335 total population) Inuit (i.e. a person with any Inuit heritage is considered Inuit under traditional definition). The remaining 20 per cent is non-Inuit. This condition has created a disenfranchised sector of the population consisting on non-Inuit or non-entitled Inuit.

The principles of sustainability, however, imply an equal opportunity to move forward together and that economic sufficiency, maintenance of biophysical integrity and enhancement of social well being are not reserved for one ethnic population, but benefit everyone. Several of the respondents interviewed emphasized this point, particularly relating to the Hamlet's infrastructure and its ability to manage the societal issues associated with mineral development. One particular example refers to the Hamlet's Wellness Centre. A community member described the Wellness Centre as a facility that covers everything from prenatal nutrition to parenting skills, alcohol and drug treatment, and family violence counseling. The centre looks after every other situation not covered under federal or provincial social assistance programs and is the sole responsibility of the Hamlet. This respondent commented further:

> The responsibility of the Hamlet is to make sure the Wellness Centre and the Wellness Committee have the resources they need in order to do their job. If we don't have a healthy community, we face the problem of attracting future employers into the community and to have positive conditions for economic growth.

The potential for stresses on the existing infrastructure is not lost on the community. There is documented evidence that a fly-in, fly-out operation has had a negative impact on the Hamlet in the past. A community member commented:

> We know whenever there is a fly-in, fly-out operation such as the DEW Line clean-up, the Lupin Mine, or an exploration camp,

> the Wellness Centre can track increases in family violence, alcohol and drug abuse, and spousal abuse that completely mirrors the shift rotation schedule. What you tend to see is that the people come back into the community with large sums of money sitting in their pocket with really nothing to spend it on. In addition when these people return with all this money, all family members and everybody they know in the community, want the money spent on them to buy them gifts and alcohol. This type of salary with lots of time off tends to result in increases in those types of incidents. Because of the tightness of the family unit, here, there tends to be increased allegations of infidelity. Because one spouse is left alone to care for the extended family, tensions mount and there is a marked increase in elder abuse.

In summary, the distribution of decision-making power lies largely in the hands of the KIA and to a lesser extent, with the industrial actor, with little or no power in the hands of the local community. These communities may not even want that authority but, nevertheless, their lack of participation means that the goals of a sustainable mining community remain unmet. Bryant and Bailey (1997: 167) recognize this general situation and suggest, "indigenous actors may even be forced into a situation in which they must join in the degradation".

7.10 Discussion of the Political Ecology of Mineral Development in Cambridge Bay

A review of the Jericho Diamond Project IBA through a political ecology lens indicates that there is an unequal or, inequitable distribution of decision-making power related to natural resource development. For the purpose of this discussion, I take a 'telescoping' or narrowing view of these actors and their interrelationships.

As discussed in earlier chapters, I have stressed that natural resource development occurs within and is directed by pressures and priorities emanating from the global capitalist system (GCS). The GCS is not an institution but a 'playing field' established by influence from all actors, as suggested in Chapter 4. Thus, the GCS is not rigid, but ebbs and flows. The GCS's influence in natural resource development in Cambridge Bay is modest other than driving

the profit motive of several actors, including industry, and the KIA, and directing the emerging wage economy of the community grassroots members themselves.

The Canadian federal government has little direct or instrumental decision-making power in this scenario, other than through federally administered environmental rules and regulations. Again, as with the GCS, its power is more systemic compared to more intimate actors. The federal government is in a contradictory position as highlighted in Chapter 4, in terms of its responsibilities. In the case of Jericho, the federal government has the responsibility for ensuring that Tahera is operating in an environmentally appropriate manner, while at the same time, is also responsible for fostering economic development and positive economic performance. Furthermore, the federal government faces sensitive issues concerning Aboriginal self-government as granted from the settlement of the Nunavut land claims agreement. As a result, the federal government must take a hands-off approach to the administration of the Inuitmiut and their resources, and rely on the best efforts of the Territorial Government.

