

**Governmentality and Mining:
Analyzing the Environmental Impact Assessment for the Mary
River Mine, Nunavut, Canada**

by

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ABSTRACT

The purpose of this research is to examine the thoroughness, objectivity, and inclusivity of the Environmental Impact Assessment (EIA) for the Mary River Iron Mine as a means to evaluate broader tensions expressed by the people of Nunavut that impact assessments are not addressing the concerns of northern communities. The EIA process in Nunavut is often conceptualized as a rigorous and unbiased tool that provides decision-makers with the information necessary to determine the likely impacts of a natural resources development project. This research reveals that the Mary River Project's potential to negatively impact caribou and Inuit harvesting of caribou was not thoroughly assessed, nor was it meaningfully informed by those concerned about the mine (e.g. Inuit organizations and residents of potentially impacted communities). As currently practiced, EIA privileges the perspectives of the mining industry and reinforces narratives that mining is the key to Nunavut's socio-economic development.

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TABLE OF CONTENTS

Abstract	ii
Acknowledgements	iii
List of Figures and Tables	vi
List of Acronyms	vi

CHAPTER 1: INTRODUCTION **1**

1.1 MINING AND ENVIRONMENTAL IMPACT ASSESSMENT IN NUNAVUT	1
1.2 BAFFINLAND'S MARY RIVER IRON MINE: PROJECT OVERVIEW	6
1.3 CARIBOU AND HARVESTING IN THE QIKIQTANI REGION	9
1.4 THESIS LAYOUT	13

CHAPTER 2: GOVERNMENTALITY AND EIA IN NUNAVUT **16**

2.1 EIA: CONCEPTUALIZATIONS, PRACTICES, AND ONGOING CHALLENGES IN INDIGENOUS CONTEXTS	16
2.1.1 CONCEPTUALIZING ENVIRONMENTAL IMPACT ASSESSMENT	16
2.1.2 ONGOING CHALLENGES WITH ENVIRONMENTAL IMPACT ASSESSMENTS	19
2.1.3 ENVIRONMENTAL IMPACT ASSESSMENT IN INDIGENOUS CONTEXTS	25
2.2 ANALYZING EIA IN NUNAVUT THROUGH A GOVERNMENTALITY LENS	36
2.2.1 FOUCAULT AND GOVERNMENTALITY	37
2.2.2 GOVERNMENTALITY STUDIES: APPLICATIONS FOR STUDYING EIA IN NUNAVUT	39

CHAPTER 3: RESEARCH CASE STUDY AND METHODOLOGY **43**

3.1 THE NUNAVUT IMPACT REVIEW BOARD: AN OVERVIEW	43
3.2 THE EIA PROCESS FOR THE MARY RIVER IRON MINE	47
3.3 IMPLEMENTING THE RESEARCH FRAMEWORK	52
3.4 POSTSCRIPT	61

CHAPTER 4: EIA IN NUNAVUT AND THE WILL TO APPROVE **63**

4.1 THE ENVIRONMENTAL IMPACT ASSESSMENT OF THE MARY RIVER MINE	63
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4.1.1 ISSUE SCOPING AND GUIDELINE CREATION	65
4.1.2 BAFFINLAND'S ASSESSMENT OF CARIBOU IMPACTS IN THE DRAFT ENVIRONMENTAL IMPACT STATEMENT	68
4.1.3 TECHNICAL REVIEW OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT	71
4.1.4 PUBLIC RESPONSE TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT	74
4.1.5 BAFFINLAND'S SUBMISSION OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT	76
4.1.6 TECHNICAL REVIEW OF THE FINAL ENVIRONMENTAL IMPACT STATEMENT	79
4.1.7 FINAL HEARINGS AND RESPONSE TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT	80
4.2 THEORIZING THE DECISION TO APPROVE THE MARY RIVER PROJECT	86
<u>CHAPTER 5: ASSESSING INUIT HARVESTING THROUGH NARRATIVES OF CAPITALISM AS DEVELOPMENT</u>	91
5.1 CAPITALISM QUA DEVELOPMENT IN NUNAVUT	92
5.2 BAFFINLAND'S ASSESSMENT OF THE PROJECT'S IMPACTS ON INUIT HARVESTING	96
5.2.1 BAFFINLAND'S FRAMING OF SOCIO-ECONOMIC CONDITIONS IN THE QIKIQTANI REGION	97
5.2.3 BAFFINLAND'S CONCEPTUALIZATION OF INUIT HARVESTING PRACTICES	104
5.2.4 CRITIQUING BAFFINLAND'S ASSESSMENT OF IMPACTS ON CARIBOU HARVESTING	105
5.4 EPISTEMIC VIOLENCE AND INUIT HARVESTING	112
<u>CHAPTER 6: CONCLUSION</u>	114
<i>REFERENCES</i>	120

LIST OF FIGURES AND TABLES

Figure 1: Map of the Mary River Project and potentially impacted communities	7
Figure 2: Caribou sub-populations on Baffin Island	10
Figure 3: Regional Study Area and caribou populations	11
Figure 4: The NIRB impact review process	44
Table 1: The Mary River Project Review Process	48

LIST OF ACRONYMS

AANDC - Aboriginal Affairs and Northern Development Canada (used interchangeably with INAC)
DIO - Designated Inuit Organization
DEIS - Draft Environmental Impact Statement
EIA - Environmental Impact Assessment
EIS - Environmental Impact Statement
FEIS - Final Environmental Impact Statement
GC - Government of Canada
GN - Government of Nunavut
INAC - Indian and Northern Affairs Canada (used interchangeably with AANDC)
IIBA - Inuit Impact and Benefit Agreement
IK - Indigenous Knowledge
IQ - Inuit Qaujimajatuqangit
IR - Information Request
MRP - Mary River Project
NIRB - Nunavut Impact Review Board
NLCA - Nunavut Land Claims Agreement
NTI - Nunavut Tunngavik Inc.
QIA - Qikiqtani Inuit Association
TK- Traditional Knowledge
VC - Valued Component
VEC - Valued Ecological Component
VSEC - Valued Socio-economic Component

Chapter 1: Introduction

1.1 Mining and Environmental Impact Assessment in Nunavut

In 1993, the Tunngavik Federation of Nunavut (the organization representing the Inuit people of the eastern Canadian Arctic) and the Federal Government of Canada signed the Nunavut Land Claims Agreement (NLCA) and settled all claims to land within Canada's eastern Arctic (NLCA, 1993). Upon signing this agreement, Inuit relinquished title to their traditional territory in exchange for rights to 2% of the subsurface and 19% of the surface within the new Territory of Nunavut (NTI, 2000). The inauguration of the Government of Nunavut significantly altered the governance regime in the Territory (Abele, 2009, White, 2009), leading to the NLCA being seen by many as a necessary step to increasing the self-determination of Inuit people in Nunavut (Obed, 2009).

Over a decade has passed since the creation of Nunavut, and despite initial expectations of the Government of Nunavut, the socio-economic conditions of many Inuit have not improved to the extent anticipated (*ibid.*). Many communities in the Territory continue to face severe social and economic problems, such as high unemployment, low life expectancy, and alarming suicide and infant mortality rates (Abele, 2009; Hicks, 2009). These stark realities highlight a need to critically examine contemporary governance in Nunavut.

With the establishment of Nunavut, a number of bureaucratic mechanisms and institutions for governance were created. This thesis will focus on one institution in particular, the Nunavut Impact Review Board (NIRB), which was created to screen all mining and development project proposals within the Nunavut

Settlement Area¹ in order to assess their likely socio-economic and environmental impacts (NIRB, 2014). The NIRB's role is to facilitate open dialogue between the various actors involved or impacted by a project proposal, and to assess the Environmental Impact Statement (EIS) submitted by the project proponent. The review process involves a number of stages such as issues scoping, preparation and review of the EIS, and community consultations (NIRB, 2014B). In theory this process allows actors to express their concerns and opinions, and facilitates the collection and sharing of scientific data, as well as Inuit knowledge, known as Inuit Qaujimajatuqangit (IQ)², as evidence to predict the likely socio-economic and environmental impacts of the project being assessed. Upon completion of a review, the NIRB reports its recommendations on whether or not a project should be approved, and under what conditions, to the Federal Minister of Aboriginal Affairs and Northern Development Canada (AANDC) who has the ultimate say regarding approval (NIRB, 2009A).

Despite having a systematic procedure for conducting Environmental Impact Assessments (EIA), the NIRB's role is made more difficult due to the complex and often contested nature of mining and development plans in Nunavut. When plans for large-scale development projects are proposed, a number of conflicting perspectives often emerge. Narratives about sustainable development, Inuit self-determination,

¹ The Nunavut Settlement Area is the geographical area that would become the Territory of Nunavut as defined in the NLCA. For a more detailed description of the geographical extent of the area, as well as its legal significance, see Article 3 in the NLCA (1993).

² Also referred to as Traditional Knowledge, Traditional Ecological Knowledge, Aboriginal Knowledge, and Inuit Qaujimajatuqangit within Nunavut. I will use the term Indigenous Knowledge (IK) when speaking in a broad sense, and Inuit Qaujimajatuqangit (IQ) when referring to Inuit knowledge specifically.

respect for IQ in decision-making processes, and the benefits of the free market clash with others' claims about continued colonial policies and the dispossession of lands and resources, capitalistic exploitation, and the social issues and environmental degradation that inevitably occur alongside large-scale extraction of natural resources and related infrastructure projects (Dumond 2007; Mining Watch, 2012).

This thesis is motivated by feelings expressed by the people of Nunavut that impact assessments for development projects are not addressing the concerns of northern communities (Bernauer, 2011; Isuma, 2013; Makita, 2012; Mining Watch, 2012; Nunatsiaq 2012, 2012B, 2012C, 2013). Despite these concerns, proponents of mining in Nunavut could point to the fact that EIA processes often span a number of years, involve numerous actors including Federal and Territorial Government departments, Inuit organizations such as Nunavut Tunngavik Incorporated (NTI) and the Qikiqtani Inuit Association (QIA), include public consultations with impacted communities, and result in the collection and analysis of volumes of scientific data and IQ to determine the likely impacts of a project. Given that these practices take place, it could be assumed that the EIA process in Nunavut is thorough, objective, and inclusive, and that it allows the NIRB to make rational decisions about whether or not projects should be approved.

The purpose of this thesis is twofold. First, it attempts to provide a thorough analysis of the EIA process for the Mary River Project (MRP)³ in order to determine if assumptions about the comprehensive nature of EIA in Nunavut need to be called

³ Also referred to as "The Project" throughout this thesis.

into question, as well as to reveal some of the specific reasons why concerns about the NIRB EIA process persist. This objective is addressed in Chapter 4 through an analysis of how Baffinland determined that the MRP would not significantly impact caribou in the Qikiqtani Region. The focus of this analysis is to examine if Baffinland's conclusion was based on compelling evidence that was thoroughly compiled, presented, and referenced, and to assess if the perspectives and concerns of interested actors (including members of the public) were integrated into the EIA decision-making process. This objective is addressed further in Chapter 5, which examines how Inuit hunting practices are conceptualized in the EIS, and how impacts on caribou hunting from the MRP were assessed. Second, this thesis draws on governmentality literature to theorize the ways that the EIA process in Nunavut unfolds and is perpetuated despite its perceived shortcomings, and the implications that this has for mining and development in Nunavut.

To meet the objectives of this thesis a number of research questions are explored:

- What can a critical reading (through the lens of governmentality) of the NIRB's assessment of the Mary River mine tell us about the EIA process in Nunavut? Specifically,
 - How are potential impacts discussed and assessed?
 - How and when do actors intervene in the process? Who has the authority to intervene?
 - How are communities consulted? How is information from these consultations recorded and integrated into the EIS?

- How is knowledge (both scientific knowledge and IQ) integrated (discussed, referenced, defined, and conceptualized) throughout the EIA process by various actors?

After the practices listed in the research questions above were investigated, a follow-up question informed by governmentality⁴ was explored:

- What are the effects produced by the various practices involved in assessing mining projects, and how do these effects influence the outcomes of EIA in Nunavut?

As explained further in Chapter 2, governmentality as a methodological orientation involves paying attention to forms of government, with a particular emphasis on technical documents, expertise, calculation, and bureaucracy. Informed by this approach, this thesis critically evaluates a number of documents that were created during the EIA process including: Baffinland's formal submission of various drafts of the EIS, NIRB EIS guidelines, meeting notes from community consultations, and feedback on the EIS from various government departments, Inuit organizations, and community members⁵. A list and explanation of the documents analyzed for this thesis is presented in Chapter 3.

⁴ Governmentality as a theoretical approach will be discussed more thoroughly in Chapter 2.

⁵ All of these documents are stored on the NIRB public registry and can be found at: <ftp://ftp.nirb.ca/02-REVIEWS/COMPLETED%20REVIEWS/08MN053-BAFFINLAND%20MARY%20RIVER/>

1.2 Baffinland's Mary River Iron Mine: Project Overview

On March 30, 2008 Baffinland submitted a development proposal for the MRP to the NIRB (NIRB, 2009C). This resulted in the ensuing EIA process that included numerous stages spanning from 2008 to 2012. The MRP is a proposed open-pit iron mine to be located in northern Baffin Island in Nunavut (see Figure 1). The Project includes a four-year construction phase, a 21-year long operational phase, as well as closure and reclamation of the mine. The Project consists of three main locations: the mine site; Milne Port, located north of the mine; and Steensby Port, located south of the mine (Baffinland, 2012). To connect the mine site to Steensby Port, a railroad of approximately 150 kilometres is planned, while Milne Port is already connected to the proposed mine site by an existing road (*ibid.*). During the construction period supplies and equipment required for the mine site as well as the northern portion of the railway will be received at Milne Port. Construction supplies and equipment for Steensby Port and the southern portion of the railway will be received at Steensby Port. During the operational phase of the Project iron ore will be transported from the mine site by railway and shipped from Steensby Port.

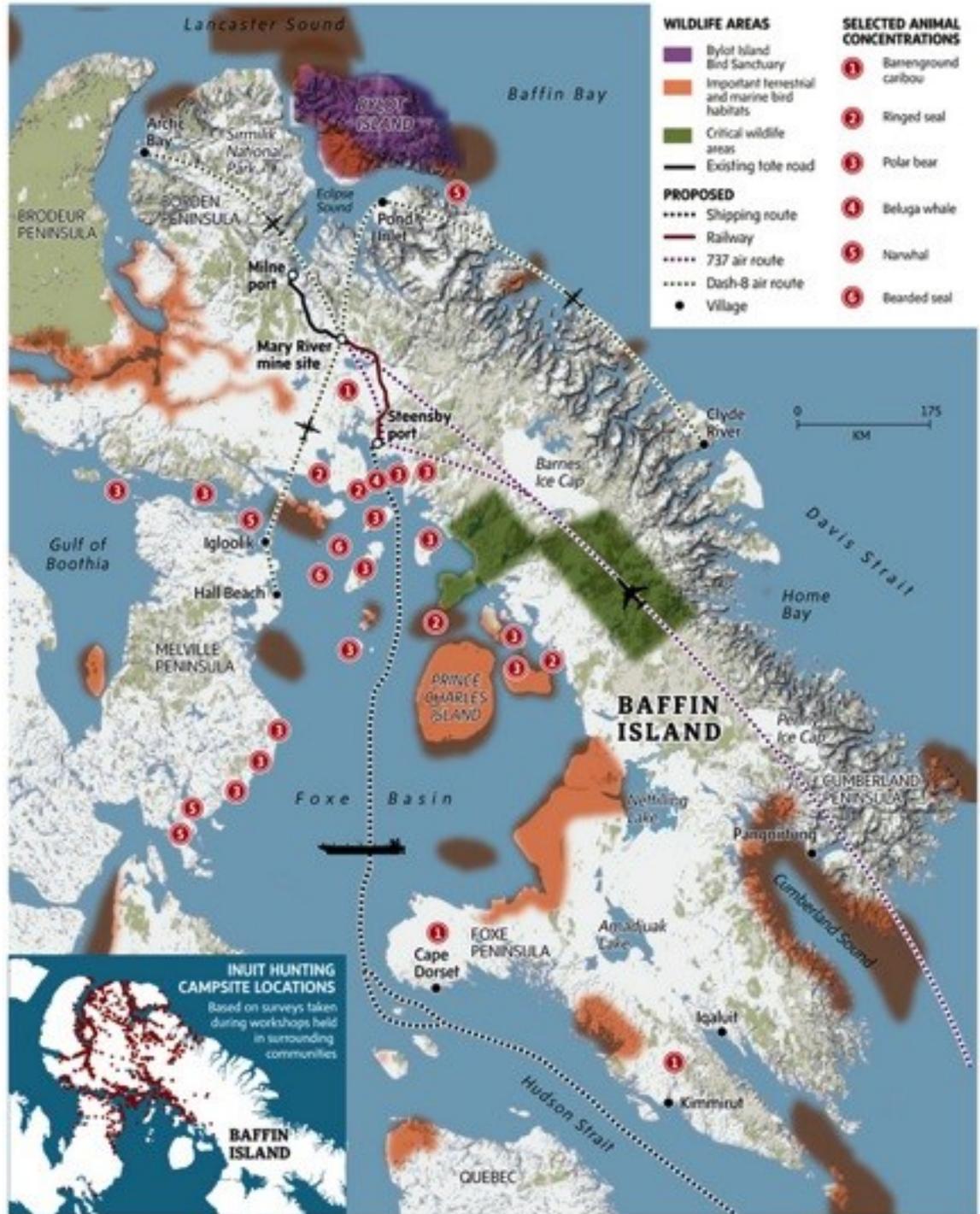


Figure 1. Map of the Mary River Project and potentially impacted communities (Globe and Mail, 2011).

There are nine known iron ore deposits located around Mary River, with Deposit No. 1 targeted for extraction within the current development proposal (Baffinland, 2012). The project would result in 18 million tonnes of ore being extracted annually. The ore would then be processed on site, transported by railroad to Steensby Port, and from there shipped year-round to markets in Europe (NIRB, 2009C).

The MRP has the potential to significantly impact (both positively and negatively) a number of communities in Nunavut. Impacts on the communities of Pond Inlet, Arctic Bay, Igloolik, Hall Beach, Clyde River, Cape Dorset, Kimmirut, and Iqaluit (see Figure 1 above) have been assessed in the EIA. Some of the potential benefits of the mine include providing Nunavummiut⁶ with employment and skills development opportunities, increasing the Territory's wealth through taxes and royalties, and encouraging future investment by expanding the infrastructure in the region (Baffinland, 2012). The Project may also negatively impact communities by threatening wildlife habitat and populations, contributing to climate change and environmental degradation, increasing access to narcotics and alcohol, and threatening traditional Inuit cultural practices such as hunting (NIRB, 2009C).

For the Mary River Project a number of Valued Ecological Components (VECs) and Valued Socio-economic Components (VSECs) were identified as being potentially impacted by the mine during the scoping phase conducted by Baffinland and the NIRB with the input of concerned community members. Valued Ecological Components identified include climate, air and water quality, vegetation, landforms,

⁶ This term is used to refer to people living within Nunavut (both Inuit and non-Inuit).

soil and permafrost, as well as terrestrial and marine wildlife and habitat. Valued Socio-economic Components identified include population demographics, employment and training, economic development, community infrastructure, human health, cultural well-being, and resources and land use⁷. Baffinland was required by the NIRB EIA Guidelines to formally assess all of these VECs and VSECs in their Environmental Impact Statement (NIRB, 2009B).

Given the volume of information produced for the EIA it was not feasible to evaluate Baffinland's assessment of all VECs and VSECs. Therefore, to provide focus for this thesis the assessment of one VEC (caribou) and one VSEC (Inuit harvesting of caribou) was evaluated. The following section will discuss the current state of caribou populations in the Qikiqtani region, and outline some of the factors that contribute to fluctuations in caribou health and population numbers.

1.3 Caribou in the Qikiqtani Region

There are three recognized populations of barren ground caribou (*Rangifer tarandus groenlandicus*) on Baffin Island referred to as the North, Northeast, and South Baffin Island caribou populations (Jenkins and Goorts, 2013). For the MRP, the Regional Study Area (i.e. the area of the mine's potential impacts) falls entirely within the North Baffin caribou range, and as a result impacts on the Northeast and South Baffin caribou populations were not assessed in the EIS (Baffinland, 2012) (see figures 2 and 3).

⁷ For a complete breakdown of all VECs and VSECs see Baffinland (2012).

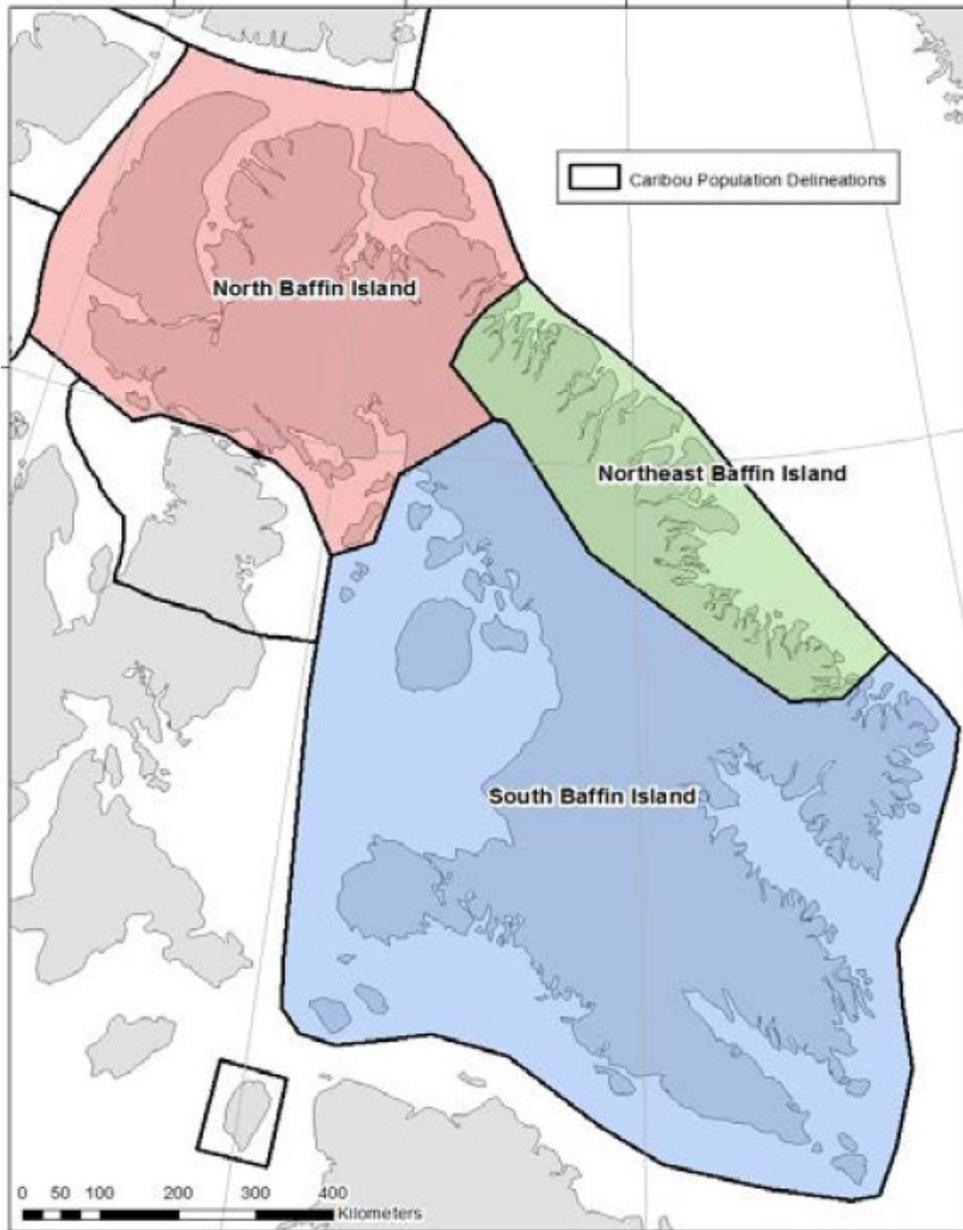


Figure 2. Geographical extent of barren ground caribou sub-populations on Baffin Island (Jenkins and Goorts, 2013).