The Territorial Government of Nunavut has more influence and decision-making power than the federal government as it pertains to natural resource development in Cambridge Bay. This influence is perhaps best demonstrated by the operation of the Nunavut Impact Review Board or NIRB, which was discussed above. Again, NIRB is responsible for the assessment of new project development where there is a perceived impact on the environmental, cultural, and socio-economic welfare within the Settlement Area. The NIRB review process feeds into the Nunavut Water Board and provides guidance to the Territorial Minister responsible for the environment.

The Territorial government's power at the project level can be significant. For example, if the industrial proponent's submissions to NIRB are inadequate, or inappropriate, NIRB will not recommend the project to advance, and licenses, permits and other approvals will not be granted (e.g. Miramar Mining's submissions for the Robert's Bay/Hope Bay Gold Project). By

declining a proponent's project, an impact is obviously felt by the industrial actor but also by the RIA (in this case, the KIA), and the grassroots community. As part of the Board's review process, submissions are made by outside actors, such as ENGOs (CARC in this case) and the Hamlet of Cambridge Bay, as discussed above. This is the only opportunity for these actors to have a formal voice in the decision-making process.

As mentioned above, the KIA is subject to the decisions of NIRB when it involves the advancement of a mineral project. Although the project may have the potential to be of great benefit to the beneficiaries of the land claims agreement, if the project does not receive the approval of NIRB, it will either be delayed or dropped entirely by the industrial actor. An example of this is again Miramar's Robert's Bay project, where the KIA was very keen on the project advancing and openly expressed its approval, regardless of the major deficiencies NIRB found in the operating and environmental protection and remediation plan. This raised an important issue of conflict of interest for the KIA. The KIA saw the economic advantage of the project and this became the focus. However, the development as proposed would have had serious social and environmental impacts.

During the intervening period after the industrial actor submits its proposal to NIRB and waits for comments, and/or approvals, the actor initiates negotiations with the KIA for an impact and benefit agreement. No other party has influence over these negotiations, other than KIA and the industrial proponent. Other than sporadic community information sessions and meetings, everything is kept confidential between the two parties. The KIA is to represent the best interests of the beneficiaries in defining the parameters of any IBA, and only recently has the publicly listed industrial proponent been required to file non-confidential portions of the IBA with the securities commissions. Based on recent experience with the Jericho IBA, no financial information surrounding the IBA has been made public. This raises an important point: there is no scope for public scrutiny or accountability on the part of the KIA for these elements of the IBA.

The KIA holds significant decision-making power over the industrial proponent during these negotiations as a result of NLCA Article 26 requiring the completion of an IBA on Inuit lands. This power is best defined as instrumental, as explained in Chapter 4.

As already indicated above, the industrial actor is subject to some degree to the powers of the GCS, federal government, and to a greater extent the Territorial government, in the form of NIRB. The KIA has instrumental power over the industrial actor during the negotiations for and the implementation of the resultant IBA. Nevertheless, the industrial actor has limited powers over both the grassroots community and the Hamlet. In the case of the grassroots community, the industrial actor must follow the terms and conditions of the IBA, which, for the beneficiary, is positive. The impact or exercised power for the non-beneficiary is relatively indirect or systemic. The industrial actor has a more negative impact on the Hamlet as was discussed above in terms of drawing qualified employees away with better salaries and benefits.

The Hamlet has no decision-making power over mineral development in Cambridge Bay. Its role is passive, other than the opportunity to make submissions at NIRB hearings. The Hamlet finds itself under staffed, with few or no resources to manage the increased demand on infrastructure and services it is mandated to provide.

Finally, the grassroots actor, similarly the Hamlet, has limited decision-making power. The best opportunity for this actor to participate in and have any influence over the development of natural resource development is through submissions and participation in the NIRB process. At these forums the grassroots actor has the greatest opportunity to have its opinions heard and to make a difference. By its very structure, the NIRB panel review is composed entirely of Inuitmiut and the grassroots actor stands to have the best opportunity to present views in the appropriate cultural context, alleviating common cross-cultural problems.

In the broader context, however, the power of grassroots participants who wish to stop development is quite limited because the major actors (the

KIA, the mining companies, and the territorial and federal governments) are motivated towards the development of natural resources in Canada's North as a means to diversify an otherwise limited local economy. Nevertheless, surprising "victories" do occur when grassroots actors have a well-organized campaign, demonstrated in a few notable cases throughout the world from Peru to Nunavut (e.g. Manhattan Minerals' Tambo Grande project in Peru, Miramar Mining's Hope Bay project in Nunavut).

The analysis of the Jericho IBA has generated a picture of the political ecology of natural resources in the Cambridge Bay area. The IBA structures of today severely limits the ability for all community members to participate actively in decisions that directly affect them. As a result, the IBA structure reinforces the dominant capital model that benefits certain elites and ultimately can undermine the enduring quest for sustainable communities.

IBAs are effective on one level. On a broader systemic level, however, we need to keep in mind that Nunavut and the communities within it are irrevocably becoming embedded in a wage economy that is ultimately dictated by the global capitalist forces that determine its position in the cycles of mineral economies.

The following chapter summarizes the findings, presents conclusions and offers suggestions for further research.

Chapter 8: Summary, Conclusions and Recommendations for Further Research

8.0 Introduction

In ideal form, Impact and Benefit Agreements are limited in their ability to facilitate sustainable mining because they are inevitably subject to power relations globally, particularly with respect to those forces associated with the cyclic nature of the mineral industry. Moreover, as mentioned throughout the dissertation, mining is inherently unsustainable. Nevertheless, IBAs could constitute one tool to improve the current situation and nudge the decision-making system towards a more sustainable approach than has been the case in the past.

The remainder of this chapter contains a summary of the research and its contributions. It also draws conclusions as to the appropriateness of IBAs as a tool of sustainable mining and mining communities. This chapter concludes with a selection of recommendations for future research.

8.1 Summary

The goal of this research was to assess the political context and nature of discourse between affected actors, identify and describe the presence of power relationships, and evaluate the success of the Impact and Benefit Agreement instrument in sustainable mining and establishing a sustainable future for these communities. The research was framed within a conceptual framework of political ecology, and a theoretical perspective consisting of a hybrid mix of critical theory and post-positivist thinking. The interaction between the industrial actor and the affected community was mapped (political ecology), analyzed (discourse analysis), and reframed within the context of a modified, and hopefully enhanced, Impact and Benefit Agreement structure.

This research was intended to build upon the literature in the fields of sustainability and natural resource development so that mining, which has historically been thought of as largely unsustainable, might continue sustainably

with respect to affected communities. In addition, the research defined elements of sustainability that would be appropriate in an IBA. Another aspect was to consider how mining could be used and better still, understood as a tool to promote sustainability and provide the impetus for a community and other actors to embark upon a more sustainable pathway.

The research question (**Can sustainable mining contribute to the development of sustainable communities through the application of Impact and Benefit Agreements? Furthermore, how can the development of mineral resources be best pursued to establish a pathway of community sustainability for the future?)** is important because mining and mineral exploration have expanded globally due to improvements in technology and the desire of Inuitmiut to participate in the new wealth generated from mineral extraction. Mining activities have expanded into increasingly remote areas with limited economic development choices. The settlement of land claims (e.g. Nunavut Land Claims Agreement) has allowed Aboriginal organizations the opportunity for self-government and administrative control over their lands and resources. Furthermore, IBAs are a central feature of the Nunavut Land Claims Agreement. The tool itself is a negotiated agreement between the industrial proponent and the regional Inuit association (e.g. Kitikmeot Inuit Association), and consists of a set of expectations of performance from both parties and a promise of benefits for the beneficiaries of the NLCA.