Figure 3. North Baffin caribou range (in orange) and the Regional Study Area (red outline) for the Mary River Project (Baffinland, 2012C, p. 132).

Based on both IQ and scientific studies there is growing concern that caribou numbers on Baffin Island are currently very low (Ferguson and Gauthier, 1992; GN, 2013; Jenkins et al., 2012; Jenkins and Goorts, 2011, 2013). Although IQ suggests that caribou populations fluctuate naturally following 30-75 year cycles (Baffinland, 2012C; GN, 2013), there are a number of other specific factors that could be contributing to the currently low caribou populations. Local Inuit knowledge suggests that disease becomes prevalent when caribou numbers are high and also points to the beneficial function of wolves to cull weak and sick caribou, thereby keeping the population healthy (Jenkins and Goorts, 2013). Conversely, there are some concerns that wolves are contributing to the very low caribou populations

currently present in the region (Jenkins et al., 2012). Caribou populations may also be adversely affected by climate change as fluctuations in climate can cause inaccessibility to food and result in caribou die-offs (GN, 2013).

Harvesting of caribou can also contribute to low populations. Increasing human populations and demand for country food in the Qikiqtani Region, as well as technological advancements in harvesting methods and equipment may be resulting in the harvesting of caribou at unsustainable rates⁸.

Finally there is growing concern in Inuit communities that mining activities (including exploration, construction, and operation) may be having a negative effect on the migration and overall health of caribou populations (GN, 2013). In support of these concerns, scientific studies have highlighted some of the negative impacts that mining activity can have on caribou. Linear infrastructure associated with mining activity (such as roads, railways, and power lines) can cut through migration paths and lead to loss or fragmentation of caribou habitats (Bradshaw et al., 1997; Dyer et al., 2002; Vistnes et al., 2004). In addition, studies have shown that caribou do have a tendency to avoid or move away from industrial sites, buildings, and aircrafts (Cameron et al., 2005; Reimers et al., 2007; Wolfe et al., 2000). This tendency may also lead to a reduction or fragmentation of caribou habitat. Mining activities that

⁸ As final revisions for this thesis were being completed, the GN announced that an interim moratorium on caribou harvesting on Baffin Island would take effect on January 1, 2015 in response to evidence that the caribou population is at severely low levels. It would be interesting to see how this issue progresses and if any serious discussion takes place about how mining activities may be contributing to this problem, and if plans for the MRP should be put on hold until the caribou population recovers. Information about this issue can be found at:
http://www.nunatsiaqonline.ca/stories/article/65674nti_support_gns_moratorium_on_baffin_caribou_hunt/

occur near caribou calving grounds may be especially destructive as caribou females are most sensitive to disturbances (Nellemann et al., 2001; Weir et al., 2007). In addition, responding to human disturbances often causes stress and nutritional loss for individual caribou and may negatively impact population productivity (Cameron et al., 2005).

Given the possibility that mining can result in a number of negative impacts on caribou, it is important that EIA processes assess specific projects to determine how severe impacts are likely to be, and to determine how to minimize negative impacts wherever possible. It is also important to assess how important practices in the Qikiqtani Region such as hunting (that rely on healthy caribou populations) may be impacted if caribou are threatened by industrial activities.

1.4 Thesis Layout

This chapter has briefly introduced the broader political and governmental context in contemporary Nunavut, highlighted the current socio-economic issues faced by Nunavummiut, and stressed the need for critical assessment of governance in Nunavut. It has also explained the role of the NIRB in assessing major development projects such as the Mary River Project in Nunavut, while also pointing out concerns that the NIRB is not fulfilling its mandate and therefore is failing to meet the needs of Nunavummiut. These issues will be discussed further throughout this thesis.

Chapter 2 of this thesis examines existing literature on EIA processes. It outlines how EIA is conceptualized and practiced within professional circles, as well as how these conceptualizations have been critiqued. Literature discussing the

ongoing challenges of practicing EIA, specifically in Indigenous contexts, is presented, and wherever possible insights from existing research on Nunavut are highlighted. The second part of this chapter outlines the theoretical approach taken in this thesis, the literature that has informed this approach, and how this approach differs in focus from much of the existing literature on governmental processes and EIA in Nunavut.

Chapter 3 provides an overview of the NIRB EIA process in Nunavut, as well as a description of how this process unfolded for the assessment of the MRP. The remainder of this chapter explains the research methodology that was used to assess the EIA of the MRP by referencing the theoretical approach discussed in Chapter 2, and by describing the specific documents that were used as primary source material for the research.

Chapters 4 and 5 present the empirical findings of this thesis, using the theoretical approach discussed in Chapter 2 as an analytical lens. Chapter 4 examines the NIRB's assessment of the likely impacts that the MRP will have on caribou, and argues that the unconvincing EIS submitted by Baffinland provides justification to question assumptions about the objective, rational, inclusive, and evidenced-based nature of EIA processes in Nunavut. Chapter 5 explores the role of the EIA process in articulating and reinforcing narratives of development and mining in Nunavut, how the EIS fails to genuinely consider the importance of Inuit harvesting practices, and how these practices are likely to be impacted by the Project. Chapter 6 concludes this thesis by summarizing the findings in Chapters 4

and 5, discussing implications for EIA, development, and mining in Nunavut, as well as possible avenues to expand on this research.

Chapter 2: Governmentality and EIA in Nunavut

2.1 EIA: Conceptualizations, Practices, and Ongoing Challenges in Indigenous Contexts

2.1.1 Conceptualizing Environmental Impact Assessment

Since its inception in Canada in the early 1970s, Environmental Impact Assessment (EIA) has evolved in a number of significant ways, both at a theoretical and practical level (Gibson & Hanna, 2009). EIA was introduced as a reactive approach to curbing pollution caused by industrial activities, and eventually evolved into a technical process of identifying and mitigating biophysical impacts of human activity on the environment. More recently, EIA developed into its current form as a process that integrates broader considerations, such as cultural and socio-economic impacts, and encourages the participation and consultation of the public (*ibid.*). Much of the existing literature has viewed this evolution in EIA as a positive progression towards a more effective, inclusive, and transparent process, although ongoing challenges with EIA have been acknowledged (e.g. Gibson & Hanna, 2009; Greig & Duinker, 2011; Hanna, 2009).

In recent years perspectives have been changing and there is now significant debate within the academic literature and from EIA practitioners as to how EIA processes should be conceptualized (Cashmore et al., 2004; Bond and Pope, 2012; Gibson and Hanna, 2009; Hanna, 2009; Jay et al., 2007). The Canadian Environmental Protection Agency describes EIA as a process that identifies possible impacts, proposes measures to mitigate negative effects, and predicts the likelihood and significance of ongoing or future impacts resulting from human activities

(Hanna, 2009). This exemplifies many recent conceptualizations of EIA and informs EIA processes in a number of jurisdictions across Canada ⁹ (*ibid.*).

This interpretation of EIA is not universally accepted. Critics argue that such definitions present EIA as a systematic process, informed by expert opinion, and aimed at providing technocratic solutions for environmental governance issues (Gibson and Hanna, 2009). Within this conceptualization, the most immediate purpose of EIAs is to supply decision-makers with information about the environmental impacts of development actions, with a focus on plans for mitigating negative impacts (Jay et al., 2007). Practiced in this way, EIA rarely results in the abandonment of project proposals, and the role of EIA in informing more sustainable development alternatives is negligible (Cashmore et al., 2004; Jay et al., 2007). Furthermore, these conceptualizations of EIAs as systematic and rational processes may not reflect the complexity and uncertainty inherent in many EIAs, and may at the same time limit the scope of what EIAs are capable of achieving (*ibid.*).

In many jurisdictions EIA processes continue to increase in complexity, as the targets of EIAs proliferate (i.e. to include aspects for examination beyond the natural environment, such as cultural and socio-economic impacts), and as various new methodologies for measuring, predicting, and mitigating impacts are proposed (Morrisson-Saunders et al., 2014). It is argued that in response to the growing complexity of EIAs, as well as the resulting perception that these processes are

⁹ Federal, provincial, and territorial EIA processes may differ significantly in practice (Hanna, 2009). It is also important to recognize that EIA processes are not static over time as ongoing changes to EIA regulation and legislation in Canada, Australia, and the European Union demonstrate (Kirchhoff & Tsuji, 2014; Lawrence, 2003).

becoming costly, time-consuming, and inefficient, that governments acting within a time of economic uncertainty are cutting back¹⁰ or proposing to cutback on EIA (Bond and Pope, 2012; Gibson, 2012; Morrison-Saunders et al., 2014). Proponents of these cut-backs argue that effort is needed to make EIA processes more focused and integrated in order to demonstrate their value to governments (Morrison-Saunders et al., 2014). Furthermore, it is argued that EIA processes as a whole represent "green tape" and that they delay or inhibit the development infrastructure and natural resource extraction projects that are needed to maintain economic growth (see Bond and Pope, 2012, Middle et al., 2013).

In contrast, although recognizing that EIA processes have expanded in scope and are increasingly complex and diverse, some scholars feel that these changes are positive. Kirchhoff and Tsuji (2014) point out that many governments are now weakening EIA obligations by streamlining the EIA process in response to the expanded scope of these processes and the associated costs and delayed economic development. However, these authors argue that current plans to "streamline" EIA could actually hinder the efficiency of these processes. To support this perspective, they cite an increased potential for litigation (as stakeholders may no longer be sufficiently consulted), and growing uncertainties about EIA timelines due to simplified guidelines and the introduction of discretionary powers for EIA practitioners (*ibid.*). Finally, some have argued that the increased complexity of EIA reflects a growing recognition of the importance of a number of environmental, social, political, and economic factors in EIA (Cashmore & Morgan, 2014), and that

¹⁰ For a discussion on how Canada has been cutting back on EIA requirements see Gordon (2012).

these developments should not be sacrificed to appease proponents involved in EIA with a vested interest in project approvals (Greig & Duinker, 2014).

Throughout the debates about how EIA should be conceptualized and practiced, a number of specific and ongoing issues and challenges with EIA have been identified. The remainder of this chapter will discuss these issues with a focus on challenges related to public participation, uncertainty and knowledge gaps, tensions around the determination of impact significance, and attempts to conduct these processes in Indigenous contexts.

2.1.2 Ongoing Challenges with Environmental Impact Assessments

Public Participation

In recent years public participation has become commonplace in EIA in Canada, Nunavut included. At a theoretical level the benefits of public participation may include enacting the fundamental principles of democracy (Fischer, 2006), fostering community empowerment (Fitzpatrick & Sinclair, 2003), and encouraging public education on issues such as sustainability (Diduck & Mitchell, 2003; Sims & Sinclair, 2008). From a practical standpoint, public participation can be beneficial by providing access to valuable local and traditional knowledge, enhancing the legitimacy of proposed projects, encouraging more balanced decision-making, and broadening the range of issues, ethical concerns, and solutions considered in EIA (Sinclair & Diduck, 2009). Overall, it is assumed that the benefits of public participation will result in a more accountable EIA process that ensures that proposed projects meet the needs of the public (*ibid*).

Although the benefits of public participation have been highlighted in both theoretical and practical terms, public involvement also complicates the EIA process as it can be costly and time consuming (Stewart & Sinclair, 2007). In addition, critics of these processes argue that in practice public participation often ends up being a form of tokenism, where public concerns are heard but do not meaningfully inform the decision-making process (Sinclair and Diduck, 2009). Participants themselves have also expressed dissatisfaction with public consultations for this reason (Stewart & Sinclair, 2007).

This concern is particularly relevant when participation is limited to latter stages of the EIA process when a number of important decisions have already been made (Diduck & Mitchell, 2003). In some instances various stakeholders may have differing understandings about the objectives of public participation, i.e. whether their purpose is information sharing or more ambitious goals such as partnership building or power sharing (Sinclair & Diduck, 2009).

There are also a number of specific issues that prevent the public from engaging successfully in EIA processes. Inconsistency in how information during the EIA processes is presented to the public often results in inadequate notice for public consultations and inaccessible project documents (*ibid.*). Inaccessibility problems can exist due to incomplete or poorly organized public registries that store EIA information (Kidd, 1998; Sinclair & Diduck, 2001). Additionally, the use of technical language, a general lack of readability, and the sheer volume of information presented in EIA documents can make them inaccessible to the general public (Petts, 2003; Diduck & Sinclair, 2002).

These problems can be exacerbated if the public is not provided with adequate resources to participate in EIA. Lack of sufficient funding, often needed for the public to hire mediators and translators (when language barriers exist), inadequate public education about project impacts, and unaccommodating EIA timelines are all cited as challenges to meaningful public participation in EIA (Sinclair & Diduck, 2009; Stewart & Sinclair, 2007). Furthermore, these issues can reinforce power imbalances between various stakeholders, generally favouring governments and project proponents over the public in the EIA process (Lawrence, 2003).

Finally, it has been argued that EIA processes that include public consultations, as well as processes to encourage the input of other parties (such as government departments and non-governmental organizations) create an air of consensus that often does not actually exist (Li, 2009). By enfolded individuals and institutions that often have diverse and conflicting interests into the EIA process, and by describing these processes as participatory, open, and transparent, claims of EIA accountability are strengthened, spaces for opposition to projects are circumscribed, and contesting the outcomes of EIA processes becomes extremely difficult (*ibid.*).

Uncertainty

Uncertainty about the potential impacts of a project and the efficacy of proposed mitigation measures are significant issues within EIA. Given the complex and dynamic nature of environmental systems, even in the absence of human

impacts, it is generally impossible to model potential interactions with a high degree of accuracy and precision especially when attempting to predict long-term impacts (Baker & Rapaport, 2009; Noble, 2000).

Despite this, concerns about uncertainty and the predictability of impacts and mitigation are often unrecognized in government conceptualizations of EIA. For example, Environment Canada defines EIA as: "a process used to predict and mitigate the adverse environmental effects of a project before it is carried out. As such it is a powerful planning tool that provides decision makers with the information they need to ensure the projects they approve are compatible with a healthy, sustainable environment for present and future generations" (Environment Canada, 2012, n.p.).

It has been argued that improving the science in EIA can generate more reliable knowledge useful for consistent and rational decision-making (Greig & Duinker, 2011). Proponents of this approach argue that there needs to be greater integration between environmental science that takes place outside of EIA – to create, test and refine models – and science used within EIA that applies these models for predictive purposes. They also argue that uncertainty can be reduced if subsequent EIA work builds on the existing scientific knowledge base from previous assessments (*ibid.*).

Others dispute this perspective, arguing that uncertainty will always exist, and therefore adaptive management is a more appropriate tool for mitigating and responding to impacts (Lawrence, 2003; Noble, 2000). The basis of this approach is that EIA should be flexible, iterative, and adjustable to changing events and

circumstances, allowing for modification of monitoring and mitigation strategies as new information is gained (Baker & Rapaport, 2009; Noble, 2000). Similar to proponents calling for the integration of more rigorous science in EIA, proponents of the adaptive approach feel that practices can be improved by building on past experiences. The result of this accumulation of knowledge is not to ultimately reduce uncertainty; rather, it allows for improvements in monitoring techniques, and the design and implementation of adaptive strategies, to respond to uncertainty (*ibid.*).

There are concerns about these adaptive and flexible approaches to EIA. For example, it is still debated, and therefore often unclear, who is responsible (i.e. governments or mining companies) for ongoing monitoring and mitigation plans throughout the life of a project (Greig & Duinker, 2011). In addition, an adaptive approach encourages generalizations and vagueness at the development and implementation stages of a project (Noble, 2000). Although this flexibility is presented positively within the literature, theoretically it could allow proponents with a vested interest in project approvals to cite future adaptive measures as a solution to outstanding issues and concerns that haven't been addressed during the EIA process. Indeed, this has been documented in Nunavut. In a discussion paper critiquing the Environmental Impact Statement (EIS) for the proposed Kiggavik Uranium mine located near Baker Lake, it is noted that proponents routinely refer to monitoring and adaptive management plans to respond to, and negate the significance of, negative impacts related to resource extraction, but that these promises are rarely followed through on (Makita, 2012B).

Significance

Related to the issue of uncertainty is the challenge of evaluating the *significance* of the potential impacts of a project. There are a number of criteria that can be considered when determining significance of a potential impact including "magnitude, geographical extent, duration and frequency, and degree of reversibility or irreversibility" (Baker & Rapaport, 2009). However, when studying potential impacts uncertainty and knowledge gaps often exist. This makes it difficult to accurately predict the criteria for determining impact significance.

Debates about predicting the significance of a project's potential impacts do not only center on the thoroughness of science used. Given that determining significance is not a straightforward and certain process, interpretation, judgment, and the values and interests of various actors necessarily influence how significance is determined (Baker & Rapaport, 2009). For this reason tensions often exist within EIA concerning who has the knowledge, expertise, or authority to determine significance. This problem also exists when EIA processes incorporate public participation if the role of public participants is not clearly defined and explained to all parties involved. A common problem cited by public participants is that they are given a chance to provide information, but that their interpretations of issues (especially when it comes to determining significance of impacts) are not heeded (*ibid.*).

2.1.3 Environmental Impact Assessment in Indigenous Contexts

Since the 1980s, increased attention has been given to IK and its applicability to decision-making in the fields of wildlife management, sustainability, and EIA.

Various explanations have been given for this increase in visibility such as: the ability of IK to inform sustainable environmental policies (Stevenson, 1996; Birkes et al., 2000); the broader or more holistic approach IK provides to environmental issues (Ellis, 2005); and that the use of IK recognizes Indigenous rights and reflects the results of Indigenous struggles for autonomy and empowerment (Agrawal, 2002; Tester & Irniq, 2008).

Although IK is now ostensibly recognized within environmental decision-making processes, many Indigenous people as well as critical scholars question the success of current attempts to meaningfully integrate IK into policy (e.g. Agrawal, 1995, 2002; Bates, 2007; Briggs, 2005; Cruikshank, 2012; Ellis, 2005; Nadasdy, 1999; Spak, 2005; Stevenson, 1996; Tester & Irniq, 2008; Usher, 2000; Wenzel, 2004; White, 2006; Wiles et al., 1999;). In other words, a recognition of IK in EIA should not be conflated with integration of IK¹¹. As Ellis (2005, p.75) succinctly states: "upon being brought into the decision-making process, traditional knowledge is commonly ignored, misunderstood, or transformed into something palatable to conventional environmental governance."

¹¹ In Canada, EIA routinely takes place in Indigenous contexts but with great variation in how IK is recognized and incorporated. It is also important to recognize that Indigenous participation in relation to development processes and the practice of IK may not only take place at the level of EIA. For example, Indigenous groups often assert sovereignty over territory through the refusal of mining projects outside of formal processes such as EIA. For a recent Canadian example see Hoozevee (2014).

This quote raises a problem that is often central to debates surrounding the use of IK in governance, i.e., the challenge of defining what IK actually is. While generally agreeing that IK itself is diverse (given that "Indigenous" is not a homogenous identity category), scholars often provide a broad definition of IK as an accumulation of knowledge, practices, and beliefs shared by a community that are gained through generations of living intimately with the natural environment (e.g. Berkes, 1999; Huntington, 1998). Within an Inuit context, Tester and Irniq (2007, p. 49) refer to the Inuktitut concept *avaluqanngittuq* or 'that which has no circle or border around it' to argue for a "seamless" understanding of IQ. This seamless definition would integrate the Inuit perspective that economic, social, and spiritual phenomena, which tend to be siloed in Western¹² perspectives, are in fact intimately and complexly interconnected and therefore inseparable even for analytical purposes. Within this conceptualization of IQ, the Western notion that subject matter can be understood as a whole by systematically studying its isolatable parts becomes untenable (*ibid.*). Other scholars argue that by presenting Western science and IK as competing knowledge systems based on epistemological differences, a binary divide is created that precludes the integration of these knowledges (Briggs, 2005). Despite this, empirical research in cross-cultural contexts indicates that even if Indigenous people and Western scientists do not think in terms of binarized knowledge systems, epistemological tensions persist (Bates, 2007; Briggs, 2005; Ellis, 2005; Nadasdy 1999; Spak, 2005).

¹² Although I use the term "Western" for explanatory purposes to highlight differing perspectives, I do recognize that Western, as well as other non-Indigenous cultures, are themselves diverse and multi-faceted.

The debate about how to conceptualize IK continues, with some even arguing that due to differing academic perspectives (as well as the differing perspectives within and between Indigenous communities) it is unlikely that a single "correct" definition or approach to studying IK can be identified (Huntington, 2005). Instead of attempting to find such a universal approach, scholars should be clear about their research aims and conceptual starting points, so that their work can be examined in its own right, rather than with the preconception that all studies of IK can be measured against each other (*ibid.*).

From a practical perspective it may be necessary to conceptualize a working definition of IK and highlight some of its key properties, especially if the goal is to evaluate government and industry claims that Indigenous perspectives are in fact influencing decision-making processes. It has also been argued that without a clear contextual definition of what IK entails, policy makers, assessment panels, and industry representatives can shape the meanings of IK to suit their own needs (Usher, 2000).