Although the IBA is an agreement between two parties, it has influence over a much broader spectrum of actors. As is the case with any natural resource development scenario, the development of a mineral project in a small community such as the Hamlet of Cambridge Bay operates within the context of the unequal distribution of decision-making power. The end result is that institutions designated to assist them may not best serve some actors.

The research question was explored in the following manner. Chapter 1 established the parameters and discussed the characteristics and nature of Aboriginal communities affected by mining. In addition, Chapter 1 introduced the politicized environment and how political ecology can be used to

examine the unequal distribution of power in a mineral development scenario. Political ecology integrates the concerns of ecology and political economy to consider the dynamic tensions between natural and anthropogenic change, and also the considerations of damage from both natural and anthropogenic perspectives. Chapter 2 presented the approach used. The approach was in two phases: literature search and review, and fieldwork consisting of unstructured interviews in Cambridge Bay, Nunavut between September 6-13, 2004. The specific tools employed to accomplish this research included an overall qualitative approach, key informant interviews, and examination of primary and secondary literature. Criteria of sustainability attributes for IBAs were developed and then applied against selected existing agreements to examine their levels of sustainability. A case study IBA, the most recently completed (i.e. Jericho Diamond Project), was examined in detail against the same criteria. The results from key informant interviews were included in order to accomplish several objectives. The interview results added a second level of data to allow for a bracketing of data, and perhaps, more importantly, provided valuable insight into the political ecology of natural resource development in the Hamlet of Cambridge Bay.

Chapter 3 consists of a literature review. It included defining the concepts of sustainability and sustainable development, sustainable mining communities and the challenges they face, the evolution of sustainability thinking by mining companies, and Impact and Benefit Agreements. This review provided important background information and highlighted several aspects for which there is little or no previous work. These gaps included examinations of the political ecology of mineral development in remote locations, particularly those where local agencies manage resources and unequal decision-making power relationships persist. This dissertation contributes to the literature on Impact and Benefit Agreements by taking existing agreements, and assessing their contribution to community sustainability against new criteria of sustainability.

The Canadian Arctic is a fragile environment in the broadest sense, and little research has been done on sustainable development and sustainability of Inuit communities proximal to mineral development. The notion of sustainability calls for an enhanced dialogue between decision makers and other actors with the intention to distribute decision-making power more equitably regarding natural resource development. This thesis contributed to various bodies of literature, particularly in political ecology. This thesis also has contributed to the understanding of community participation in the IBA process and makes suggestions on how to improve this situation.

Chapter 4 provides a review of political ecology and the nature of power. The concepts were examined and defined, including an examination of the actors in the political ecology of mineral development in Cambridge Bay. Each actor was defined, and placed into a context of decision-making power. This material provided the background for Chapter 5, in which criteria of sustainability were developed.

The criteria in Chapter 5 are based on sustainability and an understanding of other criteria and indicator sets from the literature review. Each criterion is not intended to serve in a stand-alone manner, but rather as one in a set of sustainability elements that could be instrumental in making an IBA more of a tool of sustainable mining. The criteria include holistic corporate policies, Aboriginal partnerships and cooperation, training and education, employee and community well being, capacity building and enhancement, and community participation and information disclosure. The criteria provide a guide to examine pre-existing IBAs in Chapter 6.

Six current and past IBAs were selected for review. They demonstrate an evolution of agreements to having more 'sustainability' features. Of the agreements reviewed, the Diavik and Ekati showed the greatest promise due to a distinct focus on the sustainability of the affected communities. This review also recognized an evolution in terms of the components of the IBAs over time, but also an evolutionary shift in the decision-making power from what historically was largely in the hands of the industrial actor to the Aboriginal

actors, who now control the development agenda. This review validated the criteria, and in Chapter 7, the criteria were used again to evaluate Tahera Diamond's Jericho Diamond Project IBA.