In order to determine the extent that such processes of IK incorporation are occurring, scholars have attempted to elucidate broad categories to describe the various applications of IK. Usher (2000), for instance, has identified four categories of IK. The first is empirical knowledge about the environment. This includes specific knowledge about things such as weather, climate, and animal behaviour, as well as generalized observations of these phenomena gained through long term (often intergenerational) experiences. The second category includes factual knowledge about past and current use of the environment. This knowledge has often been used

to determine historical and contemporary patterns of land use, occupancy, and harvesting, to support Indigenous assertions of their land and hunting rights. The third category includes culturally influenced value statements about how things should be, such as the proper way to live with respect for animals and the environment. Finally, the fourth category provides a foundation for the first three categories. It includes the “cosmology” or knowledge system by which the information in the first three categories is derived. Usher argues that this final category is the least articulated and therefore also the least understood by non-Indigenous people trying to interpret IK.

It could be argued that Usher’s conceptual framework makes it possible to examine how IK is (or is not) being integrated into governance processes¹³. It has been stated that IK can be incorporated into EIA processes on three levels: to provide detailed information from local communities on wildlife and other environmental characteristics; to gain knowledge about the likely cultural and socioeconomic impacts of a project; or to understand how an altered landscape may threaten a people's relationship or identification with their environment (Wiles et al., 1999). Based on Usher's fourth category of IK, it could also be argued that if considered in its entirety, IK may have the potential to question the underlying rationalities (e.g. capitalism and the commodification of natural resources; see Spak, 2005) that inform development projects.

Within Nunavut, attempts have been made to conceptualize an understanding of IQ that can be incorporated into governmental practices such as

¹³ This is not the approach taken in this thesis. Reasons for this, as well as the approach taken in this research will be discussed in section 2.2 of this Chapter.

EIA. The IQ Task Force was appointed by the Government of Nunavut (GN) in 2001 to advise the GN on how to incorporate IQ into its structures and processes (GN, 2002). The IQ Task Force suggests that IQ is more than just "traditional knowledge", defining it as " The Inuit way of doing things: the past present and future knowledge, experience and values of Inuit society" (*ibid.*, p. 4). The IQ Task Force goes on to explain that there are six guiding principles of IQ: 1) Pijitsirniq: The concept of serving (a purpose or community) and providing for (family and/or community); 2) Aajiiqatigiingni: The Inuit way of decision-making. The term refers to comparing views or taking counsel; 3) Pilnimmaksarniq: The passing on of knowledge and skills through observation, doing and practice; 4) Piliriqatigiingniq: The concept of collaborative working relationships or working together for a common purpose; 5) Avatittinnik Kamattiarniq: The concept of environmental stewardship; and 6) Qanuqtuurniq: The concept of being resourceful to solve problems (GN, 2002, pp. 4-5).

Even with the conceptual frameworks for understanding IK (or IQ specifically) proposed by Usher or the IQ Task Force, it remains difficult to integrate these knowledge systems into EIA processes. Critical scholars studying IK have identified two broad themes to explain the difficulties of integrating IK into contemporary governance processes. The first is the epistemological and ontological differences between IK and non-Indigenous knowledge - in other words, the differences between how Indigenous and non-Indigenous people understand existence and what is real (ontology), as well as the differences between Indigenous and non-Indigenous studies of the origin, nature, and limits of human knowledge

(epistemology). The second is the power relations embedded within the political, economic, and bureaucratic structures that influence how knowledge is taken up within decision-making processes.

These two broad categories will be used for analytical purposes as a way to structure the following discussion. However, in reality it is likely that epistemological and ontological perspectives are themselves entangled with power relations in society. For example, in most Indigenous contexts (including the Canadian North) the way that Indigenous people learn and think about the world has been challenged and influenced by outside social, economic, and political forces for a number of generations (Tester & Irniq, 2008).

Epistemological Challenges

Scholars have argued that epistemological differences exist between IK and Western knowledge systems that make their integration challenging. For example, Bates (2007) believes that Inuit may not predict and plan in the same way as Western scientists and policy makers. He states that the Western tendency to "claim knowledge about the future is perceived as rather futile, and even arrogant by many Inuit" because these predictions ignore the inherent complexity and uncertainty of the world (*ibid.*, p. 93). Bates goes on to posit that because of this reluctance to predict the future, Inuit prefer to pursue knowledge that maintains flexibility and resilience in order to respond effectively to future conditions (*ibid.*). This characteristic of IQ can be expected to interact with EIA processes in at least two ways. Firstly, Inuit may be reluctant to definitively state (especially in formal

consultation processes) what they perceive as the future risks or outcomes of a particular project. This could lead Western scientists or policy makers to conclude that IK does not exist or is inconclusive in relation to certain issues, and therefore lead them to proceed with Western knowledge as the only information available. The second is that large-scale projects may tie a community's wellbeing to a single resource or industry and therefore threaten the characteristics of flexibility and resilience on which Inuit place so much importance (*ibid.*).

Language also often provides a barrier between Indigenous and Western perspectives. During community consultations, presentations of development projects are often full with technical and scientific concepts and jargon expressed in English (Bielawski, 2003, Makita, 2012). Even if translations are provided it may be difficult for Indigenous people, potentially unfamiliar with these specialized scientific fields, to comprehend and evaluate the information being presented. In some cases, scientific terms may not have analogues in Indigenous languages (Ellis, 2005). Likewise, IK statements can be confusing and difficult to interpret for those lacking knowledge in Indigenous methods of communication.

Indigenous elders often use metaphor, analogy, and myth to communicate a broad range of knowledge about interrelated topics such as the environment, cultural values, and history (*ibid.*). These Indigenous communication methods often do not provide straightforward data applicable to quantification, manipulation, and scientific analysis (Cruikshank, 2012) and therefore, Western scientists and policy makers have a tendency to overlook these statements as being "off topic," "anecdotal," or irrelevant to the decision-making process (Bielawski, 2003; Nadasdy,

1999). From a practical perspective it has also been noted that it is extremely difficult to find translators that possess sufficient IK as well as specialized technical and scientific knowledge to bridge these linguistic and epistemological divides (Ellis, 2005).

Given that IK often does not conform to the criteria set by scientific knowledge (i.e. quantifiable, replicable, universal), IK must go through a process of "scientisation" (Agrawal, 2002). This involves two steps: *particularisation* or identifying IK that is useful for decision-making and discarding information that is not; and *validation*, or testing IK to ensure that it holds up to the rigours of scientific data (*ibid.*).

Nadasdy (1999) discusses similar processes using different terms. He explains that Western knowledge is compartmentalized into various specializations that often contradict the holistic nature of IK. However, if IK cannot fit within these analytical categories it may be assumed that those who practice it do not have anything to say about these topics. For example, IK studies (influenced by Western perspectives) used for wildlife management often focus on a single species or a handful of 'important' species rather than examining the complex relationships between humans, animals, plants, and land forms. Furthermore, in an attempt to fit IK into these categories it must be distilled. This distillation involves separating the 'relevant information' – i.e. the quantifiable, objective, and universal – from the 'irrelevant information' – i.e. the qualitative, subjective, and place-based (*ibid.*).

These processes severely limit the scope of IK that is deemed relevant to decision-making. Within this framework of knowledge validation, it is unlikely that

Usher's third and fourth categories of IK (culturally based value statements and Indigenous cosmologies) would be considered. Furthermore, it has been argued that IK subjected to compartmentalization and distillation becomes decontextualized from its social contexts and the original holders and practitioners of this knowledge (Simpson, 2001). Given that IK holders describe the defining characteristics of IK as context dependent, social in nature, and rooted in practices (Öosten & Laugrand, 2001), it is questionable whether the decontextualized information used in formal decision-making processes remains truly Indigenous. In Nunavut this point is made by the IQ Task Force that stresses that the principles of IQ cannot be directly applied to existing government processes or practices without losing at least some of their meaning (GN, 2002).

In support of this perspective it has been noted that the complexity and holistic nature of IK is often reduced in scientific reports. For example, IK about animal behaviour (often quantitative *and* qualitative in nature) is often recorded as numerical data or plotted on maps, in an attempt to give the knowledge a sense of validity from a scientific perspective (Duerden & Kuhn, 1998). When IK is not amenable to Western scientific modes of presentation, manipulation, and analysis, it is presented as anecdotal information, not genuinely considered to make decisions, or discarded altogether (Nadasdy, 1999; Raffles, 2002).

Additionally, distillation of information may result in interpreting concepts such as well-being in a narrow way. It has been noted that even when references are made to the importance of cultural traditions, social impacts and well-being are almost entirely measured in economic terms such as employment, income, business

opportunities, and career training (Wiles et al., 1999). This issue has been reiterated in the context of Nunavut where it has been argued that the NIRB pays little attention to social and cultural issues (Tester & Irniq, 2008).

Structural Challenges

Many scholars studying IK integration into government processes admit that challenges are partly caused by epistemological barriers, but also feel that these issues cannot be understood without examining the power and structural relations embedded in political, economic, and bureaucratic institutions responsible for policy decisions (Briggs, 2005; Cruikshank, 2012; Ellis, 2008; Nadasdy, 1999; Spak, 2005; White, 2006; Wiles et al., 1999). Broadly speaking, these scholars expand the debates about IK in an important way. Rather than limiting their analysis to the epistemological tensions of integrating IK with science, they also explore the difficulties of integrating Indigenous perspectives into contemporary political and bureaucratic institutions. Nadasdy (1999) argues that even when policy makers are aware of problems such as the compartmentalization, distillation, and decontextualization of IK, they treat them as technical issues and ignore their political dimensions. Failure to question *who* decides what is considered relevant and useful IK often results in those that may know little about IK (e.g., policy makers and Western scientists) setting the standards as to how this knowledge is recorded and used (*ibid.*).

Many of these issues can also be linked to the dominance of Weberian bureaucracy in Western societies (White, 2005). The essential features of this style

of bureaucracy include: a hierarchical structure with power concentrated at the top; operation guided by impersonal rules, procedures, formal written reports, and a strict division of labour; and employment within institutions that is dependent on formal criteria and education (*ibid.*, p. 407). These characteristics may be incommensurable with Indigenous approaches to governance. It is argued that this may limit the ability of IK knowledge holders to participate meaningfully within these settings since personal experience outside of institutional contexts counts for little (*ibid.*). In addition, Inuit have often described their culture as non-confrontational (Freeman, 1978, Price, 2007), which contrasts with Western assumptions that knowledge and information should be debated and challenged within formal legal and bureaucratic settings to determine its validity (White, 2005). Finally, it has been argued that even if these institutions are mandated to encourage Indigenous participation and the integration of IK, those with formal credentials are responsible for the interpretation of information and possess the authority to make decisions (Nadasdy, 1999; White, 2005). Because of these bureaucratic and political structures, many holders of IK may play the role of knowledge provider rather than interpreter or decision-maker.

Finally, it has been argued that advocacy of the genuine integration of IK (conceptualized as empirical knowledge about the world, as well as culturally-based values and cosmologies) into decision-making processes threatens the power relations and institutional structures embedded within the Western industrial complex (Ellis, 2005). In contrast, the integration of a compartmentalized, distilled,

and decontextualized version of IK may actually serve to re-concentrate power into the dominant political and economic segments of society (Nadasy, 1999).

2.2 Theoretical Approach: Analyzing EIA in Nunavut through a Governmentality Lens

The discussion above has highlighted some of the critiques of contemporary EIA with a focus on how these processes unfold in Indigenous contexts. A central theme in the literature is the ongoing challenges faced by governments for incorporating IK into their structures, processes, and policies. Many scholars and professionals working for government institutions continue to grapple with the ways that IK is conceptualized and applied in an attempt to improve the integration of IK into processes such as EIA. While recognizing the practicality of this approach, as well as the important insights drawn out in the literature, I intend for my work to offer something new. I will be approaching my analysis of EIA in Nunavut from a alternative theoretical angle, with decidedly different end goals in mind. One reason for this shift in focus is ethical. As a non-Inuit person from southern Canada it would be problematic to attempt a critique of how IQ is, or is not, being integrated into EIA. This would require a claim to possessing a thorough understanding of IQ as a precursor to judging whether or not it was genuinely utilized in the assessment of the MRP, a claim that I am not willing to make.

The second reason for taking an alternative approach is that it can offer new insights about EIA in Nunavut. Rather than adding to the debate about how and why it remains to be difficult to incorporate IQ into the NIRB processes, I am interested

in exploring how EIA processes are perpetuated despite their perceived shortcomings by examining the range of practices involved in the assessment of mining projects, and the implications that these practices have for mining and development in Nunavut. To do this, my work will be guided by the analytical framework of *governmentality*.

2.2.1 Foucault and Governmentality

Critical to my approach are Foucault's theorizations of governmentality, as well as a number of contemporary scholars who continue to grapple with Foucault's ideas to inform their own research. In a 1978 lecture at the Collège de France, Michel Foucault spoke of a theme prevalent in his later work, the art of government (Gordon, 1991). The lecture's title – "Governmentality" – is the neologism introduced by Foucault to describe studies of governmental rationality, or simply put, "who can govern; what governing is; what or who is governed" (cited in Gordon, 1991, p. 3). Foucault defined governmentality as "the ensemble formed by institutions, procedures, analyses and reflections, the calculations and tactics" that allow for the practice of government (1978, p. 102). This definition relied heavily on Foucault's early work in which he theorized notions of power, and the relationship between power and knowledge. For Foucault (1977, 1978), power works in a dispersed and diverse manner, as a force with multiple origins that *produces* subjects and objects in spatial and temporal contexts, rather than as a force that operates between pre-existing subjects and objects (Berg, 2009). Foucault (1980) also argued that power and knowledge are inextricably linked. To describe

this relationship, he coined the term “power/knowledge”. He maintained that those who have the ability to produce dominant discourses are able to construct the circumstances in which society functions (*ibid.*). Following from these understandings, the act of government should be examined as a series of governmental apparatuses¹⁴ linked to effects of power, and as a complex of knowledges developed for administering populations (Foucault, 1978).

In his work on governmentality, Foucault was particularly interested in tracing the historical progression of the roles of the state (sovereignty, discipline, government) and the forms of power linked to these various roles. Although he identified changes in the role of the state, Foucault was not proposing a linear narrative from societies of sovereign power, to discipline, to government. Rather, Foucault suggested a triangular space of sovereignty-discipline-government in which societies in different places at different times may be closer to one corner of the triangle or another (*ibid.*). This aspect of Foucault's thinking is important because it allows for historical and geographical specificity within governmentality studies (Elden, 2007). It also detaches history from a developmentalist logic, a logic that presents history as a march to higher orders of social organization; therefore, a governmentality approach allows governance to be "assessed within an analytics of power" (Walters, 2012, p. 67.).

¹⁴ Within Foucault's lectures on governmentality two related concepts, apparatus (*dispositif*) and assemblage, are discussed. Foucault used the term apparatus to broaden studies of power beyond discourses to semi-stable elements such as laws, architectures, and administrative procedures. Apparatuses have a stability that allows them to function in multiple domains without the rigidity of structures. Assemblages are similar arrangements but are comparatively unstable; they either crystalize into apparatuses or disappear (Walters, 2012).

Within Foucault's theorizations on governmentality, the scope of power (or what Foucault terms "biopower") moves beyond the disciplining of individuals to targeting the population at large (Foucault, 1976). For Foucault, the exercise of biopower requires an assortment of mechanisms, techniques, and technologies for administering populations as well as new ways of understanding populations, such as demographics, for example, that make the population visible, measureable, and improvable within the defined rubrics of the state (Foucault, 1976, 1978). This thesis explores how these ideas about governmentality may be applicable for understanding environmental resource governance in Nunavut.

2.2.2 Governmentality Studies: Applications for Studying EIA in Nunavut

Many scholars continue to be inspired by Foucault's work on governmentality and apply these theorizations to a variety of studies about contemporary societal processes (e.g. Li, 2007; Mitchell, 2002; Walters, 2012). However, it should be clarified that Foucault never fully formed a theory or methodology of governmentality with definitive research guidelines. For this reason it is argued that governmentality should be understood as a flexible and adaptable "analytical toolbox" that can guide a range of empirical research projects examining past and present forms of governance (Rose et al, 2006; Walters, 2012).

Walters (2012, p. 3) argues that governmentality is a useful perspective to "critically encounter" social and political issues, as it allows for a destabilization of the taken-for-granted features of the present. This destabilization is made possible due to the angle of analysis taken by governmentality studies. This approach avoids

taking an "aerial view" where one's analysis begins at the level of political and economic structures, narratives, or ideologies (such as neoliberalism, capitalism, etc.); an aerial perspective tends to give these structures and narratives a coherence, logic, or stability that they may not inherently have (*ibid.*). Just as power is theorized as working in a dispersed and diverse manner, practices involved in governance are not homogenous or singular. Therefore governmentality studies stress multiplicity and contingency, or in other words, analyzing events requires attention to the multiple processes that constitute them (Walters, 2012). Rather than focusing on broad structures, governmentality studies take a "micropolitical" perspective; they are interested in how societal discourses and structures are constituted and maintained, even if unconsciously and precariously, by the everyday activities and practices of citizens (Ettlinger, 2011).

For example, the work of cartographers, and the creation of maps more specifically, could be thought of as an objective or technical process undertaken by trained experts. However, critical geographers (e.g. Blomley, 2003; Wainwright, 2008) would challenge this perspective by bringing attention to the relationship between territory, governmental practices (in this case, mapmaking), and rule, and how space (and the objects found within spaces) are subjected to quantification, mapping, and modeling to allow for political calculation (Elden, 2007)¹⁵.

This idea is particularly relevant for studying resource extraction in contemporary Nunavut where the very process of creating the territory, and the

¹⁵ For examples of how scholars have used these ideas to inform their own empirical research, refer to Mitchell (2002) who describes these practices as prescribing a "character of calculability" in twentieth century Egypt, and Li (2007) who examines the process of "rendering technical" that informs development plans in contemporary Indonesia.

related practice of mapping out surface and subsurface landownership rights, has aided ongoing plans for resource extraction. The creation of Nunavut has introduced the idea that Inuit can now fully participate in, and benefit from mining projects (NTI, 2000).

It has been argued that governmentality is a useful approach for connecting abstract societal discourses with everyday material practices. This is because rather than privileging either the material or the discursive, governmentality studies are interested in the relation between the two (Ettlinger, 2011). Inspired by this conceptualization, my research attempts to examine not only how the material practices undertaken under the auspices of the NIRB are informed by broader discourses about the benefits of mining and economic development, but also how these material practices serve to produce and reinforce these very discourses.

Governmentality as a methodological orientation involves paying attention to forms of government, with a particular emphasis on technical documents, expertise, calculation, and bureaucracy. It is particularly suitable for thinking critically about situations where governments and institutions claim to be undertaking reasoned, expert driven decision-making for the well-being of a population, and for situations where various target populations are enrolled in their own governance (through forms of consultation, participation, representation, etc.). Contemporary resource governance in Nunavut, and especially the work of the NIRB, is thus an ideal target for a governmentality approach.

Baffinland's proposal for the Mary River Mine has undergone an EIA resulting in the NIRB recommending the Project's approval. This multi-step EIA

process spanned a number of years, and resulted in the production of a number of documents and presentations. Consistent with the NIRB's procedures, a variety of actors including Federal and Territorial Government Departments, Inuit organizations (such as the Qikiqtani Inuit Association and Nunavut Tunngavik Incorporated), as well as concerned members of the public were solicited to take part in the review process. It could be assumed that this process has allowed the NIRB to make a rational and evidence-based decision in support of the MRP's approval. Guided by the theoretical insights within the governmentality literature, this thesis questions that assumption.

By focusing on the details found within the EIS and related documents, and the routine actions of those taking part in the process, the goal of this research is not to refute the outcomes of the EIA process from an ideological standpoint (e.g. anti-mining, anti-capitalist, anti-development, etc.) but to reveal the shaky ground upon which narratives about mining and development are built (and reinforced) throughout EIA processes in Nunavut.

Chapter 3: Research Case Study and Methodology

This chapter will describe the case study analyzed for this thesis, the Mary River Project, and discuss the research methodology used. It will begin with a general overview of the various phases and stages of the Nunavut Impact Review Board's (NIRB) Environmental Impact Assessment (EIA) process. Section 3.2 will outline how the review process unfolded for the Mary River Project (MRP) in particular and provide a description of key actors that participated in the EIA. With this context provided, section 3.3 of this chapter will elucidate how the theoretical discussions on governmentality have been implemented as a research methodology, and highlight the documents that were used as source material for the empirical analysis in this thesis.

3.1 The Nunavut Impact Review Board: An Overview

When large-scale development projects are proposed in Nunavut they must first be assessed by the Nunavut Planning Commission (NPC) to determine whether or not they conform to the applicable land use plan (in this case the North Baffin Regional Land Use Plan)¹⁶. Upon determination of conformity, project proposals are passed on to the NIRB for initial screening to determine if a formal impact review is required. The NIRB's decision is forwarded to the Federal Minister at Aboriginal

¹⁶ The North Baffin Regional Land Use Plan was prepared by the Nunavut Planning Commission after consultations with communities and Inuit organizations within the Qikiqtani Region, and approved by the GN in June, 2000. The plan is available at: <http://www.nunavut.ca/files/North%20Baffin%20Regional%20Land%20Use%20Plan.pdf> (NPC, 2000).

Affairs and Northern Development Canada (AANDC) who makes the final judgment on whether or not an impact review is required (NIRB, 2009E).

The NIRB facilitates the impact review process to assess the environmental and socio-economic impacts of proposed projects, to assess the extent of impacts on communities and the region, and to determine whether project proposals should proceed, and if so, under what conditions (NIRB, 2014). To achieve these ends, a Part 5 review is undertaken, consisting of a number of stages with corresponding rules of procedure. Figure 4 is a diagram of the stages involved in a Part 5 Review.