The Jericho Diamond Project IBA is the most recent agreement in Nunavut. Although the agreement is not as comprehensive as either Diavik's, or Ekati's, it does incorporate all of the criteria developed in Chapter 5. Chapter 7 focuses not only on the criteria, but also explores the political ecology of the Hamlet. The interviews were an effective validating tool for what was found to be a complex web of power relationships and influences. The end result of the work in Chapter 7 was the conclusion that IBA structures reinforce the dominant capital model that benefits certain elites that ultimately can undermine the quest for sustainable communities.

Overall, this research has contributed to several areas of scholarly inquiry. This research developed criteria intended to highlight aspects that illustrate the loci of decision-making power among actors in a review of the political ecology of mineral development in remote locations. This research provides the first political ecology examination of mineral development in the Canadian Arctic and demonstrates that the current IBA structure often is incompatible with sustainable mining ideals.

This research has highlighted an inconsistency between the need for sustainable community development and the concentration of decision-making power at the regional Inuit association level. As a result, efforts made by industrial proponents to become more sustainability-oriented and develop more holistic best practices face a barrier in the form of a RIA in the West Kitikmeot region of Nunavut.

8.2 IBAs Today and in the Future

This research has advanced the understanding of the relationship between actors and the problems associated with the development of mineral resources in Nunavut from a political ecology analysis. I have determined that there is an unequal distribution of decision-making power surrounding the development of

these resources that can affect the success of any attempt to establish a sustainable pathway for the future. The IBA instrument was seen as an instrument or tool that could assist in the promotion of sustainable mining and mining communities. However, its inherent form and function renders it inappropriate by itself. That being said, the instrument, used in conjunction with other tools (i.e. environmental and social impact assessment, social licensing or co-management) may be effective in achieving more sustainable mining practices and the pursuit of sustainable mining communities.

8.2.1 IBAs and Sustainability

In the discussion above, I have highlighted that IBAs are being regarded as a tool of sustainability for the people of Nunavut. The spirit and intent behind the instrument, as viewed by the broad public are of being inclusive, promoting cooperation between the people of Nunavut and the mineral development company, and addressing the traditional conflicts that have arisen over mining in the North. IBAs create a forum for negotiation over the traditional pillars of sustainability (i.e. biophysical integrity, economic sufficiency, social well-being and perhaps cultural aspects) as well as more current views such as the 'spheres of concern' approach of CEAA (2005). The findings of this research suggest that the IBA may encompass these notions. However, are they relevant or appropriately defined and understood, considering the politically charged nature the mineral development?

I have concluded that the political ecology of mineral development cannot be separated from sustainability, sustainable mining and sustainable communities, and in fact, these are so tightly intertwined that IBAs negatively affect the potential to approach this ideal. Also, I have concluded that the decision-making power associated with IBAs is concentrated within the Regional Inuit Association and excludes many disenfranchised parties, thus diminishing sustainability. Nevertheless, the IBA, recognized as inherently inadequate, may have value as part of the larger suite of assessments and approaches to sustainability.

8.2.2 IBAs Relative to Other Tools

The trend in more recent IBA negotiations is to develop a series of side agreements to address the concerns of those parties that are explicitly not included under an Aboriginal land claims agreement such as the NCLA. The mineral developers are not compelled to negotiate these agreements. However, in order to proceed with development of their project, free of protest or delay, they opt to take a more proactive stance.

IBAs and these other social development agreements are part of a much larger set of assessments and reviews to which a project and company is subjected to. The environmental impact assessment ("EIA") is analogous to viewing the development from 30,000 feet. The EIA examines the project largely from a biophysical perspective and to a lesser extent the social. The EIA is the broadest review, but in terms of importance to the company, it is the most important. IBAs can be seen as viewing the project from 10,000 feet. Social licensing, a new 'vision of sustainability' can be regarded as viewing a proposed development from ground-level with a focus on the social dimensions of corporate and stakeholder accountability. IBAs have the potential to be far more effective if integrated more closely with these other two assessment and review approaches. EIAs invoke an extensive program of public hearings and submissions from experts and local community members (e.g. traditional knowledge) to assess the broader environmental impacts of the proposed development. Another approach, social licensing requires extensive on-the-ground interviews and questionnaires to conduct parametric (i.e. quantitative) and modeling evaluations of the proposed development. The outcome of this latter approach includes enhanced opportunities for participation, rule making, conflict management, power sharing, leadership, dialogue, decision making, negotiation, knowledge generation, and sharing, learning and development among all stakeholders.

IBAs fit in the middle of these two approaches. The consultation process, which I have determined IBAs lack can benefit from input from these other approaches. What is required is that the IBA process itself become more

transparent and included in “reinforcing feedback loops” with the other two approaches (Figure 8.1).

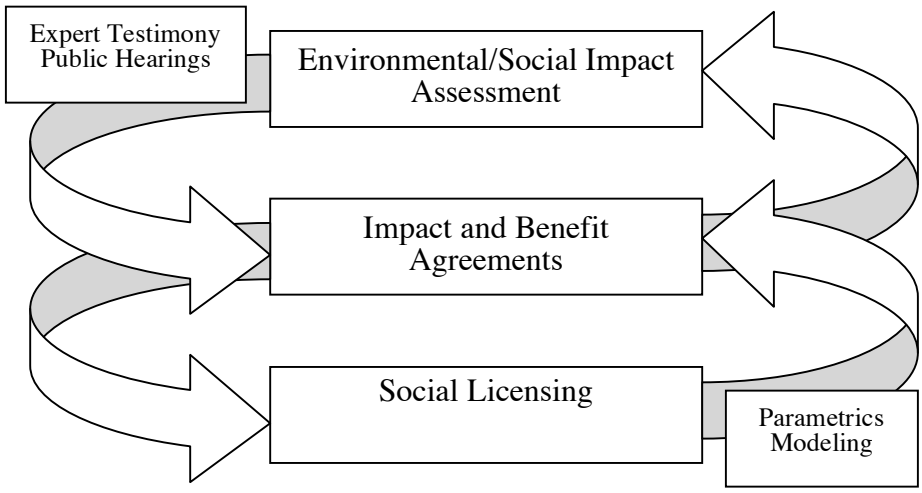

Figure 8.1 Proposed Input/Output Flow for Three Tools of Sustainability. Note: Approaches ordered from finest (bottom) to broadest (top) scope.

8.3 Conclusion

IBAs offer no panacea. Mining is an unsustainable activity operating in a global capitalist structure predicated on unequal power relations. The most that can be expected from an IBA is that it can ameliorate some of the inequity by redistributing some of the benefits generated from mining activity. The current IBA structure has been determined to be inadequate as a sole tool of sustainability. However, in association with other approaches and in a more transparent condition, it would more appropriate.

The Northern economy is inevitably subject to the vagaries of a global boom and bust economy if Northern peoples chose to partake in a wage economy. That cannot be changed. While the North is dependent on the wage economy, the best opportunity that can be offered to Northern peoples is to ensure that they have a say in how decisions are made. If we continue to recognize through institutional participatory processes that the community members have an important role in decision making in institutional, social,

biophysical and economic arrangements, progress will be made towards establishing a path toward sustainability.

8.4 Recommendations for Future Research

From the above, IBAs are limited in their ability to redistribute equitably the benefits associated with mineral development. Any structural change altering the IBA instrument needs to be introduced with sensitivity, because of the degree of self-government afforded the Inuitmiut by the NCLA. The IBA as a concept is an ingrained article of the agreement and has several mandatory elements. However, there is no restriction to adding others. Any new features can be added with the consent of the two negotiating parties.