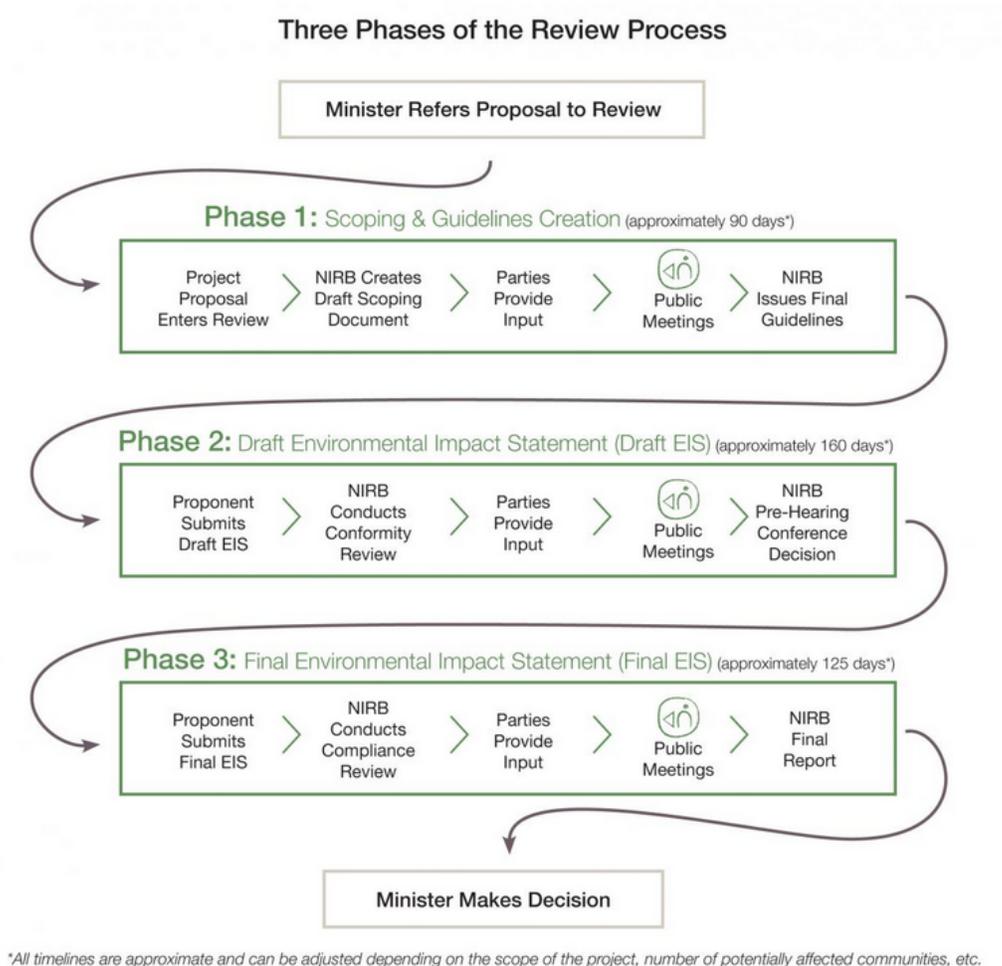


Figure 4. The NIRB Impact Review Process (NIRB, 2014)

Phase 1 of the review process includes a project scoping stage and a stage for Environmental Impact Statement (EIS) guideline creation. The scoping stage is meant to identify potential environmental or socio-economic impacts of the project including issues for which there is public concern. The scoping process identifies issues that require study and assessment and these are referred to throughout the EIA process as Valued Ecological Components (VECs) and Valued Socio-Economic Components (VSECs). Throughout this process the NIRB solicits input from the proponent, and all interested parties from Federal and Territorial Government departments and Inuit Organizations, as well as members of the public (NIRB, 2008).

The scoping process determines which components of the project must be included in the review and the specific issues and concerns that must be assessed, the temporal and spatial boundaries of the project, and any other requirements for the assessment of the proposal. The NIRB draws on information gained through the scoping process to create Draft EIS Guidelines. These guidelines are distributed to interested parties, and feedback from those parties is considered by the NIRB; if the NIRB deems the feedback applicable it is integrated into the Final EIS Guidelines that are issued to the proponent (*ibid.*).

Phase 2 of the review process involves the proponent creating and submitting the Draft EIS (DEIS), followed by a period during which interested parties can assess and comment on the submission. It is the responsibility of the proponent to prepare the DEIS in accordance to NIRB guidelines. Once the NIRB receives the DEIS they conduct an internal conformity review to determine whether

or not the DEIS meets the requirements of the EIS Guidelines. If the DEIS meets the necessary guidelines, it is distributed to all interested parties and the Technical Review of the DEIS commences. At this stage both Federal and Territorial Governments, as well as Inuit organizations such as the QIA and the NTI are solicited to provide feedback. Members of the general public do not provide formal feedback at this stage. The Technical Review allows all implicated actors to assess the information presented in the DEIS and to submit Information Requests (IRs). IRs are generally issued to the proponent when a party disagrees with a specific assessment (in terms of the outcome or the methodology used) or if they feel that more information regarding impact determination or assessment methodology is required (*ibid.*).

After IRs have been submitted, a technical meeting is held in which various groups within the interested parties discuss issues related to specific areas such as engineering, wildlife, or socio-economic issues. The purpose of the technical meetings is to identify issues with the assessment so that they can be addressed by the Proponent as they prepare the Final Environmental Impact Statement (FEIS). Following the technical meetings a Pre-Hearing Conference is held to discuss requirements and timelines for the submission and review of the FEIS. This stage also provides an opportunity for members of the public to express their views on the information contained in the DEIS (*ibid.*).

In the third and final phase of the review the proponent submits the FEIS, and the NIRB then begins an internal review to determine whether or not the FEIS meets the EIS Guidelines and any additional requirements specified during the

Technical Review or the Pre-Hearing Conference. If the FEIS is in compliance with all requirements the review process continues in a similar fashion as in the previous phase, that is: actors are encouraged to present feedback and submit IRs; technical meetings are held to address IRs and any outstanding issues with the FEIS; and a Final Hearing is held where actors (including members of the public) are given a final chance to voice their comments on the FEIS and the project.

Following the Final Hearings the NIRB determines whether or not the project should be approved and under what conditions. This decision is then forwarded to the Federal Minister of AANDC who makes the final decision on the project (*ibid.*).

3.2 The EIA Process for the Mary River Iron Mine

In 2008 Baffinland submitted a proposal to develop the MRP. Following Baffinland's proposal, on April 30, 2008 the NIRB received a positive conformity determination from the NPC for the MRP in relation to the North Baffin Regional Land Use Plan. The NIRB proceeded to screen the project in accordance with Part 4 (Article 12) of the NLCA and issued a recommendation to the Federal Minister at AANDC that the project undergo a Part 5 review. On February 11, 2009, the NIRB received correspondence from the Minister referring the project for a review of the ecological and socio-economic impacts pursuant to Section 12.5.1 of the NLCA (*ibid.*). At this point, the NIRB began the formal EIA process for the MRP. The timeline for this process is outlined in Table 1 below.

Following the Final Hearings the NIRB issued a recommendation to the Minister of AANDC in support of the development of the MRP. Upon

recommendation from the Federal Minister, on December 28, 2012 the NIRB issued a project certificate for the MRP (NIRB, 2012D)

Table 1: The Mary River Project Review Process: Timeline of Key Events

Full Review Steps	Date Completed
Phase 1. Project Scoping and Guidelines Creation	
Community Scoping Sessions and Summary Report	March - June 2009
NIRB Issues EIS Guidelines	November 16, 2009
Phase 2. Draft Environmental Impact Statement (DEIS)	
Baffinland Submits DEIS	January 21, 2011
Technical Meetings	Commenced February 15, 2011
Information Requests (IRs) Received by NIRB	February and March 2011
Baffinland Submits IR Response Package	April 26, 2011
Pre-Hearing Conference	November 6-10, 2011
Phase 3. Final Environmental Impact Statement (FEIS)	
Baffinland Submits FEIS	February 13, 2012
NIRB Commences Internal Compliance Review	February 14, 2012
Technical Review Period (90 days)	Commenced February 29, 2012
IRs Submitted to NIRB	March 30, 2012
Baffinland Responds to IRs	April 19, 2012
Technical Meeting	April 30, 2012
Final Hearings (In Iqaluit, Igloolik, Pond Inlet)	July 16-28, 2012

A number of actors participated throughout the process outlined in Table 1. As they will be referred to throughout the subsequent chapters, a short description of key actors (including their involvement in the EIA) is presented below¹⁷.

- The Nunavut Impact Review Board (NIRB)

The NIRB is an institute of public governance that was created with the signing of the NLCA in 1993. The NIRB's mandate is to assess the impacts of proposed development projects in Nunavut to ensure that they promote the existing and future well-being of all Nunavummiut (NIRB, 2014). The NIRB consists of up to nine board members appointed by the Government of Canada and the Government of Nunavut from nominations from the federal government, the territorial government, and Nunavut Tunngavik Incorporated¹⁸. The NIRB facilitated each of the stages involved in the review process for the MRP and collected submissions from the Proponent as well as from all interested actors before making a recommendation on the Project's approval to the Federal Minister at AANDC.

- Baffinland Iron Mines Corporation (Baffinland)

Baffinland is the Proponent of the MRP. The corporation is owned by ArcelorMittal (70%) and Iron Ore Holdings LP (30%) and its head office is located in Toronto

¹⁷ This is not a comprehensive list of all actors involved in the EIA processes, although it does provide descriptions of the most prevalent actors. Descriptions of these actors have been included as they all were significantly involved in the process and are referred to in discussions in Chapters 4 and 5 of this thesis.

¹⁸ More information about the appointment process and the current NIRB board members can be found at: <http://www.nirb.ca/board-of-directors>

(Baffinland, 2012). As the Proponent, Baffinland was responsible for preparing the EIS in accordance with the NIRB's guidelines, as well as responding to feedback and concerns raised by interested actors.

- Government of Nunavut (GN)

The GN is the Territorial government created with the inauguration of Nunavut. As the EIA process for the MRP was in process, the GN had a number of policies in support of resource extraction in Nunavut. For example, *Parnautit: The Nunavut Mineral Exploration and Mining Strategy* provides funding for territorial mapping and exploration research projects (GN, 2007). The GN also introduced the Development Partnership Agreement Program in 2006 that offers fuel tax credits to developing and producing mines, and outlines the GN's commitment to working cooperatively with mining companies in areas such as education, training, socio-economic monitoring, and infrastructure development (GN, 2009). The GN participated in the EIA process by providing feedback on the various versions of the EIS at technical meetings and community consultations, and through submissions of formal IRs.

- Qikiqtani Inuit Association (QIA)

The QIA is a Designated Inuit Organization¹⁹ that represents over 14,000 Inuit from the Qikiqtani Region, with the goal of protecting and promoting Inuit rights and

¹⁹ Under the NLCA there are three recognized Inuit organizations: the Qikiqtani Inuit Association, the Kitikmeot Inuit Association, and the Kivalliq Inuit Association. Each association has jurisdiction over a specific region within Nunavut.

values (QIA, 2014). Each of the 13 communities in the Qikiqtani Region has a community director to represent them on the QIA board (*ibid.*). The QIA participated in the EIA process by providing feedback on the various versions of the EIS at technical meetings and community consultations, and by submitting formal IRs²⁰.

- Nunavut Tunngavik Incorporated (NTI)

The NTI is the organization that represents all Inuit under the NLCA. The NTI is responsible for collecting all resource royalties from projects on Inuit Owned Lands²¹. The organization's website states that they are committed to "support and promote the development of mineral resources in Nunavut provided there are significant benefits to Inuit and the integrity of the environment is protected" (NTI, 2000, p. 3). Throughout the EIA process the NTI participated in technical meetings and community consultations, and provided feedback on the EIS.

- Government of Canada (various departments)

Various departments of the Canadian federal government such as Environment Canada, Natural Resources Canada, and Transport Canada were involved in the EIA process by providing feedback on the various versions of the EIS at technical meetings and community consultations, and by submitting formal IRs. The Minister

²⁰ It is important to note that during the EIA process the QIA was also involved in negotiating an Inuit Impact and Benefit Agreement with Baffinland. This will be further discussed in Chapter 5 although a thorough analysis of how this arrangement might have impacted the EIA process is beyond the scope of this thesis.

²¹ The proposed Mary River Project is located on Inuit Owned Lands.

of AANDC played a significant role as the final decision-maker in granting the Project approval.

- Members of the public

Impacts on the communities of Pond Inlet, Arctic Bay, Igloolik, Hall Beach, Clyde River, Cape Dorset, Kimmirut, and Iqaluit were assessed in the EIA. Consistent with the NIRB's requirements for public participation, individuals from these communities were given the opportunity to voice their opinions and concerns about the Project at a number of public meetings.

3.3 Implementing the Research Framework

Walters (2012) warns against prescribing rigid methodological guidelines when attempting analysis informed by governmentality. Despite this, he does suggest a number of "encountering moves" to aid researchers when conducting critical analysis of governmental processes²². He notes that these suggested guidelines are not a definitive list of practices for conducting a governmentality study. Rather, according to him they are ideas for analytical pathways into a variety of empirical topics about society and governance and should not override the flexibility, adaptability, or unexpected nature of governmentality studies (*ibid*).

According to Walters a key element of governmentality studies is that they involve a close reading of technical literatures and expert knowledges to identify techniques of governance. However, due to the emphasis on official documents, a

²² Walters uses the term *encounter* deliberately to suggest something unexpected that connotes an element of conflict and uncertainty (*ibid*).

common critique of studies of governmentality is that they often focus solely on specific authoritative actors, namely states and their formal institutions (Walters, 2012), and the sources of knowledge that they produce. Walters suggests changing the angle of analysis from dominant actors to consider the practices of multiple actors. This perspective is informed by the Foucauldian notion that power is diffuse and pervasive. With this understanding of power as a starting point, it is reasonable to suggest that studies of governmentality do not necessarily need to focus on dominant actors such as the state. As Walters suggests, shifting focus is not necessarily meant to imply that power has shifted away from the state, to other actors such as corporations, NGOs, and communities; rather, this approach is meant to recognize that governance involves a network of various actors, sites, and practices (*ibid.*).

In recognition of this critique, the analysis in this thesis considers the practices of a variety of actors involved in the EIA process. Although official documents submitted by Baffinland and the NIRB are examined, the interventions of a variety of actors (in the form of verbal and written responses to the EIS and the MRP) such as local Inuit organizations as well as the public are also considered and analyzed.

Walters also suggests that studies of governmentality should be wary of rationalism, and specifically should move beyond understandings of governance as pragmatic or rational. He argues that in reality, governance is often complex and uncertain, and that government processes often hold together in unplanned ways to find a provisional coherence (Walters, 2012). Informed by this suggestion, this

thesis evaluates claims that the NIRB's process is thorough, rational, and objective, by investigating how the EIA process unfolded for the MRP, and how it was influenced by a number of (at times contradicting) practices.

A final critique of Foucault's work on governmentality (and other research informed by it) is that it is Eurocentric. While this claim has merit, as Foucault's work is primarily concerned with the history of governmentality of the West (Shani, 2010), it also points to one of the strengths of a governmentality approach; that is, that studies of governmentality are highly contextualized (Walters, 2012). Because studies of governmentality are concerned with examining the material practices and techniques of government that take place in particular places, in particular circumstances, and at particular times, the approach has been adapted to a variety of empirical studies in various "non-European" and decolonizing contexts (e.g. Kalpagam, 2000, Li, 2007; Mitchell, 2002; Osborne, 1994, Scott, 2005). My own work attempts to move beyond this critique by focusing on governmentality in an Indigenous context.

Drawing on Walters' suggestions, and with the critiques of governmentality research in mind, a critical reading of documents produced for the MRP EIA was conducted. As outlined in Table 1 in Section 3.2, the EIA process for the MRP spanned a four-year period from 2008 through to 2012. Throughout this period a substantial amount of documentation related to the MRP was produced, including: formal submissions of various drafts of the EIS by Baffinland; correspondence from actors (such as the QIA, GN, and community members) to the NIRB and Baffinland regarding the Project and the EIS; and correspondence from the NIRB providing

feedback on the EIS and providing information to all relevant actors in order to facilitate the progression of the EIA process at each stage. All of this documentation is stored and made publicly available on the NIRB website resulting in a significant amount of source material for the analysis undertaken in this thesis.

The following list is a collection of formal EIS documents, presentations, meeting minutes, and actor submissions that were analyzed for this thesis²³:

1- NIRB Draft EIS Guidelines (NIRB, 2009)

This is an 86-page document prepared by the NIRB that instructs Baffinland about what must be included in the EIS.

2- Comments on the proposed EIS Guidelines (Baffinland, 2009; QIA, 2009)

Baffinland submitted a 13-page response and the QIA submitted an 8-page response to the Draft EIS Guidelines.

3- NIRB Final EIS Guidelines (NIRB, 2009B)

This 128-page revised version of the EIS Guidelines was prepared by the NIRB after feedback from actors was considered.

4- DEIS submitted by Baffinland, Volumes 1, 4, 6 (Baffinland, 2011, 2011B, 20011C, 2011D)

²³ All of these sources of information are available publicly from: <ftp://ftp.nirb.ca/02-REVIEWS/COMPLETED%20REVIEWS/08MN053-BAFFINLAND%20MARY%20RIVER/>

Volume 1 is the 284-page main document of the Draft EIS which summarizes the assessments made in the other volumes of the EIS, Volume 4 is 214 pages and discusses impacts on the human environment (including Inuit caribou harvesting practices), and Volume 6 is 190 pages and discusses impacts on the terrestrial environment (including caribou).

5- NIRB Public Information Meetings Summary Report (NIRB, 2011)

This report was completed by the NIRB after public meetings were held in the communities impacted by the mine. It is a 58 page document that includes the NIRB's summary of issues discussed, as well as an appendix of recorded statements made by community members. The document indicates the following attendance in each community: 33 in Igloolik; 70 in Hall Beach; 30 in Coral Harbour; 73 in Cape Dorset; 45 in Kimmirut; 24 in Iqaluit; 36 in Clyde River; 102 in Pond Inlet; 81 in Arctic Bay; 33 in Resolute; and 11 in Grise Fiord. Individuals were left anonymous and where not described by age or gender.

6- Comments on the DEIS (Baffinland, 2011E; CTA, 2012; DFO, 2012; EC, 2012; INAC, 2012; QIA, 2011, 2012)

The Canadian Transportation Agency, the Department of Fisheries and Oceans, Environment Canada, Indian and Northern Affairs Canada, and the QIA all submitted comments on the DEIS. All of these

comments were compiled into a 70-page document with Baffinland's responses to them (Baffinland, 2011E).

7- FEIS submitted by Baffinland, Volumes 1, 4, 6 (Baffinland, 2012, 2012B, 2012C)

After considering comments on the DEIS, Baffinland completed and submitted the FEIS. Again, Volume 1 is the main document that summarizes all the assessments made, Volume 4 assesses impacts on the human environment (including Inuit harvesting practices), and Volume 6 discusses impacts on the terrestrial environment (including caribou).

8- Comments on the FEIS (GN, 2012, QIA, 2012B)

After Baffinland submitted the FEIS a number of government departments and Inuit organizations submitted comments. Only comments submitted by the GN (63 pages) and the QIA (35 pages) dealt with impacts on caribou and Inuit harvesting of caribou and are therefore the only comments analyzed here.

9- Final Hearing Presentations and Transcripts (Baffinland, 2012D; GN, 2012B; NIRB, 2012E, 2012F, 2012G, 2012H, QIA, 2012B, 2012C)

Transcripts from the final hearings in Igloolik (887 pages), Iqaluit (1648 pages), and Pond Inlet (860) pages were analyzed using key

word searches to find discussions about caribou and Inuit harvesting of caribou. Baffinland, the GN, and the QIA all prepared formal presentations to express their final conclusions about the project and impact assessments.

My analysis of these documents was guided by a number of broad research questions:

- What can a critical reading (through the lens of governmentality) of the NIRB's assessment of the Mary River mine tell us about the EIA process in Nunavut?
 - How are potential impacts discussed and assessed?
 - How and when do actors intervene in the process? Who has the authority to intervene?
 - How are communities consulted? How is information from these consultations recorded and integrated into the EIS?²⁴
 - How is knowledge (both scientific knowledge and IQ) integrated (discussed, referenced, defined, and conceptualized) throughout the EIA process by various actors?

After the practices listed in the research questions above were investigated, a follow-up question was explored:

²⁴ This was asked to determine whether or not community members were able to effectively participate in the EIA process. For this thesis effective participation is defined as communities actually being able to influence what is included in the EIS rather than merely being provided with a venue to voice concerns.

- What are the material and discursive effects produced by the various practices involved in assessing mining projects, and how do these effects influence the outcomes of EIA in Nunavut?

While investigating the research questions, the documents listed above were read in the order that they were produced. As I read through the documents I compiled evidence that could be used to provide insight into the issues raised by the research questions. Reading the documents in chronological order was important as it allowed me to not only document how actors participated in the process at various times, but also allowed me to analyze how specific issues raised were responded to, and whether or not the interventions of various actors had an impact on the content or conclusions ultimately reached in the FEIS. My analysis also led me to include one additional research question:

- How did the various actors involved in the EIA process describe their own participation?

This question was included as it became clear when reading through the EIA documents that actors (such as Baffinland, the NIRB, the GN, and the QIA) not only provided information and questioning in relation to the assessment, but also continually described their participation quite deliberately as being effective, rigorous, and collaborative. I explore the implications of this practice in subsequent chapters.

Given that each draft of the EIS includes a number of volumes spanning

hundreds of pages each, and that a significant amount of documentation was produced as a result of actor responses and feedback, it was not feasible to thoroughly examine every issue discussed in the EIS. For that reason I chose to focus my analysis on one VEC, caribou, and one VSEC, Inuit caribou harvesting. Potential impacts on caribou and Inuit harvesting are both significant issues and each had sections within the EIS devoted to them. The assessment of these issues also generated significant feedback from interested actors. It is hoped that by focusing on these two issues, insights about the EIS and the EIA process in general can be revealed.

After completing this initial reading I identified two prevalent themes throughout the EIA process. The first theme concerned how Baffinland provided evidence for the conclusions reached in the EIS, how this evidence was cited and referenced, and how other actors including the GN, NTI, QIA, and individual community members felt about these issues. This theme is addressed in Chapter 4 of this thesis, which examines how Baffinland assessed the Project's likely impacts on caribou and how various actors responded to this assessment.

The second theme was the tendency of Baffinland to conceptualize complex issues such as Inuit hunting practices in specific and narrow ways as to present a narrative that privileged the approval of the Project. This latter theme is the focus of Chapter 5, which analyzes the way that Baffinland conceptualized Inuit harvesting practices primarily as an economic pursuit, and how this conceptualization led to a determination about the significance of the Project's impacts on the ability of Inuit to hunt caribou.

3.4 Postscript

Analysis for this thesis was conducted on the period spanning February 11, 2009 (the date that the Federal Minister of AANDC referred the MRP for a Part 5 Review) until December 28, 2012 when the MRP was granted a project certificate. Since the Project was granted approval based on the original proposal, a number of events have unfolded resulting in Baffinland revising their plans for the mine, resulting in new rounds of review being required²⁵. Despite this, the analysis in this thesis is still valuable as it provides insights into how the EIA process works, and reveals some of the strategies used by Baffinland who still have an ongoing interests in the mineral resources in the Qikiqtani Region.