8.4.1 Future Research on Political Ecology

During the research, it became apparent that this work could be extended in several areas. One area, for example, is to examine the role the NIRB has in terms of project approvals, and how to use the public hearings more effectively as well as to be more inclusive of members of the community who have the least decision-making authority. The NIRB is composed entirely of Inuitmiut. Hence, they have the ability to understand the social and biophysical character of their land. Additional work could be focused on finding the most effective way to develop community participation (i.e. both the Hamlet and residents, regardless of ethnicity), to address sustainability in the most direct manner possible.

Another finding was the nature of decision-making power developed in a mineral development scenario. For example, power generated from an "organic" origin, such as training and education, as opposed to a "granted" source, such as giving a community responsibility for some function at the operation, may be significant over the long term. Areas of future research could be to examine the two different origins of decision-making power (i.e. organic vs. granted) to determine which is the most effective in developing sustainable Aboriginal communities.

The criteria developed as part of this research represent a first attempt to find a tool to assess the political ecology of mineral development. Political ecology lacks a set of indicators, which has been one of the main criticisms of its application as a conceptual lens (Walker, 2005). The criteria used in this research worked well. However, in some cases, several criteria were too similar (e.g. Training and Education, and Community Capacity Building and Enhancement). Future research is needed to develop more refined criteria with more focus on aspects that illustrate and characterize the political ecology of a mineral development scenario.

8.4.2 Future Research on Corporate Sustainability Best-Practices

Industry will continue to evolve in terms of its recognition of other parties involved in the development of natural resources in developing areas. This research has highlighted the evolution of some companies through developing their own best practices to include aspects of sustainability. The primary finding and one that needs to be expanded upon is the ways and means of incorporating more input from local people. As it is today, the NIRB process is the only opportunity that the local community, and any other party whether organized or not, has for input into the review process. Through this research I have concluded that the IBA mechanism itself is insufficient to be the catalyst for sustainable communities. However, I have indicated that opportunity for public involvement exists through the NIRB hearings. Industry must respond in a timely and effective manner in addressing these concerns.

I have highlighted the conclusion that the IBAs are embedded in the GCS and will remain so until both parties recognize the need to adjust the current structure to accommodate other aspects of sustainability not properly addressed. One example that became very clear during the interview process was the situation where the Hamlet itself was left out of the benefit process. As a result, any arrangements agreed to by industry and the RIA have the potential to be detrimental to the community as a whole. New industrial proponents must follow in the same path as BHPBilliton and Kennecott/Aber in striking a

separate arrangement with the local administrations to help alleviate the new stresses on the community infrastructure.

The ability to negotiate these kinds of separate agreements is a luxury afforded to larger companies with projects with long life spans. For smaller companies, or those with shorter mine lives, a different tool needs to be developed; one that addresses the issues that lie outside of the realm of the land claim beneficiary.

8.4.3 Further Research on Inuit Community Development

Similarly, this research has concluded that the Regional Inuit Association, as a representative of the beneficiaries of the NCLA, holds significant power. If more focus were given to assisting the Hamlet with those social services that are not funded (i.e. supported) by the Territorial government (e.g. the Wellness Centre), the burden would be reduced for the community. Additional work is needed in determining what is the best way to move the KIA into a more direct role in moving communities with mixed ethnic compositions (e.g. Cambridge Bay) along a more sustainable pathway.

Of all the RIAs in Nunavut, the KIA has been the most effective in developing a plan for its beneficiaries, a plan that is largely economics-oriented. I believe that this research can help RIAs develop sustainability plans that go beyond just the economic, but also prioritize social well being, and the biophysical integrity of their regions.

8.4.4 Further Research in Cultural Geography

Another realization was made over the duration of this research. Based on the interviews, it became apparent that there is a generation of Inuit who have a different kind of "Aboriginalness" compared to other segments of the population. This is possibly due to this generation being the first to be born and raised in a settlement. Although all of the interview participants claimed to have some degree of attachment to the land, this "lost-generation" segment

gives the impression of being confused about their value placed on culture and a traditional way of life.