Shortly after the original proposal was accepted for approval Baffinland deemed that the MRP was no longer economically feasible as planned. As a result, Baffinland submitted a new Project Proposal describing an "Early Revenue Phase" (ERP) on January 13, 2013 (Baffinland, 2014). The ERP proposed significant changes to the original project proposal. Instead of mining up to 18 million tonnes of iron ore per year, only 3.5 million tonnes would be mined annually during the phased approach (Baffinland, 2013). The iron would be transported by truck to the port at Milne Inlet where it would be shipped to markets during the open water season. Within this new proposal Baffinland stated that as "global markets improve for the prices of iron ore the Company intends to proceed with the construction and operation of the larger approved project" (*ibid.*, p. 2). This larger project would

²⁵ The following supplementary information is provided for the reader's interest only. Any events that have taken place after the initial project certificate was granted (December, 2012) have not been included in the analysis presented in this thesis.

involve the construction of an additional port at Steensby Inlet as well as a railroad to connect Steensby Port to the mine site. This infrastructure would allow Baffinland to extract up to 21.5 million tonnes of iron annually (*ibid.*).

After review of the ERP by the NIRB and interested parties, and meetings being held in impacted communities, the amended Project Proposal was approved on April 29, 2014 (Baffinland, 2014). With the new proposal it was expected that extraction would begin late 2014 (*ibid.*). However, the Proponent surprised the NIRB and other interested parties as they announced further changes to the project proposal in November 2014. Citing tumbling global iron prices, Baffinland requested new regulations for the project to allow for year-round shipping from Milne Inlet and an increase in the amount of iron to be shipped from the port during the early revenue phase (Nunatsiaq, 2014). The new proposal further delays the construction of the railroad and port at Steensby Inlet. It would also require that ice-breaking vessels be used to ship year-round from Milne Inlet. Due to considerable concerns about the increased industrial activity at Milne Port, the new proposal is being reviewed with amendments to the project certificate, and new rounds of comments, information sessions, and public hearings are likely to be required before a recommendation on the new proposal can be made (*ibid.*).

Chapter 4: Environmental Impact Assessment in Nunavut and the Will to Approve

4.1 The Environmental Impact Assessment of the Mary River Mine

Referencing the EIA process in Nunavut, the Nunavut Impact Review Board (NIRB) states its mandate:

The NIRB is an institution of public government created by the Nunavut Land Claims Agreement to assess the potential impacts of proposed development in the Nunavut Settlement Area prior to approval of the required project authorizations. Using both traditional knowledge and recognized scientific methods, the NIRB assesses the potential biophysical and socio-economic impact of proposals and will make recommendations and decisions about which projects may proceed. (NIRB, 2014)

Furthermore, the NIRB describes its reviews as "comprehensive assessments" that encourage the participation and input of various actors²⁶ to provide the information necessary to assess the accuracy of predictions made in the EIS (NIRB, 2014B). The ultimate goal of EIA in Nunavut is to protect and promote the well-being of the environment and all Nunavummiut (NIRB, 2014).

Such conceptualizations present EIA as a systematic process, informed by expert opinion and aimed at providing technocratic solutions for environmental governance issues (Gibson and Hanna, 2009). Framing EIA in this way helps to

²⁶ Actors involved in the EIA process include Baffinland, community members, and groups such as the NIRB, QIA, GN, and the NTI. A description of these actors and the roles they played in the EIA process is provided in chapter 3.

reinforce the idea that EIA processes are objective, thorough, and ultimately evidence-based. It is argued that this works to legitimize the outcomes of these processes and thereby makes them extremely difficult to contest (Li, 2009).

It has been argued that conceptualizations of EIA as systematic, thorough, evidenced-based, inclusive, and objective may not reflect the complexity and uncertainty inherent in these processes (Cashmore et al., 2004; Gibson and Hanna, 2009; Hanna, 2009)²⁷. The analysis in this chapter will evaluate the validity of this claim as it pertains to the EIA process for the Mary River Project (MRP), and specifically how it relates to Baffinland's assessment of the Project's potential to impact caribou.

The sections in this chapter are organized to follow the temporal progression of the EIA process from the issues scoping and guideline creation phase, the Draft Environmental Impact Statement (DEIS) phase, and the Final Environmental Impact Statement (FEIS) phase. The concluding section of the chapter will draw on governmentality to discuss the NIRB's decision to approve the Project.

Analysis of the issues scoping and guideline phase identifies a key theme that will be discussed throughout the chapter; that is, the tensions surrounding how information and evidence should be compiled, presented, and referenced by Baffinland in the Environmental Impact Statement (EIS). This theme will be further addressed through a discussion of Baffinland's submission of the DEIS (specifically sections in the document that assess impacts on caribou) and how interested actors responded to this submission during the technical review period and community

²⁷ See the literature review in Chapter 2 for a more detailed discussion of these critiques.

consultations. Subsequent analysis of Baffinland's submission of the FEIS will be provided, with an emphasis on examining the extent that concerns raised about the DEIS by interested actors were addressed and integrated into the assessment of caribou impacts. Again, this will be followed by a discussion of the concerns raised by actors during the technical review of the FEIS, as well as the perspectives of community members heard during the Final Hearing Conference.

The purpose of this analysis is to examine how Baffinland came to the conclusion that the MRP would not significantly impact caribou in the Qikiqtani Region, to determine if this conclusion was based on compelling evidence that was thoroughly compiled, presented, and referenced, and to assess if the perspectives and concerns of interested actors (including members of the public) were integrated into the EIA decision-making process.

4.1.1 Issue Scoping and Guideline Creation

The EIA process begins after a formal project proposal has been submitted, and the NIRB compiles detailed guidelines directing the proponent on how to comply with the requirements for completing an EIS. These guidelines are derived from documents outlining the general protocol for proponents completing an EIS in Nunavut (NIRB, 2007). The guidelines are then adjusted to the specific project being assessed, and community consultations are subsequently conducted to scope out potential concerns and issues that should be addressed during the assessment process. On June 24, 2009 the NIRB submitted Draft EIS guidelines for Baffinland's proposal for the Mary River Project and encouraged stakeholder feedback (NIRB,

2009). Following this review period, on August 5, 2009 the NIRB issued the Final EIS guidelines for the Project (NIRB, 2009B).

During the NIRB's Draft EIS guidelines review period, various actors voiced their opinions on how the EIS should be prepared and presented. For example, concerns were raised about how information (including scientific studies and Inuit Traditional Knowledge) referred to in the EIS should be cited and referenced. In the Draft EIS guidelines the NIRB states:

The Proponent shall support all analyses, interpretations of results, and conclusions with a review of the relevant literature, providing all references required and indicating the public availability of all works consulted. Any contribution based on Traditional Knowledge shall also be specified and sources identified, subject to any concerns relating to ownership or confidentiality. (NIRB, 2009, p. 33)

Indian and Northern Affairs Canada (INAC)²⁸ supported this guideline by stating that clear referencing significantly increases the efficiency of a review even when data, charts, diagrams, and maps, are included in the text of the EIS (INAC, 2009). In contrast, Baffinland responded to this guideline with the claim that providing references is likely not possible in all cases (research may be out of print or unpublished) and that this requirement is "well beyond standard practice" of technical writing and EIA specifically (Baffinland, 2009, p. 3).

²⁸ Indian and Northern Affairs Canada is a department of the Canadian Federal Government that was renamed Aboriginal Affairs and Northern Development Canada (AANDC) in 2011. Both acronyms are used interchangeably throughout this thesis.

Other actors felt that the NIRB's referencing requirements needed to be expanded. For example, the Qikiqtani Inuit Association (QIA) commented that all cross-referencing in the EIS should include the document name, section, and page number so that readers could be easily guided to information provided in various volumes and appendices of the EIS (QIA, 2009). In the final EIS guidelines, the NIRB reiterated the requirement for referencing and added QIA's suggestion about cross-referencing (NIRB, 2009B, p. 21).

It is evident even at this early stage of the EIA process that actors (such as NIRB, QIA, and INAC) felt that the EIS should be based on thorough and clearly cited evidence, and that information should be presented in a clear, organized, and transparent way so that it could be evaluated. To a certain extent, Baffinland seemed apprehensive regarding this, for example expressing a concern that the NIRB guidelines placed unrealistic expectations on them, making it impossible to complete a concise and efficient EIS (Baffinland, 2009). Baffinland cited the NIRB's use of absolute language such as "any", "all", and "comprehensive" as problematic as it requires that the EIS evaluate *all* possible interactions between the project and the Valued Ecological Components (VECs) and Valued Socio-Economic Components (VSECs), using *any* existing information or studies available. As a result of these requirements, Baffinland felt that actors would be able to easily argue that the EIS did not comply with the guidelines regardless of the thoroughness of the EIS. In general, Baffinland felt that the NIRB should soften the language used in the guidelines to allow the Proponent more discretion when evaluating potential impacts of the project (*ibid.*).

Tensions around how information should be gathered, presented, and referenced in the EIS continued throughout the EIA process. The remainder of this chapter will further explore these issues, focusing specifically on Baffinland's assessment of the Project's potential to impact caribou.

4.1.2 Baffinland's Assessment of Caribou Impacts in the Draft Environmental Impact Statement

The purpose of an EIS is to present information on the likely impacts of a development project in a way that it can be evaluated by others. However, Baffinland went beyond this by explicitly and repeatedly emphasizing what they believed to be the quality and thoroughness of their assessment. This was particularly noticeable in the description of the assessment of the potential for the Project to impact caribou in Volume 1 of the DEIS:

The terrestrial and wildlife habitat baseline report provides the most extensive and thorough summary of North Baffin Island caribou currently in existence. It summarizes and synthesizes the history of government surveys, local harvest, IQ, habitat use, and terrestrial wildlife surveys, and is one of the most in-depth analyses of caribou habitat selection completed in Nunavut. (Baffinland, 2011, p. 58)

An examination of Baffinland's assessment of caribou impacts raises questions about this superlative description. In Volume 6 of the DEIS Baffinland explains their assessment of potential impacts on caribou, and also how they

reached the conclusion that the Project's impacts on caribou will not be significant (Baffinland, 2011C). They state that there are "four measurable parameters that allow us to predict the effects of the project on caribou and that these are habitat, movement, mortality, and health" (Baffinland, 2011C, p. 127). They explain that scoping and assessment of the interactions between caribou and the Mary River Project were informed by scientific study, Inuit Qaujimagatuqangit (IQ), consultations with QIA and community members, as well as by the NIRB EIS guidelines (Baffinland, 2011C).

Baffinland briefly cites a number of scientific studies that have reported on the effects of industrial activity on caribou habitat. This discussion is meant to provide the baseline information that will inform Baffinland's own assessment of the Project's impact on caribou. However, Baffinland also cautions that the conclusions of these studies are varied, that factors may be herd- and location-specific, and that the predictive power of these studies may be limited to their own specific contexts (Baffinland, 2011C, p. 129).

For the other three parameters used to assess the impact on caribou (movement, mortality, and health) a similar discussion of potential impacts is provided although it is notable that no existing studies are cited. As discussed in Chapter 1 of this thesis there are a number of existing studies that Baffinland could have consulted when assessing these parameters (see. Bradshaw et al., 1997; Cameron et al., 2005; Dyer et al., 2001; Nellemann et al., 2001; Reimers et al., 2007; Vistnes et al., 2004; Weir et al., 2007; Wolfe et al., 2000).

Following these initial descriptions of the four parameters, the DEIS explains that "Habitat and movement effects were predicted using a quantifiable procedure. Mortality and health effects were assessed qualitatively" (Baffinland, 2011C, p. 131). Based on these assessment methods it is concluded that although there will be negative impacts on caribou habitat, movement, and mortality, these impacts will not occur at a scale significant to the North Baffin caribou population (*ibid.*, p. 149). In other words, Baffinland concludes that the Project will not significantly impact caribou, and therefore the MRP should not be refused approval on these grounds. It is also notable that Baffinland admits that caribou health was not assessed for the DEIS but simply indicates that follow-up studies will be conducted at an unspecified later date (*ibid.*). It is unclear how this knowledge gap was considered, if at all, in Baffinland's conclusions about caribou impacts.

Throughout the DEIS Baffinland states that IQ was considered in the assessment (e.g. Baffinland, 2011B, p. 13, 14, 25; Baffinland 2011, p. 75; Baffinland, 2011C, p. 124, 130, 140). However, based on the assessment methods applied, Baffinland's claim that IQ was used to measure the potential impacts on caribou is questionable. For example, the assessment of caribou habitat relied solely on quantifiable data, gained through scientific studies, which was then plugged into predictive models (Baffinland, 2011C, pp. 131-134). To assess the likelihood that project infrastructure would pose a barrier to caribou movement, aerial surveys as well as IQ surveys²⁹ were conducted. However, these studies were only used to determine the probability that caribou would come in to contact with project

²⁹ Again, as it the case throughout the EIS, this claim is made by Baffinland but formal references to these IQ surveys are not provided.

infrastructure. It was left to "professional opinion", in other words Baffinland's judgment, to determine whether or not this infrastructure would impact caribou migration (*ibid.*, p. 136).

Finally, it is questionable if IQ (or significant scientific research, for that matter) was used at all to determine the impacts on caribou mortality. Baffinland briefly states that their policies give wildlife the right-of-way over project activities and that "with the appropriate mitigations, monitoring and the implementation of a comprehensive wildlife policy, the effect of the mine on caribou mortality will be minimal" (*ibid.*, p. 147). The final conclusion reached in this section of the EIS is that the Project will not significantly impact caribou in the region.

4.1.3 Technical Review of the Draft Environmental Impact Statement

The lack of evidence presented (and the failure to provide references for much of the information offered) did not go unnoticed by the actors that reviewed the DEIS. Following Baffinland's submission of the DEIS, the NIRB completed an internal conformity review and determined that the submission met the requirements laid out in the EIS guidelines (NIRB, 2011). Following this, the technical review commenced on February 15, 2011, and actors were asked to submit written Information Requests (IRs) to be considered by the NIRB, Baffinland, and all other interested parties (*ibid.*). A number of actors, including the GN, INAC, and the QIA, submitted a significant amount of feedback on the DEIS. On the surface this feedback may be taken as an indication that EIA in Nunavut is a participatory process that holds project proponents accountable to the input of other actors.

However, a closer examination of Baffinland's responses to the specific concerns raised by actors questions this assumption.

Considerable concerns were voiced regarding the incomplete nature of the DEIS, and the lack of clear and sufficient evidence for assessing the Project's impact on caribou. These concerns highlight a flaw in the structure of EIA processes that place the responsibility of identifying impacts and potential solutions on the project proponent. It has been argued that when proponents are responsible for producing an EIS, they may choose to highlight only the potential impacts that they can easily explain, and only do so if they also have a technical solution for mitigating the impact (Li, 2009).

This practice was evident during the Mary River Project EIA. For example, the GN questioned conclusions made by Baffinland about how the Project will interact with caribou movement by stating: "Please provide an assessment of how high frequency train movements may impact caribou and other wildlife, including potential effects of noise, vibration, and visual stimuli" (GN in Baffinland, 2011E, p. 25). In response to this concern Baffinland admits that "The potential effect of vibration on caribou was not addressed because no relevant information or studies could be found" (Baffinland, 2011E, p. 25). Despite admitting that a knowledge gap existed, Baffinland did not comment on how this lack of information had influenced their conclusion that the Project will not impact caribou.

The GN followed up this concern with another regarding how project infrastructure may deter caribou migrations: "It is assumed in the DEIS that caribou will easily pass under bridges and over tunnels associated with the railway. Please

provide supporting evidence that caribou will use these crossing corridors" (GN in Baffinland, 2011E, p. 34). Again, despite being explicitly asked to do so, Baffinland failed to provide supporting evidence on this issue. Instead, the Proponent responded with the vague statement that "Caribou are *expected* to be able to cross the railway and pass under bridges if desired" (Baffinland, 2011E, p. 34, *emphasis added*).

The QIA also requested that Baffinland provide more information, specifically about the potential interactions between the Project and caribou calving grounds during cyclical highs and lows in caribou population. In response Baffinland stated that they "*expect* that habitat preference is similar during population highs and lows" and alluded to studies that they have completed (without providing a specific reference) to back up this assertion (Baffinland, 2011E, p. 74, *emphasis added*). Given the lack of detail provided, and Baffinland's reluctance to directly answer the questions being asked, it is unclear whether these *expectations* are based on evidence or not.

Overall, Baffinland's responses indicate that they had limited motivation to genuinely consider the views of all actors involved, and thoroughly address the IRs. This is likely related to the fact that the DEIS had already passed NIRB's internal conformity review, meaning it had been deemed to meet NIRB's general EIS submission guidelines. Furthermore, given the vague and at times dismissive nature of Baffinland's responses to IRs, it was asserted that stakeholder concerns were not

adequately addressed³⁰. This seems to indicate that the perfunctory progression of the EIA process (of collecting information, producing documents, and gathering stakeholder feedback, etc.) takes precedence over the actual evaluation of the content created during these processes (Li, 2009).

4.1.4 Public Response to the Draft Environmental Impact Statement

After the technical review was completed, the NIRB held public information meetings from April 9, 2011 to May 9, 2011 to gather feedback on the DEIS from all 11 impacted communities. The issues discussed during these meetings were compiled by the NIRB in the Public Information Meetings Summary Report (NIRB, 2011).

Community members raised concerns about Baffinland's assessment of the Project's potential impacts, and many expressed strong disagreement with the conclusions drawn in the DEIS³¹. For example, a community member from Resolute³² stated: "I'm in disagreement with the company's conclusions on all VECs especially with respect to their non-significance determination" (NIRB, 2011, p. 50). Another community member from Pond Inlet commented on how exploration

³⁰ The QIA stated in written communication that 42/97 (over 40%) of the concerns they raised about the DEIS were not adequately addressed by Baffinland's responses (QIA, 2011). There are no records of other actors formally commenting on the adequacy of Baffinland's responses to their IRs.

³¹ By presenting these perspectives I am not making the claim that they represent the views of all community members in the Qikiqtani Region, or even the dominant views of communities in the region. The purpose of presenting these perspectives is twofold: to raise questions about claims made by Baffinland that the project will not have any negative impacts on caribou; and to determine the extent that community perspectives (especially when they disagree with those of Baffinland) are considered and integrated into the EIS.

³² When documenting community concerns the NIRB divided statements based on the community they originated in but did not include individuals' names.

activities have already impacted wildlife: "Many predictions of no impacts to wildlife from the project are not true as wildlife is presently impacted. So the prediction of non-significance is incorrect" (*ibid.*, p. 44).

Many community members expressed concerns related specifically to Baffinland's assessment of impacts on caribou and harvesting. For example, an individual from Hall Beach stated: "I went hunting recently but got lost as I couldn't find any caribou. I remember before exploration commenced there was an abundance of caribou. Once Baffinland exploration activities commenced, including aircraft flights, the calving grounds of caribou were affected" (NIRB, 2011, p. 31). A community member from Pond Inlet also raised concerns about caribou: "We've heard that there'll be no significant impact to wildlife et cetera. We have to go far distances to hunt for caribou and yet Baffinland continues to tell us there'll be no significant impacts but that's false" (*ibid.*, p. 46). An individual from Arctic Bay voiced a similar sentiment: "Also caribou calving grounds will be impacted. We presently have to go to Repulse Bay to hunt caribou. Professionals in this room are making money but we value our wildlife" (*ibid.*, p. 49).

Although the NIRB documented the considerable concerns that community members had with the DEIS, there is no indication that Baffinland was required to formally respond to any of these concerns, and it is unclear how Baffinland would be made to incorporate this feedback into the FEIS³³. Despite this uncertainty, the then-Executive Director of the NIRB, Stephanie Autut, stated that the public information

³³ The NIRB did provide the vague statement that issues raised at the public information meetings will contribute to "the remaining steps in the Review for the proposed Mary River project" (NIRB, 2011, p. 5). However, my subsequent discussion about the FEIS raises questions about the extent to which this actually occurred.

meetings "were successful owing to the active participation of local organizations and community members... (NIRB, 2011, p. v)". The "success" of the event is therefore based on the fact that community participation *occurred*, as opposed to any admission that community concerns were, or would be, addressed. Although community members and other actors (such as the GN and QIA) pointed out the lack of evidence presented in the DEIS, and voiced considerable disagreement about the conclusions Baffinland reached, the EIA process was allowed to proceed to the next stage.

4.1.5 Baffinland's Submission of the Final Environmental Impact Statement

Given that it is unclear how Baffinland would be held accountable to address concerns raised about the DEIS, it is unsurprising that when examining Volume 6 of the FEIS (specifically Section 5 that focuses on caribou impact assessment) that it is evident that much of the content is the same as in the DEIS. For example, the subsections on "issues scoping" and "assessment methods" are copied word for word from the DEIS³⁴. The remainder of Section 5 in Volume 6 generally follows the same format as in the DEIS. The assessment methods for measuring impacts on caribou (including habitat, movement, mortality, and health) have not changed since the DEIS, meaning that local input was collected but largely ignored. However, despite this overall lack of improvement to their assessment methodologies, Baffinland supplied some additional information in the final EIS throughout the

³⁴ This represents more than 1/3 of the total length of the analysis on caribou.

assessment (outlined below) in an apparent attempt to better support their conclusions.

Some of the additional information that Baffinland has provided does seem to be a direct response to concerns raised by actors. Whether or not this added information adequately addresses actor concerns is questionable, however. For example, in response to the DEIS the QIA requested that "... the Proponent provide an assessment of the risk to caribou from annual and cumulative levels of metals from dust affecting forage plants in the caribou diet" (Baffinland, 2011E, p. 75). Environment Canada also requested more information regarding the methods that Baffinland would employ to suppress dust (*ibid.*, p. 17). Throughout Volume 6 Baffinland has added a number of statements about how dust created by project activities may impact caribou. For example, in the section describing caribou habitat assessment methods Baffinland has added the following statement:

Dust may be generated from mining activity at the Mine Site; however, the train will not generate significant dust and the port facility will generate minimal dust. Transport of equipment from Milne Inlet port along the tote road will produce dust, but the road will mostly be used during construction, and only intermittently during operation. Consequently, dust generation along the road will be reduced compared to the mine site. Therefore, the mechanism reducing caribou use around the Railway, tote road, and ports sites will be sensory disturbance from human activities as opposed to dust (Baffinland, 2012C, p. 141).

This statement attempts to recognize the potential exposure of caribou to dust, but it is extremely vague. For example, this statement does not qualify or explain what is meant by "significant dust" or "minimal dust". Baffinland also fails to direct readers to additional data, studies, or estimates on the dust creation expected from the mine, road, or railway. It is also interesting that Baffinland admits in the statement above that sensory disturbance from the railway (as well as the road and port sites) is the significant factor that may hinder caribou use of the area. As was mentioned earlier, Baffinland did not assess the sensory impacts of the train as this information was not available to them (Baffinland, 2011E, p. 25).

In a subsequent discussion on the assessment methods used to evaluate impacts on caribou health, Baffinland directs readers to a report contained in Appendix 6G-2 (Baffinland, 2012C, p. 146) that was produced by Intrinsik Environmental Sciences Inc. on behalf of Baffinland (Intrinsik, 2011). Baffinland briefly discusses the purpose of the report, i.e. to assess the impacts of dust on caribou health, and some of the methodologies used to do so (Baffinland, 2012C, pp. 146-147). Interestingly Baffinland does not discuss the outcomes of the report. Therefore, it seems that Baffinland's mention of the report is motivated by an aspiration to convey technical rigour, rather than a genuine desire to provide evidence to support the assessment.

Analysis of the actual content of the report supports this claim. It is noted in the report that the conclusions are based on extrapolating studies from the Diavik and Ekati mines³⁵, and although these studies indicate that exposure potential for

³⁵ Both are diamond mines located near Yellowknife in the Northwest Territories.

caribou to dust created is low, there is a degree of "uncertainty in this conclusion as a result of a lack of site specific data" (Intrinsic, 2011, pp. 19-20). Based on Intrinsic's cautious conclusions in the report there is no basis for Baffinland's assertion that they have "high confidence in prediction" that dustfall created by the Project will not impact caribou health (Baffinland, 2012E, p. 170).

The report also recommends that a lichen and soil study be conducted to provide baseline data that will be useful for monitoring the impacts of dust creation on caribou during the life of the Project (Intrinsic, 2011). However, Baffinland does not mention this recommendation in its proposed mitigation measures (Baffinland, 2012C, p. 170). Instead, Baffinland vaguely describes the proposed mitigation as "standard operating protocols to minimize dust deposition" (*ibid.*).

4.1.6 Technical Review of the Final Environmental Impact Statement

Again, as was the case following Baffinland's submission of the DEIS, actors raised considerable concerns about the Proponent's assessment of caribou in the FEIS. For example, the GN argued that Baffinland's choice to measure impacts at the scale of the entire North Baffin caribou range (rather than at the more relevant scale of the Regional Study Area³⁶) likely biased the conclusion towards a "low magnitude" impact (GN, 2012, p. 16).

The QIA also raised a number of concerns about the FEIS. They stated that Baffinland's assessment does not sufficiently consider the precedent that would be

³⁶ The Regional Study Area is defined as "the area within which there is the potential for indirect or cumulative biophysical and socio-economic effects" (NIRB, 2009B, p. xi). See Figure 3 on page 11 for a map of the RSA.

set, and the implications of, building the first mine site and railway in Canada on caribou calving grounds (QIA, 2012, p. 33). Furthermore, QIA points out that the analysis in the FEIS admits that in other cases (such as in Alaska) industrial development has reduced caribou habitat use, but it fails to examine the impacts of development on calf survival, or to mention that in Alaska extremely low harvesting levels are required to offset the effects of industrial development (*ibid*).

Despite a number of clearly expressed concerns about the insufficient, biased, and inaccurate nature of Baffinland's assessment of impacts on caribou, the Proponent was not required to re-submit an improved assessment. Rather, as with previous cases where flaws in Baffinland's EIS were pointed out, these concerns were merely registered, and the EIA process was allowed to move on to the next stage, which in this case was the Final Hearings.

4.1.7 Final Hearings and Response to the Final Environmental Impact Statement

The Final Hearings were held in July 2012 over a number of days in the communities of Iqaluit, Igloolik, and Pond Inlet³⁷. These provided the venue for all actors involved in the EIA process to provide their final comments on the FEIS and the Project in general.

During the Final Hearings the acting chair of the NIRB, Elizabeth Copeland, emphasized the importance of actor participation in ensuring that the NIRB had "a full and fair basis for our decision and recommendations" (NIRB, 2012E, p. 1340).

³⁷ Individuals from other potentially impacted communities were invited to attend meetings in these three centralized locations.

Copeland went on to stress that the final hearings were structured in a way to facilitate this participation to the greatest extent possible (*ibid.*).

In each of the three communities where hearings were located, day-long technical sessions were held "so that technical experts and interveners [could] present evidence and respond to technical questions from the proponent, from the interveners, and from the Board" (*ibid.*, p. 1341). Although these technical sessions were open to the public, community members were not encouraged to actively participate at this point (*ibid.*).

During these sessions Baffinland reiterated the conclusions in the FEIS. In relation to caribou they stated: "After design and mitigation, the Project is expected to cause no significant effects on caribou habitat, movement, mortality, and health" (Baffinland, 2012D, slide 76).

This perspective was not shared by other actors attending the Final Hearings. As during previous phases of the EIA, considerable concerns were expressed about the Project, Baffinland's FEIS, and specifically about the potential for adverse effects on caribou. For example, during their presentation the GN stated that it is likely that the Project could have a significant impact on caribou (GN, 2012B). They pointed to multiple stressors (e.g. mine site, railway, and roads) within the calving ground of a sensitive caribou population, and indicated that the impacts on caribou due to year-long use of infrastructure, as well as the effectiveness of mitigation measures remain unknown (*ibid.*).

The QIA also voiced their ongoing concerns about the project and the FEIS. They stated that limited baseline information led to shortcomings in the assessment

of effects, mitigation plans, and monitoring of caribou (QIA, 2012B). They also noted that significance as described throughout the EIA by the proponent does not equate with Inuit understandings of significance, and that if the project goes ahead major impacts will occur (*ibid.*). It is clearly evident that the statements from these actors directly contradict Baffinland's claims that the Project's impacts on caribou have been thoroughly assessed and will be insignificant. Despite the potential risks of significant negative impacts on caribou both the GN and the QIA agreed that the project should be approved due to the predicted benefits of the mine (GN, 2012B, QIA, 2012B)³⁸.

Following the technical sessions two days of community roundtables were held in Iqaluit, Igloolik, and Pond Inlet. These allowed community members to ask questions and provide their perspectives on the FEIS and the Project in general. Again, as with previous rounds of public consultation perspectives about the mine were mixed. Some community members stated their support for the project and the jobs that it would bring. For example, Abraham Ulayuruluk from Igloolik commented: "Baffinland wishes to build a mine at Mary River. I am not only going to say thank you, but like I said, there's barely any jobs available here for the young people, but I'm very pleased that they may be employing people in our -- from my community because they have to make an income" (NIRB, 2012F, p. 1859). Simon Idlout from Resolute Bay also voiced his support for the project: "I'm supporting the company and the fact that you're going to be mining in the Mary River Project... You're being very cautious not to damage the land" (NIRB, 2012H, p. 1034).

³⁸ Reasons for this will be discussed in the following section and in Chapter 5.

Others, however, voiced concerns about the project and some felt that the MRP should not be approved. Francis Piugattuk from Igloolik stated: "I'm here to tell you that, based on the information that you receive about this project, I'm here to recommend that you not approve this, because this is my land that will be disturbed and impacted, and it will never -- back to -- it will never go back to its normal self" (NIRB, 2012G, p. 1901). Salomon Mikki from Igloolik expressed concerns about the mine when addressing Baffinland: "How could you take our land away from us? And you have -- you're saying that there's going to be no impacts to the land. We can already see it" in terms of impacts from exploration (NIRB, 2012F, p. 1839).

Some community members spoke directly about the Project's potential to impact caribou. Speaking about shipping at Steensby Inlet, David Irngaut stated: "...caribou used to go there. But once the ship route is in operation, they are not going to be there anymore" (NIRB, 2012F, p. 1864). Irngaut further stated: "And the people who lives [sic] in Arctic Bay and Pond Inlet, that would be my concern about their caribou -- caribou habitat... Like, when you were showing the slide [referring to Baffinland's presentation] I noticed there was a caribou trail. Perhaps if you don't cross over the caribou crossing path as perhaps move -- move the railway somewhere else" (NIRB, 2012F, p. 1867).

Solomon Qanatsiaq from Hall Beach also raised concerns about how the MRP infrastructure would impact caribou and how this issue was assessed in the FEIS by stating: "I want you to make sure that these migration routes are kept free and open for caribou, and I think we misunderstood earlier that you're going to make an embankment for caribou to cross just like human beings will be able to cross

through, you mentioned that we're going to be able to cross through the embankment ourselves as well as the wildlife, and I don't think the wildlife are going to think like human beings. They don't have boundaries" (NIRB, 2012H, p. 1009).

There were also a number of concerns raised about the EIA process in general and whether or not the NIRB, government agencies, and Inuit organizations were acting in the interest of community members. For example, Francis Piugattuk from Igloolik stated: "They want to destroy the land, the Nunavut Government, the Federal Government, the Inuit associations. I thought they were representing me, but even the local groups in town that should be representing us seem to be in support of this project" (NIRB, 2012G, p. 1901).

Others questioned whether it was inevitable that the MRP would be approved. Salomon Mikki questioned whether the NIRB had the power or any intention to reject the project: "So I wonder if there's any possibility that the Board can say no to this project because we've been impacted already?" (NIRB, 2012F, pp. 1839-1840).

Finally, concerns were raised about how the Final Hearings were facilitated and how this restricted the full participation of community members. Community members expressed concern that they were not given enough time to ask questions and have them responded to. Celina Irngaut from Igloolik stated: "I'm not really happy about the fact that we're -- we're being rushed and that the person prior to me asking was -- seemed to be left with some questions that she might have wanted

to ask that may have been useful. So why aren't you going to stay longer?" (NIRB, 2012G, p. 1961).

Other community members were concerned that they were not given the opportunity to provide their own information, but rather, only had a limited time to ask questions about information that was provided by Baffinland, the various government agencies and Inuit organizations involved in the EIA. For example, Gamilie Kilukishak from Pond Inlet stated: "I wonder if it is possible for me to say my part? I know about the north far more than the other people that were sitting here yesterday, and they -- in turn, they know scientific knowledge, the knowledge that I don't have as well, and we have adopted some of the knowledge. I wonder if I could do a lengthy comment the way that other presenters presented yesterday?"³⁹ (NIRB, 2012H, p. 1024).

Statements from community members during the final hearing indicate that feelings about the MRP remained mixed after the FEIS was submitted. Some community members supported the project while others still harbored concerns about possible impacts, specifically (but not limited to) impacts on caribou, and how these impacts were assessed in the FEIS. Given that the FEIS was already submitted by Baffinland, and that it passed the NIRB's conformity review, it is unlikely that the community statements had any bearing on the final content in the FEIS⁴⁰.

³⁹ The facilitator of the hearing reiterated that members of the public could ask any questions to the parties present but did not directly answer the question of whether or not Kilukishak could do an extended presentation. Kilukishak responded: "I don't have any questions too much, so I'll just stay quiet for now" (NIRB, 2012H, p. 1025).

⁴⁰ Baffinland was not required to revise the FEIS before the NIRB made its final decision on the Project.

Throughout the Final Hearings the NIRB did state that input from communities would contribute to their final decision on whether to approve the Project or not (NIRB, 2012E, 2012F, 2012G). Although this was stated, it is unclear if community concerns and outstanding issues would be systematically considered by the NIRB.

After the Final Hearings concluded, the NIRB determined that the MRP should be approved, despite ongoing concerns raised by community members, and recognition from the QIA and GN that the assessment was incomplete and that impacts on caribou were not thoroughly assessed. After getting the final stamp of approval from the Federal Minister at AANDC, the MRP was granted a project certificate on December 28, 2012 (NIRB, 2012D).

4.2 Theorizing the Decision to Approve the Mary River Project

The analysis above indicates that throughout the EIA process a number of actors such as the GN, the QIA, INAC, and members of the public repeatedly raised considerable concerns about the potential of the Project to negatively impact caribou, and stressed that Baffinland needed to provide more evidence to support their assessment that no significant negative impacts would occur. These interventions failed to have a meaningful impact on the information that was included in the final assessment of impacts on caribou or Baffinland's conclusion that impacts on caribou would be insignificant.

How can this outcome be explained given that the EIA process in Nunavut is supposedly structured to ensure that it is inclusive, thorough, objective, and that

any conclusions reached are to be evidence-based and informed by the input of all participants involved? Furthermore, how could the assessment of the potential effects on caribou, recognized as incomplete and biased by many of the EIA participants, be accepted by the NIRB as part of a submission that led to the approval of the MRP? This is not to suggest that the potential of the project to impact caribou should be grounds alone to refuse the MRP proposal. However, since Inuit individuals and groups expressed the importance of caribou to their culture and livelihood; shouldn't it follow, then, that caribou be genuinely assessed in the EIA, and given that it is not, is possible that other important issues may not have been thoroughly assessed?

Existing critical analysis of EIA sheds some light on how this outcome may have been made possible. For example, it has been suggested that EIA processes that encourage the participation of various actors create collaborative relationships between project proponents, government agencies, and the public (Li, 2009). Collaboration does not mean that all actors share the same perspectives (which is evidently not the case regarding the MRP on the basis of the discussion above); rather, it refers to the way that "EIA enfolds individuals and institutions into itself regardless of whether or not they agree with its content" (*ibid.*, p. 228). Furthermore, by merely participating in the process, government agencies, Inuit organizations, and members of the public contribute to a sense that EIA processes are open and inclusive, and that the outcomes of these processes are reached through consensus. As a result, the EIA process is legitimated, and it becomes extremely difficult to contest decisions to approve mining projects in Nunavut.

Analysis of the EIA process for the MRP indicated that, beyond merely intervening in the assessment, certain actors had a tendency to actively frame their participation in a language of expertise, effectiveness, collaboration, thoroughness, and authority. For example, during their presentation at the Final Hearings, the GN emphasized that they have "been an active participant in the NIRB review process", by contributing data, expertise, and comments to the review of EIS documents, and by having "worked co-operatively with the Proponent throughout the assessment process" (GN, 2012B, slide 4). Similarly, the NIRB also emphasized the thoroughness of their work by stating:

The NIRB considered the information contained within the draft and final Environmental Impact Statements filed by Baffinland Iron Mines Corporation, as well as the substantial written comments, information requests and final written submissions filed by federal, territorial and local government, designated Inuit organizations and members of the public throughout the course of the Review. The NIRB also carefully considered comments, evidence and advice from community representatives, members of the public and formal interveners throughout the Review. (NIRB, 2012, p. 1)

In other words, government agencies that have a mandate to participate in EIA processes also seem to have an incentive to present these processes as effective and efficient in order to legitimize their own work. These two factors, the participation

of actors, as well as actor articulations of their participation, creates an atmosphere where it is difficult to question the outcomes of EIA processes in Nunavut.

In summary, this discussion has highlighted how, throughout the EIA process, actors raised significant concerns about Baffinland's failure to provide substantial evidence to back up their assessment, their failure to provide references for much of the evidence they did offer, and their failure to genuinely consider community perspectives. Although these concerns were repeatedly raised throughout the EIA, they were generally unheeded as the process moved from stage to stage.

Ultimately this shows that despite claims that the EIA process in Nunavut is a comprehensive tool that uses scientific evidence, IQ, and the input of all actors to assess the environmental and socio-economic impacts of resource projects, it is, rather, a process that allows project proponents to frame resource extraction in ways that privilege and further their own interests, while downplaying any potential for negative impacts related to mining. Furthermore, this shows how actors (including Baffinland, the NIRB, and the GN) explicitly framed their participation in the EIA process as efficient and thorough, and in doing so reinforced the idea that the information contained in the EIA documents, as well as the outcome of the process, was authoritative and legitimate.

The "will to approve"⁴¹ Baffinland's proposal overrode substantial concerns regarding the Project's potential to negatively (and significantly) impact caribou in

⁴¹ I borrow this concept - slightly adjusted from the "will to improve" - from Tanya Murray Li (2007). Li uses the concept of will to improve to explain the persistence of experts in the field of

the region. This *will* can in part be linked to the role of trusteeship that government institutions such as the NIRB, the NTI, and the QIA occupy. Positions of trusteeship are built on claims "to know how others should live, to know what is best for them, to know what they need", where "The objective of trusteeship is not to dominate others - it is to enhance their capacity for action, and to direct it" (Li, 2007, pp. 4-5).

This position of trusteeship is reflected in the mandates of government organizations in Nunavut. For example, the NIRB states in their mandate "the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area" (NIRB, 2014). Similarly NTI states "NTI's mandate includes safeguarding, administering and advancing the rights and benefits of the Inuit of Nunavut so as to promote their economic, social and cultural well-being through succeeding generations" (NTI, 2000B). The QIA states "The Qikiqtani Inuit Association (QIA) is aimed at representing the interests of the Inuit of the Baffin Region, High Arctic and Belcher Islands in a fair and democratic way" (QIA, 2007).

Despite recognition from the NIRB, the QIA, the NTI, and the GN that the MRP would likely result in significant negative impacts on caribou, and that Baffinland failed to provide a convincing assessment of these impacts, these organizations all ultimately supported the approval of the Project. By endorsing the approval of the MRP, these actors expressed a belief that economic development takes precedence over other concerns of Nunavummiut.

international development to propose improvement plans despite their repeated shortcomings and failures.

Chapter 5: Assessing Inuit Harvesting through Narratives of Capitalism as Development

The previous chapter documented and discussed the concerns that actors repeatedly raised about Baffinland's assessment of the Project's potential to impact caribou. Many actors claimed that Baffinland's assessment lacked sufficient evidence, that information was not referenced in a clear and thorough manner, and that the perspectives of Inuit (specifically regarding the significance of negative impacts) were not genuinely considered. In light of these concerns, and Baffinland's failure to address them throughout the Environmental Impact Assessment (EIA), it was surprising that the Project was granted approval. To explain this outcome the previous chapter concluded with the argument that there seems to be a strong will to approve resource extraction projects among the many actors in Nunavut, and linked this motivation to the position of trusteeship that authoritative actors in Nunavut take up, and a belief that economic development should take precedence over other concerns.

Arguments have been made that the historical and ongoing actions of capitalist enterprises and capitalist/colonial institutions have left Inuit in a marginalized position where they feel they have few options but to allow some industrial resource extraction in Nunavut (Bernauer, 2011, p. 138). While not entirely refuting the merit of this claim, this thesis offers another explanation: it is not only material suffering brought on by conditions of poverty that have contributed to this dependence on mining in Nunavut, but rather it is an evolving

history of governmental rationalities and an associated epistemic violence⁴² that has produced this will to approve as their effect (Veyne, 1997). This chapter will explore and elucidate this claim by examining how Baffinland assessed the potential impacts of the Project on Inuit harvesting practices.

5.1 Capitalism qua Development in Nunavut

About a year and a half ago, we witnessed the coming into being of one of the most important accomplishments of the Agreement [NLCA] – the birth of the new territory of Nunavut. By this act alone, we have brought government closer to the Inuit people so that they can have a more direct say in what is happening around them... Inuit were once on the outside of the mining industry looking in. The signing of the Agreement changed all that. Now, for many reasons, we feel we can be considered part of the mining industry and that we are no longer on the outside. - James Eetoolook, First Vice-President of NTI (NTI, 2000)

Joel Wainwright's theorizations on development processes in Indigenous contexts uncovers the relationships between development, colonialism, capitalism, and the territorialization of space (Wainwright, 2008). In his work he argues that the word *development* has a number of distinct meanings that are often conflated in ways that have significant effects. For example, he states that "when we refer to 'national

⁴² Spivak uses the term "epistemic violence" to emphasize the use of western epistemologies as justification for colonial forms of dispossession (violence through epistemology), as well as to understand that dominant epistemologies can also silence other ways of knowing (violence on epistemology) (Morton, 2003; Spivak, 1990).

economic development,' for instance, we at once refer to something that is desirable, that requires willful intention, and also is a 'natural' thing for the nation to do" (*ibid.* p. 7). He notes that this conflation is not made by choice, but is an effect of language that has a number of implications. First of all, since the idea of development is naturalized as a desirable intention, development plans are continuously pursued despite their repeated failures⁴³ (*ibid.*). Second, it is argued that notions of development always bring with them a sense of *directionality*, that reinforces ideas of inevitability and progress (*ibid.*, p. 8). Finally, it is argued that notions of development today always refer to "capitalism qua development", or that the deepening of capitalist social relations are taken *as* development (*ibid.*, 2008, p. 2).

Drawing on postcolonial literature⁴⁴ Wainwright (2008) links notions of development to histories of colonialism. He highlights a number of lessons that can be gleaned from this literature, with the work of Chatterjee (2001) being most relevant to the discussion in this chapter. Chatterjee's analysis reveals that in the wake of colonialism, every capitalist state promises development (specifically capitalism qua development) "as the balm for the violence of colonialism and the anticolonial struggle" (cited in Wainwright, 2008, p. 15). Wainwright expands on this relationship between colonialism and contemporary forms of capitalist development by introducing the concept of *territorialization*, defined as "the production of the space of the nation-state" (2008, p. 21). Highlighted in this

⁴³ A number of critical scholars have illustrated that since the "age of development" (a period beginning after the Second World War when "developed" nations, multinational institutions, and NGOs pursued broad plans to accelerate development internationally) global inequality has actually increased and been reproduced (for examples see Escobar, 1995; Wainwright, 2008).

⁴⁴ Wainwright cites a number of scholars in this discussion including, but not limited to: Chatterjee, 2001; Gidwani, 2002; Gupta, 1998; Mitchell, 2003; Spivak, 1994.

discussion is the use of a number of mechanisms such as maps and treaties that naturalize spatial representations of the world and contribute to the hegemony of specific nation-state-territory ensembles. Wainwright argues, however, that processes of territorialization can be contested, and that inquiries "into territorialization may open productive ways to interpret the relations between colonialism, spatiality, and development" (*ibid.*, p. 23).

How do these ideas pertain to Nunavut? Official documents produced during the creation of Nunavut articulate a relationship between Inuit political identity, the territory of Nunavut, and capitalist forms of development. The Nunavut Land Claims Agreement (NLCA) works to territorialize the space now known as Nunavut in a number of ways. Article 3 of the NLCA demarcates the spatial boundary of the Territory (NLCA, 1993, p. 17), and also defines various internal spaces within the Territory based on both their suitable uses and their ownership. For example, the NLCA indicates which spaces are suitable for outpost camps, parks, conservation areas, and natural resource development (Articles 7, 8, 9, and 27 respectively), and distinguishes Inuit Owned Lands (NLCA, p. 5⁴⁵) from Crown Lands (NLCA, p. 3).

The NLCA also links these spatial configurations to the political identity of Inuit. The NLCA defines "Inuit" as "...all those members of the aboriginal people, sometimes known as Eskimos, that have traditionally used and occupied, and

⁴⁵ Official maps of Inuit Owned Lands can be found at: <http://ntilands.tunngavik.com/maps/> As mentioned in Chapter 1., upon signing the NLCA, Inuit relinquished title to their traditional territory in exchange for rights to 2% of the subsurface and 19% of the surface within the new territory of Nunavut (NTI, 2000). The NLCA is seen by many as a necessary step to increasing the self-determination of Inuit people in Nunavut. However, it has also provided legal and regulatory certainty for companies interested in investing within the territory (*ibid.*).

currently uses and occupies, the lands and waters of the Nunavut Settlement Area... " (NLCA, p. 4).