An area worthy of future research is to qualify and if possible develop a way to determine "Aboriginalness" and how it influences decisions made by the community in terms of sustainable development for the future. In addition, this research could help proponents of natural resource development address these issues in a more effective manner, and to tailor their development to have as little negative impact as possible.

8.5 Final Thoughts

In this dissertation, I have sought to determine whether IBAs can be a useful tool for the promotion of sustainable communities through sustainable mining. The major conclusion was that, if IBAs include specific features such as a devolution of more decision-making power to the actual beneficiaries of the land claims agreement to promote sustainability, they might be effective in moving communities onto a more sustainable pathway. Nevertheless, we need to keep in mind that larger forces may preclude the ideal from being realized. Northern communities are nested within a much larger system in which many other actors and forces interact to impose certain external economic realities on localities. Nevertheless, IBAs are useful in the following ways. First, they recognize the potential impact of mining or exploration, and seek to promote the economic development and well being of the affected communities. They provide opportunities to local businesses, offer employment and training to local residents, and provide business development and contracting services. Ideally, IBAs also seek to facilitate development of the local community through education programs, counseling services and community support programs, and encourage the maintenance of traditional lifestyles and cultures.

IBAs could also be a tool to use the benefits to provide a basis for a sustainable future. In order to realize opportunities, companies must collaborate with communities to understand fully their social and cultural values and aspirations and agree on how to best add value to the developmental, social and

cultural priorities identified by the community. Mining can be a contributor to sustainable communities only if the benefits are equitably shared. Dialogue, communication and consultation are critical, and most valuable when frequent, effective, inclusive and participatory. IBAs must be constructed so that risks are identified and mitigated, and knowledgeable, respected and committed individuals and institutions address grievances and concerns. Changes to the current IBA structure required to make the instrument more effective as a 'community' tool include considering community development, infrastructure and training programs identified by the community; social impacts, including gender issues to be addressed; companies to take a long-term view and plan for the future well in advance and be prepared to compromise and work to consensus; decision-making processes and outcomes made as transparent as possible; and finally, working relationships built on trust and respect in the spirit of collaboration and cooperation.

During the research for this dissertation, I have traveled many hundreds of thousands of miles to visit and evaluate mineral development projects in remote, culturally sensitive, and richly human locations in our world, and one thing is always constant: the desire of local people to be heard. One of the most important outcomes of this research would be if it stimulates key actors in the mineral development sector to recognize the vital importance of including people in development decisions in a meaningful way.

APPENDIX 1: UNSTRUCTURED INTERVIEW QUESTIONS

For Industry

- What are the benefits and disadvantages of working in Nunavut?
- What has your experience been working with members of the local Inuit associations?
- What strategy do you typically use?
- What do you see as the most important things your activities will bring to the community?
- Do you think the amount of environmental regulation is appropriate for the project you propose?
- What do you perceive as your responsibility towards the social well being of the local community?
- How do you ensure accountability?
- Are the economic burdens placed upon your project by the local community threatening towards the proposed economic performance?
- How do you see the local community at the end of the mine's life?
- What has been your experience negotiating with members of the local Inuit association?
- Are you interested in their views and assumptions about Inuit needs and values?
- How many of the local Inuit association's negotiating team were non-Inuit?
- Did your team have any Inuit representation?
- What would you be willing to tradeoff to ensure sustainable mining?
- What support would you need to develop an IBA?

For the Community

- Tell me about yourself
- Where were you born?
- Have you always lived in town?
- Are you aware that your region has mineral wealth?
- What are your feelings on Southern companies coming to Nunavut to develop its mineral resources?
- What do you think the development of a mine would mean for you?
- What do you think the development of a mine would mean for your community?
- How do you think mine development will impact the community in the future?
- What do you wish for your community in the future?
- What is your relationship to the land?
- Do you ever speak with Southerners?
- What is the relationship with other actors like other Local Inuit Associations and Government?

- Under what circumstances would you see the need for an IBA?
- How would you decide?
- Do you trust the government and the Local Inuit Associations?

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