The effects of these processes of territorialization are significant and help create the power/knowledge context in which EIA processes unfold. Spivak argued that the Imperialist project worked on the assumption that newly territorialized spaces were previously uninscribed (1990, p. 1). In the NLCA, something slightly different is occurring. The ways that Inuit have historically inscribed the Territory are fleetingly recognized, but then immediately erased from legal significance as the NLCA stipulates that Inuit have relinquished all title to their traditional territory (NTI, 2000). In this way the NLCA presents a closure (from future possibilities of Inuit to contest their title to the land) and also articulates how the Territory can be inscribed in the future by linking Inuit and the legal, political, and geographical space they reside in, to specific notions of development.

In the NLCA, "development" is defined as "any commercial or industrial undertaking, any municipal, territorial, provincial or federal government undertaking or extension thereof, on land or water in the Nunavut Settlement Area" (NLCA, p. 61). Throughout the NLCA there is strong indication that this development will be realized through the expansion of resource extraction projects in Nunavut. The NLCA outlines the procedure for opening lands to natural resource extraction projects (Article 27) and outlines how Nunavummiut will benefit financially from resource royalties, and from Inuit Impact and Benefit Agreements (IIBA) (Articles 26 and 27 respectively).

A critical reading of the NLCA reveals that at the outset of the creation of the space now known as Nunavut, notions of Inuit national identity, territoriality, and capitalist development were articulated and linked together. The significance of these articulations can also be further explored by examining the nature of their production (in legal documents, official maps, and in governmental settings); all of which convey a sense of legitimacy and technical rigour, and allows these ideas to circulate as "objective" knowledge (Latour, 1988, 1999).

The circulation of this knowledge is evident in a number of subsequent documents produced by government organizations (both Federal and Territorial) in Nunavut⁴⁶. Rather than attempting to discuss all of these examples here, as this is beyond the scope of this thesis, the focus of the remaining discussion will be on how practices of governmentality involved with EIA continue to articulate and reinforce the relationships between Inuit political identity, the geographical space of Nunavut, and notions of capitalist development (and more specifically, mining).

5.2 Baffinland's Assessment of the Project's Impacts on Inuit Harvesting

Inuit in the Qikiqtani region continue to hunt caribou for food security, to acquire the materials necessary to make traditional clothing, to foster social relations through food sharing and community feasts, to pass on Inuit cultural and spiritual values related to hunting, and to generate income through the sale of harvested products (Kappianaq and Nutaraq, 2009; Kulchyski & Tester, 2007; Qikiqtani Truth Commission, 2010). Policies and processes that have marginalized

⁴⁶ For some examples of this see: INAC (2004); GN (2007); NTI (2000, 2000B, 2000C, 2009, 2009B).

hunting - such as the movement of Inuit into permanent settlements, hunting bans and quotas, and pressures on Inuit to enter the wage economy - span a number of generations. However, despite these policies and processes, caribou hunting and related activities remain an important expression of Inuit cultural identity in the Qikiqtani region (*ibid*).

Given the importance of caribou and harvesting to communities located near the proposed Mary River Project, a substantial part of the EIA focused on assessing the potential impacts of the Project on caribou populations and Inuit abilities to harvest caribou. The remainder of this chapter will examine how this was done by exploring how Inuit caribou harvesting was framed by Baffinland throughout the EIA process, how this framing determined Baffinland's assessment of the Project's impacts on harvesting, and how this assessment continues the trend of articulating capitalism *as* development in Nunavut.

5.2.1 Baffinland's Framing of Socio-economic Conditions in the Qikiqtani Region

Before examining the way that Baffinland assessed the potential impacts of the Project on caribou harvesting, I will provide a critique of how the socio-economic conditions of the Qikiqtani Region were described by the proponent. Beyond merely providing context for later assessment, Baffinland's socio-economic descriptions are particularly significant as they frame the ways that specific issues can or cannot be interpreted, discussed, and assessed throughout the EIA.

Throughout descriptions of the socio-economic conditions in the Qikiqtani region, Baffinland provides a number of maps and descriptions of the spatial

configurations of the communities impacted by the project. In a sense, what Baffinland is doing is mapping out an "object of development" (Mitchell, 2002, p. 230) that will be repeatedly invoked throughout the assessment⁴⁷. These descriptions not only explain where each community is in relation to the proposed mine, but group them into tiers based on the degree they are likely to be impacted, as follows:

Tier 1: Communities in the immediate vicinity of the Project, which have existing and historical socio-economic and/or ecosystemic ties to the project area, and for which the Project has a direct effect on the traditional land-use of their residents: Pond Inlet, Arctic Bay, Igloolik, Hall Beach and Clyde River.

Tier 2: Communities with a potential interest in the Project due to their location along the shipping lanes, and therefore have a biophysical tie to the Project: Cape Dorset and Kimmirut.

Tier 3: The community of Iqaluit, which will be affected because of its commercial and institutional importance in Nunavut. (Baffinland, 2012B, p. 1)

The purpose of these divisions is not merely to provide descriptive detail, but rather to organize the impacted communities in a seemingly objective way that allows for further calculation.

⁴⁷ By invoking the idea "object of development" Mitchell is referring to the process undertaken by planners to conceptualize a geographical area, including the people and activities within it, as a basis for devising interventions.

The people within these spaces are also described in ways that give them a "character of calculability" (Mitchell, 2002, p. 80). Volume 1, Section 5 of the Draft Environmental Impact Statement (DEIS) (Baffinland, 2011) and Volume 1, Section 3 of the FEIS (Baffinland, 2012) provide baseline descriptions that outline the socio-economic setting of the Qikiqtani Region. Baffinland refers to Inuit in aggregate groupings (e.g. Elders, youth, the labour force). These descriptions are often associated with quantifiable indicators of well-being. For example, the DEIS highlights that 28% of the adult Inuit labour force in Nunavut is unemployed, although no references are provided for these statistics (*ibid.*)⁴⁸. In other cases qualitative statements are used to express the well-being of Inuit. For example, the region is described as having a "limited wage economy" where "underemployment and lack of opportunities is causing social stress" (Baffinland, 2011, p.41).

Finally, these statements are also used to indicate broader societal patterns as well as Inuit perspectives. For example, the socio-economic baseline studies begin by describing the Inuit of this region as people that have experienced dramatic change in recent decades, noting that elders are becoming more engaged in community life and the education of youth, and that Inuit youth seem to be shifting towards Western middle-class expectations (Baffinland, 2011, p. 41; Baffinland, 2012, p. 55).

⁴⁸ At the end of the socio-economic baseline studies Baffinland does provide a general statement about their sources of information: "Study area-specific statistical data were compiled mainly from government sources, including standard and customized 2006 Statistics Canada Census data, standard and customized Statistics Canada tax file data, and a range of Government of Nunavut data. In addition, data provided by the major employers involved during the exploration and bulk sample activities were compiled (Baffinland, 2011, p. 42)". Despite this statement, it remains questionable that Baffinland failed to provide detailed referencing given that this was an issue raised by a number of actors during the EIS guidelines creation stage.

These descriptions of Inuit can be critiqued in a number of ways. First, it could be argued that they are misleading or untrue. For example, the idea that Elders are only now becoming engaged in community life is questionable given that Elders have long held a central place in Inuit society, especially in their role as educators⁴⁹. The importance of Elders in Inuit culture has been thoroughly described and repeatedly documented by Inuit themselves, as well as non-Inuit scholars (e.g. Bennett & Rowley, 2004; Isuma 2010; Kappianaq and Nutaraq, 2009).

Beyond questioning the accuracy of Baffinland's description of Inuit society, the opening statements of the socio-economic study can be critiqued for what they *do* as a narrative. For example, this narrative links together a number of themes: change, development/underdevelopment, Elder engagement in society (specifically as educators), and the preference of Inuit youth for "Western middle-class" lifestyles. This simplistic description avoids acknowledging the fact that many of the rapid changes experienced by Inuit were imposed on them by external forces, often with long-lasting detrimental effects, and that Inuit continue to negotiate and struggle with the tensions that exist between Inuit cultural values and Western lifestyles (Freeman, 1978; Kappianaq & Nutaraq, 2001; Wachowich et al., 1999).

Despite a brief allusion to residential schools, this description ignores the fact that many traumatic experiences faced by Inuit, such as coerced relocations and settlement into permanent communities, the killing of sled dogs, and a new

⁴⁹ It is true that Residential schools and a Western influenced education system have significantly altered knowledge sharing practices in Nunavut. However, it is an inaccurate over simplification to suggest that Inuit methods of education (specifically the role of Inuit elders in passing down knowledge) were completely replaced and are only now resurfacing again (Kappianaq and Nutaraq, 2009).

dependence on wage-labour, were to a large extent the result of past attempts (driven by non-Inuit) to develop the North and its inhabitants (Qikiqtani Truth Commission, 2010)⁵⁰. By ignoring the complexity of social, economic, and political realities in contemporary Nunavut (and how they continue to be linked to historical processes), Baffinland's narrative works to present a rupture⁵¹ from the past, a past shaped by colonialism, failed development policies and plans, marginalization of harvesting practices in favour of wage labour, exploitation of indigenous lands and resources, and Inuit suffering (Kulchyski & Tester, 2007; Petrone, 1988; Qikiqtani Truth Commission, 2010). Creating this "rupture" is important for Baffinland, as it provides them a clean slate to present their version of development, and their vehicle for development (the Mary River Project (MRP)), as a solution to existing socio-economic challenges.

Rather than acknowledging the complexity of issues in contemporary Nunavut, Baffinland describes the region as having a "limited wage economy" where "underemployment and lack of opportunities is causing social stress"⁵² (Baffinland, 2011, p.41). This statement identifies a clear issue that needs to be solved: a limited wage economy. It also allows Baffinland to further develop their narrative about the

⁵⁰ I am not suggesting that this omission of historical complexity and the related ongoing effects is a failure of Baffinland to meet NIRB EIS guidelines. Rather, the argument made throughout this chapter is that this omission has significant discursive effects that reinforce Baffinland's narrow assessment of impacts on Inuit harvesting practices.

⁵¹ Empirical research has shown that although experts (policy makers, economists, capitalists, etc.) often allude to a rupture from past (failed) attempts at development, new plans for intervention are often slightly altered reiterations of previous ones, as they are generally influenced by similar rationalities that drove prior development plans (Li, 2007; Mitchell, 2002).

⁵² An alternative perspective might suggest that past attempts at development that have marginalized Inuit social and cultural practices (such as language, spiritual beliefs, hunting, etc.) in preference for Western ideals about education, wage labour, housing, consumerism, etc. may be contributing to ongoing suffering and "social stress" (see Freeman, 1978; Kulchyski & Tester, 2007; Qikiqtani Truth Commission, 2010, Wachowich, 1999 for examples of these perspectives).

socio-economic context in the region by enabling them to prescribe solutions to address the highlighted problems. Critical scholars informed by governmentality have labeled this practice as *problematization*. Problematization involves identifying issues within a population or territory, not only to think about possible interventions, but also doing so in a way that anticipates the solutions that those proposing them have to offer (Ferguson, 1994; Li, 2007). Given that Baffinland is able to provide job opportunities, it is unsurprising that they would frame unemployment as the significant barrier to Inuit well-being in the region.

Throughout the socio-economic baseline study, Baffinland not only emphasizes the need for job creation, but also emphasizes Inuit desire for jobs (particularly in the mining sector). For example, Baffinland states that "Community Elders recognize that the communities need to position themselves to enter the wage economy" and that "demand amongst residents for wage employment is very high" (Baffinland, 2012, pp. 55-56). Hinting that employment will be obtained in the mining industry Baffinland states: "People want to work, even when this work requires flying to remote locations away from the community [a common element of working in a mine]" (*ibid.*). Although Baffinland attempts to frame these issues in terms of Inuit choice and agency, as with many past attempts to develop northern communities, the underlying assumption is that Inuit desires and needs can only be met with the help and expertise of others, and through large-scale exploitation of natural resources.

Baffinland's failure to consider the colonial history of the area now known as Nunavut also allows them to present a snapshot of current political economic

structures in a way that furthers their interests. For example, they emphasize that actors such as the Government of Nunavut (GN), Nunavut Tunngavik Incorporated (NTI), and the Qikiqtani Inuit Association (QIA) all have economic incentives to support the MRP by stating that the QIA will receive payments that arise through the Inuit Impact and Benefits Agreement⁵³, the NTI will receive royalty payments, and the GN will gain revenue through fuel taxes, property taxes, and taxes on the profits earned by Baffinland (Baffinland, 2012, p. 14).

The discussion above reveals that even before readers are able to examine Baffinland's assessment of the Project's potential impacts, the Proponent has provided them with a clear narrative. This narrative describes how the Qikiqtani region has experienced dramatic change, that a limited wage economy and unemployment are the central causes of social issues in these communities, that community members (including both youth and elders) recognize the need to adapt to these conditions, and that the logical course of action is to enter the wage economy through employment in the mining sector.

Despite the failure of this narrative to capture the complexity of societal issues in contemporary Nunavut, it is continually invoked throughout the EIA process and forms a basis for Baffinland's assessment of the Project's potential socio-economic impacts. The remainder of this chapter will focus on how Inuit harvesting practices have been conceptualized, and how this conceptualization led

⁵³ As the EIA for the Mary River Project was taking place, QIA was also in negotiations with Baffinland about an Inuit Impact and Benefit Agreement. It is notable that within this agreement, a compensation fund is outlined that provides Inuit with monetary payments to offset the costs of wildlife that are killed by project infrastructure and activities (Baffinland and QIA, 2011). The existence of this compensation fund seems to contradict the claims made by Baffinland the design and mitigation measures will ensure that caribou are not killed by the Project.

to Baffinland's conclusion that harvesting practices will not be significantly impacted.

5.2.3 Baffinland's Conceptualization of Inuit Harvesting Practices

Throughout Baffinland's socio-economic baseline studies, the importance of harvesting to North Baffin communities is repeatedly emphasized. Although Baffinland alludes to the cultural significance of land-based activities, the Proponent has a tendency throughout the EIA to reduce harvesting activities to an economic pursuit.

For example, Baffinland notes that harvesting from the land is a "key livelihood component" of residents in the study area, and that the "annual economic value of subsistence harvesting in Nunavut has been estimated to be between \$30 million and \$50 million" (Baffinland, 2011, p. 41). In addition, the Proponent states that "The North Baffin land-based economy generates productive work equivalent to an estimated 356 full-time jobs annually" and that "The cost to purchase an equivalent amount of imported food [equaling the amount of country food that is harvested in the region] through local retailers is estimated at \$12 million" (*ibid.*). It is notable that descriptions of Inuit harvesting practices are framed in economic and quantitative terms and are grouped under the heading "Land-Based *Economy*" (*ibid.* p. 46, *emphasis added*).

What this discussion fails to consider is how Inuit harvesting practices, in addition to contributing to economic well-being, may also be important for social, cultural, and spiritual reasons. Whether intentional or not, this narrow presentation

of the importance of harvesting describes a context in which it could be assumed that one economic activity (harvesting) could be easily replaced by another (working for Baffinland) as long as an equivalent or greater amount of income is generated. Although this assumption is not explicitly stated, it is implied and reflected in Baffinland's assessment of the mine on harvesting practices; as will be discussed below.

5.2.4 Critiquing Baffinland's Assessment of Impacts on Caribou Harvesting

The previous chapter outlined and critiqued Baffinland's assessment of the Project's potential impacts on caribou, and the conclusion that these impacts would not be significant. It showed how these conclusions were not based on significant evidence. Despite this, Volume 4 of the EIS draws heavily on the conclusions reached in Volume 6 (i.e. that the project will not significantly impact caribou) to assess the interactions between the MRP and Inuit harvesting practices.

In order to assess whether or not the Project will affect the ability of hunters to harvest caribou, Baffinland suggests using a "theoretically measurable parameter" that calculates the harvest quantity (the weight of country food obtained) in relation to the estimated level of effort (amount of time) spent hunting (Baffinland, 2011C, p. 159). The Proponent states that changes of 5% or more in harvest quantity per level of effort "would be what is thought to be noticeable by the community", and the threshold at which significant impacts on Valued Socio-Economic Components (VSECs) may occur (*ibid*, p. 160). Based on Baffinland's questionable claims in Volume 6 that there will not be significant impacts on caribou

habitat, movement, and mortality, the proponent suggests that completing this calculation would indicate only a "1% magnitude change in the quantity of caribou harvested per level of effort anticipated" (Baffinland, 2011C, p. 164). In other words, the MRP will not have a significant impact on Inuit caribou harvesting.

This assessment methodology is problematic in a number of ways. First of all, the prediction of a 1% magnitude change is completely speculative given that both variables of the equation (how much people hunt and their harvest quantity) are unknown. Baffinland explicitly states that "Baseline data regarding harvest quantity per level of effort is unavailable" (Baffinland, 2012B, p. 207). This lack of baseline data also renders this equation useless for monitoring the Project's ongoing impact on harvesting. Even if data is collected on harvest quantity per level of effort during the life of the project it would be impossible to compare this to conditions before the mine existed.

Despite the fact that Baffinland admits that they do not actually have the data required to calculate the assessment equation they propose, they attempt to defend their methodology at a theoretical level⁵⁴:

Using the "per level of effort" component in the measureable parameter eliminates issues relating to an individual's ability to hunt due to other commitments such as holding a full-time job at Mary River. Because the level of effort is included in calculating the quantity of harvests, a full-time hunter

⁵⁴ It should also be noted that this methodology of measuring the Project's impact on Inuit harvesting, and the percentage thresholds it proscribes, seem to be invented by the Proponent as no mention or references are provided as to how it has been used in other cases.

can be equally compared to a weekend or off-shift hunter. (Baffinland, 2011C, p. 160)

Although this statement is meant to justify the Proponent's methodology, it actually alludes to the inherent flaws in the calculation, and raises questions about the validity of this "theoretically measurable parameter" as an objective measure of the Project's impacts on harvesting.

The proponent states that they have chosen this calculation so that full-time hunters can be equally compared to "weekend or off-shift hunters" (*ibid.*). Within the formulation of this equation, the amount of time spent hunting is not significant in its own right, but only in relation to how much country food is harvested. Given this, in the theoretical outcome that all community members stopped hunting altogether to work in the mine, the calculation would still result in the conclusion that the project has not negatively impacted harvesting practices. In other words, this measurable parameter suggests that if employees of Baffinland cannot make the time to continue hunting caribou, it is due to a decrease in the level of effort they apply, rather than a negative consequence of the MRP.

Although this assessment methodology is questionable, it is also consistent with Baffinland's narrow understanding of Inuit hunting as an economic pursuit. As mentioned above, the amount of time spent hunting is only considered important in Baffinland's assessment in relation to the amount of country food obtained. Because of this, the assessment does not recognize that time spent out on the land may be important to foster Inuit values about the environment and human-animal relations,

to learn navigation and survival skills, as a means for developing skills essential for becoming a successful hunter in the future, or as an opportunity for hunters to pass on knowledge to others.

The potential for the Project to impact harvesting practices is also briefly considered elsewhere in subsection 4.3 of the Final Environmental Impact Statement (FEIS). Baffinland notes that subsection 4.3 was prepared to respond to concerns about the DEIS raised by various actors such as the QIA and Aboriginal Affairs and Northern Development Canada (AANDC) (Baffinland, 2012B). These concerns varied but in general expressed the point that Baffinland's descriptions and assessment of Inuit harvesting did not reflect the broader social and cultural significance of these practices to Inuit. Introducing this addition to the assessment, Baffinland stated that the new section "is intended to provide additional discussion about how multiple interactions and effects may combine to influence Inuit harvesting and harvest culture" (*ibid.*, p. 50).

This section could hardly be considered a thorough assessment however, as it merely consists of a number of speculative claims by Baffinland about how Inuit harvesting will or will not be impacted by the Project. For example, they state that: "We also know from speaking to a small sampling of youth that their interests in how to spend their time are oriented towards more mainstream life, and that some prefer store-bought food over some country foods" (*ibid.*, p. 58). This statement is questionable given that it is based on a "small sampling" and that language such as "some prefer" is vague and unexplained.

In other examples, Baffinland states a number of ways that the Project may positively impact harvesting, suggesting that it will foster "improved life skills" (though exactly what these skills are is not explained) that could lead to a renewed interest in harvesting, that increased household income may make it easier to purchase hunting equipment and supplies, and that expanding markets (e.g. mine workers that may want country foods) might lead to more opportunities for hunters to sell their products (*ibid.*).

In this discussion any mention of possible negative impacts is quickly followed by suggestions that positive outcomes are also likely, in ways that are not always entirely logical. For example, Baffinland stated that local men and women going to work at the MRP may not be able to hunt during their work rotation, and that this could lead to a decrease in hunting, or even that it "might lead to pent up demand for getting out on the land and result in greater harvests overall" (*ibid.*).

In most cases these statements are not supported by evidence. In some instances Baffinland alludes to community perspectives to support their claims. For example, Baffinland acknowledges that harvesting is important to maintain Inuit cultural well-being but follows this by stating that "Need for job opportunities (for youth to gain self-reliance) is also frequently expressed" (*ibid.*, p. 51). While this statement may be true, Baffinland does not indicate where, when, and by whom, this perspective was expressed.

Baffinland also claims that the Project may lead to "improved wealth distribution in communities", but again, they do not provide evidence to back up this claim (*ibid.*, p. 61). From this statement Baffinland also concludes that since it is not

uncommon for individuals with income in Nunavut to provide fuel or other hunting supplies and equipment to others, that the Project may actually "be seen as reinforcing rather than weakening traditional sharing culture" (*ibid.*, p. 58).

Based on these various speculations, Baffinland states that "the potential for beneficial outcomes is equally or more highly anticipated than the potential for negative effects" (*ibid.*, p. 61).

Existing research suggests that a more thorough consideration of the ways that resource extraction projects interact with harvesting practices specifically, and Inuit well-being more broadly, would be wise. For example, it has been noted that although mines in the past have provided Inuit the chance to participate in the money economy, they do not automatically improve the economic stability and quality of life for workers (Bernauer, 2011)⁵⁵. Bernauer's research discusses a number of reasons for this. For example, although mining projects do create job opportunities, Inuit may only benefit from working as general labourers during the construction phase of projects, and may not have the education or technical skills required to maintain their employment throughout the production phase (*ibid.*). This suggests that the long-term benefit of employment at the Mary River Mine may be limited⁵⁶. If this is the case, it is also logical to suggest that the indirect benefits of working in the mine (such as providing income to foster harvesting practices) may not materialize or be sustainable.

⁵⁵ Bernauer's insights are gleaned through analysis (including interviews of mine workers and other impacted community members) of the ongoing outcomes of the Meadowbank Gold Mine and the Kiggavik Uranium Mine. Both projects are located near Baker Lake in the Kivalliq region of Nunavut.

⁵⁶ The construction phase for the Project is estimated to only last four years (Baffinland, 2012B).

Bernauer's research also suggests that mining projects have had negative impacts on the wellbeing of Inuit in the form of increased drug and alcohol use, the overcrowding of communities and homes with mine workers, and by creating a lack of people available to hunt or perform other duties in the community. Although Baffinland assumes that the two week in, two week out work schedule will give employees sufficient time to hunt (Baffinland, 2012B); this may not actually be the case. This is because the temporal schedules imposed by participating in capitalist employment conflict with those of hunting lifestyles. This is because the ability to respond quickly to environmental conditions (that may present short windows of opportunity to hunt wildlife) is restricted by set work schedules (Bernauer, 2011).

This discussion raises questions about the thoroughness of Baffinland's assessment. Despite this, Baffinland's reduction of hunting to an economic pursuit, again measured as quantity of harvest per time spent on the land, is consistent with their understanding of Inuit harvesting practices, as well as their preferred conceptualization of the socio-economic context in the Qikiqtani Region.

Although in the FEIS Baffinland has added a section to examine the many possible interactions between the Project and hunting practices, this section fails to meaningfully consider the potential for negative impacts. It is also notable that this section is added to the end of the original assessment (rather than being integrated into it) that already concludes that impacts on harvesting will not be significant. In other words, Baffinland's assessment reinforces the narrative that it begins with, that change is necessary and accepted by Inuit, and that change in the form of mining and developing a wage economy is not only desired for providing

opportunities to live a Western lifestyle, but also integral to the continuation of activities such as hunting.

5.4 Epistemic Violence and Inuit Harvesting

How can something as complex as Inuit harvesting practices, and the multiple ways these practices are likely to interact with the Project, be reduced into a simple calculation that measures the harvest quantity in relation to time spent hunting? Furthermore, how can Baffinland's assessment of harvesting be accepted as part of a broader FEIS that ultimately resulted in the approval of the Project? To explore these questions I will draw on Tanya Murray Li who asks: "...what ways of thinking, what practices and assumptions are required to translate messy conjunctures, with all the processes that run through them, into linear narratives of problems, interventions, and beneficial results?" (Li, 2007, p. 4).

It has been noted elsewhere that Canadian Inuit policy (although complex and disjointed) has resulted in the gradual destruction of harvesting modes of production in an effort to replace them with capitalist social relations (Bernauer, 2011, p. 10). Offering a slightly different perspective, the argument made in this chapter is that although harvesting practices have been continually marginalized by the colonial capitalist project in the Canadian North, they have not been replaced by capitalist social relations. Rather, harvesting practices have been subsumed into capitalism in a fragmented way (both materially and discursively).

The material effects of this are that hunters now rely on income to purchase hunting supplies and equipment and in this way hunting is now a part of capitalist

social relations. Beyond these material effects, the discursive effects of this are significant as they have altered harvesting epistemologies, as the ways that conceptualizations of hunting are produced and can be perceived have also changed. From the critical perspective taken in this thesis, the mining company's narratives in the EIA about hunting should not be understood as reflecting the material realities in contemporary Nunavut, but as an enactment of epistemic violence tied to earlier colonial processes that have marginalized harvesting practices in the Canadian North. The outcome of this epistemic violence is that it is difficult to understand harvesting practices in isolation from capitalism, and Baffinland uses this discourse to their advantage. Baffinland's assessment takes this discourse a step further to suggest that any capitalist project (in this case the MRP) that generates income will necessarily have positive impacts on harvesting practices. As discussed throughout this chapter this assumption is problematic as it does not consider the many ways that working at the mine may actually further marginalize harvesting lifestyles.

The naturalization of capitalism qua development (and specifically that harvesting is dependent on deepening capitalist social relations through the development of mines) in narratives about Nunavut and Nunavummiut, is evident throughout Baffinland's assessment of Inuit harvesting, and reflected in the fact that this assessment was accepted by as part of the FEIS. This naturalization has enabled a form of governmentality in which actors such the NIRB, QIA, and the GN could overlook the significant potential for the Project to negatively impact harvesting, in favour of the promised economic benefits of the MRP.

Chapter 6: Conclusion

This thesis began by pointing to concerns that the Environmental Impact Assessment (EIA) process in Nunavut is failing to assess mining projects in a way that genuinely considers the possibility of negative environmental and socio-economic impacts, or in a way that ensures that community perspectives, concerns, and local knowledge are integrated into the assessment process.

The academic literature on EIA exhibits tensions surrounding the conceptualization and implementation of EIA processes. Practitioners of EIA often present it as a systematic, thorough, evidenced-based, and inclusive process for collecting and evaluating information with the end result of making objective decisions on whether mining projects should be approved or not. Opponents of this perspective claim that in reality EIA processes are much more complicated, that not all actors participate on equal grounds, and that uncertainty about the impacts of mining projects are always likely to persist. Through an analytical lens informed by governmentality, this thesis reflects this latter perspective by revealing the relationship between societal discourses and how they are articulated and reinforced through the everyday material practices involved with EIA in Nunavut.

Chapter 4 critiqued how the everyday practices of EIA in Nunavut are informed by, as well as articulate, discourses of expertise. This was done by evaluating practices such as: the collection of information; the compiling of official documents; the holding of technical meetings to assess evidence; and the facilitation of community consultations to register public perspectives about the potential of the mine to impact caribou. This chapter was particularly concerned with examining

how various actors participated in the assessment process, and whose knowledge was held up as expertise to influence the final decision to approve the Project. The conclusion reached in this chapter was that the perfunctory completion of the EIA stages took precedence over the quality of the assessment and any genuine attempt to meaningfully consider negative impacts of the Mary River Project (MRP) on caribou. As a result, even when considerable concerns were raised by government departments, Inuit organizations, and members of the public about the incomplete or biased nature of the assessment, they were often left unaddressed in Baffinland's Final Environmental Impact Statement. Despite conceptualizations of EIA by the Nunavut Impact Review Board (NIRB) as an objective, thorough, and evidenced based process, ultimately, the potential for negative impacts on caribou was ignored, and Baffinland's biased narrative about the Project was accepted by the NIRB.

This outcome can, in part, be explained by the position of trusteeship taken up by the NIRB and other actors involved in the EIA process, such as the Qikiqtani Inuit Association (QIA) and the Government of Nunavut (GN), as well as an implied belief that economic development takes precedence over other concerns in the Territory. As it is the mandated responsibility of many of these actors to make decisions to improve the well-being of Nunavummiut, they have an inherent tendency to describe their own actions, as well as the EIA process in general, as thorough, objective, and evidenced-based. This tendency, combined with these actors' participation, contributes to a sense that the EIA process is legitimate and that outcomes are reached through consensus, with the effect of rendering EIA

decisions extremely difficult to contest even if various groups can point out significant flaws in the assessment.

Chapter 5 continued to explore the relationship between broader societal discourses and the collection, presentation, and interpretation of information in Baffinland's Environmental Impact Statement. Emphasis shifted from discourses of expertise, objectivity, and thoroughness, and was placed on how certain narratives about capitalism *as* development, mining, and Inuit hunting practices were articulated throughout the EIA process. The argument put forward in this chapter is that Baffinland's conclusion that the MRP would not significantly impact harvesting practices could only be reached by presenting a selective reading of the impacts of mining projects on communities, by ignoring the complexity and historical roots of the socio-economic conditions in the region, and by narrowly interpreting the importance of caribou harvesting to Inuit as an economic pursuit.

As highlighted throughout this thesis Baffinland is not the sole creator or articulator of many of these narratives. Notions that the extraction of natural resources improves the socio-economic conditions in the Canadian North have long been embedded in Northern discourses. As was discussed in chapter 5, these narratives are rearticulated in the language of the Nunavut Land Claims Agreement; parallel to this, economic incentives (such as corporate taxes, resource royalties, and payments from Inuit Impact and Benefit Agreements) to promote natural resource development are embedded in the structures of the GN, Nunavut Tunngavik Incorporated (NTI), and the QIA.

The continued circulation of discourses about capitalism *as* development, the benefits of mining, and the dependence of hunting practices on income generated through wage labour has a significant impact on how EIA processes in Nunavut unfold. Analysis in this thesis has shown that these familiar discourses were repeatedly articulated and reinforced throughout the EIA process for the MRP. As these ideas are expressed by numerous actors such as Baffinland, the NIRB, the GN, the QIA, and NTI, in formal institutional settings and in official documents, they are difficult to contest. This difficulty persists despite significant evidence that negative impacts related to the MRP were not genuinely or thoroughly assessed before the Project was approved, and that community members continue to harbour substantial concerns about potential impacts on caribou and harvesting practices.

This research is important for a number of reasons. At the very least it illustrates that more stringent mechanisms are needed to ensure that feedback from all actors is genuinely heeded and incorporated into the assessment process. However, even if these mechanisms are put in place it is likely that perceptions about the EIA process as privileging mining interests would still persist. This can be attributed to the fact that the process is driven by mining companies who have the responsibility (and the privilege this entails) of producing the EIS, and that authoritative actors tasked with intervening in the process on behalf of Nunavummiut, such as the GN, the QIA, and the NTI openly voice their support for resource extraction before specific projects are assessed.

This research is also important as it reveals that there are alternative theoretical approaches that can offer new insights and critiques of EIA processes. As

highlighted in Chapter 2, the academic literature in this area often focuses on broader concerns such as how EIA is conceptualized or the difficulties of integrating Indigenous Knowledge into EIA. While these approaches are valuable they tend to overlook an even more basic critique of the techniques used for presenting, referencing, and interpreting data, and how these practices articulate and reinforce specific narratives that privilege mining interests and the approval of projects. If EIA processes are to continue as currently structured (with project proponents responsible for creating the EIS) there needs to be a greater awareness about the strategies that proponents use to frame assessments in a manner that privileges their own interests. There also needs to be greater attention paid to the issues that the proponent is neglecting, and how these omissions may be increasing uncertainty in regards to the potential negative impacts of projects.

There are also a number of possible avenues to productively build on the research in this thesis. As mentioned in the postscript in Chapter 3, the MRP continues to evolve as Baffinland has submitted new project proposals that adjust the scope, timeline, and operational logistics of the mine. It would be interesting to continue the analysis of this thesis forward to see if any of the outstanding issues with the assessment have been addressed in the new EIS, and to investigate whether or not contradictions exist between the various project proposals and Baffinland's assessment of impacts⁵⁷.

⁵⁷ One possible contradiction is immediately evident. In the FEIS analyzed in this thesis, Baffinland claims that the environmental impact of dust creation on caribou (and other wildlife) will not be significant since the use of the railroad as opposed to trucking iron ore will reduce the amount of dust created (Baffinland, 2012C). In the new project proposal, iron ore will be transported using the road for a number of years until enough

Another research avenue would be to re-conceptualize the EIA process in Nunavut altogether. A key argument made in this thesis is that the EIA process, as currently set-up, privileges the interests of mining companies in the Territory. Parallel to this issue, and as thoroughly discussed in existing academic literature, is the ongoing challenge of integrating IK into EIA processes. Given this, I argue that it would be productive to have a community-based and Inuit-led effort to consider what an EIA framework *based* on Inuit values and community perspectives (rather than attempting to integrate them) would entail, and how it would function.

In conclusion, the insights revealed in this thesis point to strong justification for a re-evaluation of the NIRB's EIA process. This re-evaluation is necessary if the EIA process is genuinely intended to protect and promote the environment and the well-being of Nunavummiut through valid and thorough assessments of mining's potential negative impacts. Without ongoing critique of the EIA process, it is likely that concerns about mining will be marginalized, and that projects will be approved in the hope that economic development will override any negative impacts.

revenue is generated to build the railroad. It would be interesting to see if this proposed change in logistics resulted in a re-evaluation of the possibility for dust creation to negatively impact the environment.

References

- Abele, F. (2009). "Northern Development: Past, Present, and Future" Pp. 19-65 in *Northern exposure: peoples, powers and prospects in Canada's North*. Institute for Research on Public Policy.
- Agrawal, A. (1995). Dismantling the divide between indigenous and scientific knowledge. *Development and change*, 26(3), 413-439.
- Agrawal, A. (2002). Indigenous knowledge and the politics of classification. *International Social Science Journal*, 54(173), 287-297.
- Baffinland. (2009). *Baffinland Comments on the Draft EIS Guidelines for the Mary River Project*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 090731-08MN053).
- Baffinland. (2011). *Draft Environmental Impact Statement: Volume 1, Main Document*. Retrieved December 2013, from <http://ftp.nirb.ca/>. (NIRB File No. 110121-08MN053).
- Baffinland. (2011B). *Draft Environmental Impact Statement: Executive Summary*. Retrieved December 2013, from <http://ftp.nirb.ca/>. (NIRB File No. 110121-08MN053).
- Baffinland. (2011C). *Draft Environmental Impact Statement, Volume 6: Terrestrial Environment*. Retrieved December 2013, from <http://ftp.nirb.ca/>. (NIRB File No. 110121-08MN053).
- Baffinland. (2011D). *Draft Environmental Impact Statement, Volume 4: Human Environment*. Retrieved December 2013, from <http://ftp.nirb.ca/>. (NIRB File No. 110121-08MN053).
- Baffinland. (2011E). *Baffinland Responses to Intervener Information Requests*. Retrieved December 2013, from <http://ftp.nirb.ca/>. (NIRB File No. 110721-08MN053).
- Baffinland. (2012). *Mary River Project Final Environmental Impact Statement: Volume 1, Main Document*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 120221-08MN053).
- Baffinland. (2012B). *Mary River Project Final Environmental Impact Statement: Volume 4, Human Environment*. Retrieved December 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120221-08MN053).
- Baffinland. (2012C). *Mary River Project Final Environmental Impact Statement: Volume 6, Main Terrestrial Environment*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 120221-08MN053).
- Baffinland. (2012D). *BIMC Roundtable Presentation*. Retrieved December 2013, from <http://ftp.nirb.ca/>. (NIRB File No. 120710-08MN053).

- Baffinland. (2013). *Early Revenue Phase Mary River Project: Addendum to Final Environmental Impact Statement*. Retrieved November 2014, from: <http://www.baffinland.com/wp-content/uploads/2014/06/Popular-Summary-English-For-Email.pdf>
- Baffinland. (2014). *Location and Project History*. Retrieved November 2014, from: <http://www.baffinland.com/the-project/location-and-project-history/?lang=en>
- Baffinland and QIA. (2011). Inuit Impact and Benefit Agreement (IIBA) Initial Draft. Available at: <http://www.qia.ca/apps/UPLOADS/fck/file/Mary%20River%20IIBA%20Plain%20Language%20Guide%20ENG.pdf>
- Baker, D. C., & Rapaport, E. (2009). The science of assessment: identifying and predicting environmental impacts. *Environmental impact assessment: Practice and participation*, 38-57.
- Bates, P. (2007). Inuit and scientific philosophies about planning, prediction, and uncertainty. *Arctic Anthropology*, 44(2), 87-100.
- Bennett, J., & Rowley, S. (2004). *Uqalurait: An oral history of Nunavut* (Vol. 36). McGill-Queen's Press-MQUP.
- Bernauer, W. (2011). "Uranium Mining, Primitive Accumulation, and Resistance in Baker Lake, Nunavut: Recent Changes in Community Perspectives". Department of Native Studies. University of Manitoba.
- Berg, L.D. (2009). "Discourse Analysis" in *The International Encyclopedia of Human Geography*, R. Kitchin and N. Thrift, eds. Elsevier Publishing
- Berkes, F. (1998). The nature of traditional ecological knowledge and the Canada-wide experience. *Terra Borealis*, 1, 1-3.
- Berkes, F., Colding, J., & Folke, C. (2000). Rediscovery of traditional ecological knowledge as adaptive management. *Ecological applications*, 10(5), 1251-1262.
- Bielawski, E. (2003). *Rogue diamonds: Northern riches on Dene land*. University of Washington Press.
- Blomley, N. (2003). Law, property, and the geography of violence: the frontier, the survey, and the grid. *Annals of the Association of American Geographers*, 93(1), 121-141.
- Bond A, Pope J. (2012). Editorial: the state of the art of impact assessment in 2012. *Impact Assess Project Appraisal*. 30(1):1-4.
- Bradshaw, C.J.A., S. Boutin, and D.M. Hebert. (1997). "Effects of Petroleum Exploration on Woodland Caribou in Northeastern Alberta." *Journal of Wildlife Management* 61: 1127-33.

- Briggs, J. (2005). The use of indigenous knowledge in development: problems and challenges. *Progress in Development Studies*, 5(2), 99-114.
- Cameron, R.D., W.T. Smith, R.G. White, and B. Griffith. (2005). "Central Arctic Caribou and Petroleum Development: Distributional, Nutritional, and Reproductive Implications." *Arctic* 58: 1-9.
- Cashmore, M., & Morgan, R. K. (2014). The impact assessment 'arms race' and visions for the future. *Impact Assessment and Project Appraisal*, 32(1), 25-26.
- Cashmore M, Gwilliam R, Morgan R, Cobb D, Bond A. (2004). The interminable issue of effectiveness: substantive purposes, outcomes and research challenges in the advancement of environmental impact assessment theory. *Impact Assessment Project Appraisal*, 22:295-310.
- Chatterjee, P. (2001) [1986]. *Nationalist thought and the colonial world: A derivative discourse*. Zed Books.
- Cruikshank, J. (2012). Are Glaciers 'Good to Think With'? Recognising Indigenous Environmental Knowledge 1. In *Anthropological Forum*(Vol. 22, No. 3, pp. 239-250). Routledge.
- CTA. (2012). *Information Request in Regard to the Final Environmental Impact Statement (FEIS) for the Mary River Project*. Retrieved March 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120330-08MN053).
- DFO. (2012). Fisheries and Oceans Canada: Information Requests. Retrieved March 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120402-08MN053).
- Diduck, A., & Mitchell, B. (2003). Learning, public involvement and environmental assessment: A Canadian case study. *Journal of Environmental Assessment Policy and Management*, 5(03), 339-364.
- Diduck, A., & Sinclair, A. J. (2002). Public involvement in environmental assessment: the case of the nonparticipant. *Environmental Management*, 29(4), 578-588.
- Duerden, F., & Kuhn, R. G. (1998). Scale, context, and application of traditional knowledge of the Canadian North. *Polar Record*, 34(188), 31-38.
- Dumond, M. 2007. Western Kitikmeot caribou workshop. Government of Nunavut, Department of Environment, Final Wildlife Report: 19, Iqaluit, 47.
- Dyer, S.J., J.P. O'Neill, S.M. Wasel, and S. Boutin. (2002). "Quantifying Barrier Effects of Roads and Seismic Lines on Movements of Female Woodland Caribou in Northeastern Alberta." *Canadian Journal of Zoology* 80: 839-45.
- EC. (2012). *Environment Canada Information Requests*. Retrieved March 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120330-08MN053).
- Elden, S. (2007). Rethinking governmentality. *Political geography*, 26(1), 29-33.

- Elling, B. (2010). *Rationality and the environment: Decision-making in environmental politics and assessment*. Routledge.
- Ellis, S. C. (2005). Meaningful consideration? A review of traditional knowledge in environmental decision making. *Arctic*, 66-77.
- Environment Canada (2012). Environment Canada: Environmental Assessment. Retrieved April 15, 2014 from: <http://www.ec.gc.ca/ee-ea/Default.asp?lang=En&n=CBB499FD-1>
- Escobar, A. (1995). Encountering development: The making and unmaking of development. ETP. (2012). *Environmental Technology Program: Students Response to BIMC FEIS*. Retrieved March 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120528-08MN053).
- Ettlinger, N. (2011). Governmentality as epistemology. *Annals of the Association of American Geographers*, 101(3), 537-560.
- Ferguson, J. (1994). The anti-politics machine. *The Ecologist*, 24 (5), pp. 176-181.
- Ferguson, M.A.D., and L. Gauthier. (1992). Status and trends of Rangifer tarandus and Ovibos Moschatus populations in Canada. *Rangifer* 12(3): 127-141.14
- Fischer, F. (2006). Participatory governance as deliberative empowerment the cultural politics of discursive space. *The American Review of Public Administration*, 36(1), 19-40.
- Fitzpatrick, P., & Sinclair, A. J. (2003). Learning through public involvement in environmental assessment hearings. *Journal of Environmental Management*, 67(2), 161-174.
- Foucault, M. (1977). Chapter 11: *Society Must be Defended: Lectures at the Collège de France 1975-1976*, New York: Picador, pp. 239-264.
- Foucault, M. (1978). "Governmentality". In G. Burchell, C. Gordon & P. Miller (Eds.), *The Foucault Effect: Studies in Governmentality* (1991, pp. 87-104). Chicago: University of Chicago Press.
- Foucault, M. (1980). *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977*. Brighton: Harvester Press.
- Freeman, M. A. (1978). *Life among the Qallunaat*. Hurtig Publishers.
- Gibson R. (2012). In full retreat: the Canadian government's new environmental assessment law undoes decades of progress. *Impact Assessment Project Appraisal*. 30(3):179-188.
- Gibson, R. B., & Hanna, K. S. (2009). Progress and uncertainty: The evolution of federal environmental assessment in Canada. *Environmental Impact Assessment: Practice and Participation*. Oxford University Press, Toronto, 17-36.

- Gidwani, V. (2002). The unbearable modernity of 'development'? Canal irrigation and development planning in Western India. *Progress in Planning*, 58(1), 1-80.
- Globe and Mail. (2011). "A Mine, a Line, and an Island Transformed". May 14 2011, available at: <http://www.stockhouse.com/blogs/notes-from-a-cyber-trader/may-2011/world-s-most-northern-railway>
- GN. (2002). Inuit Qaujimajatuqanginnut (IQ) task force 2002 annual report. Retrieved Nov 2013, from: <http://www.inukshukmanagement.ca/IQ%20Task%20Force%20Report1.pdf>
- GN. (2007). *Parnautit a Foundation for the Future: Mineral Exploration and Mining Strategy*. Available at: <http://gov.nu.ca/edt/documents/parnautit-foundation-future-mineral-exploration-and-mining-strategy>
- GN. (2009). Nunavut Overview 2009: Mineral Exploration, Mining and Geoscience. Available at: <http://cngo.ca/exploration-overview/2009/>
- GN. (2012). *GN Information Request Submission*. Retrieved December 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120330-08MN053).
- GN. (2012B). *GN Presentation*. Retrieved December 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120710-08MN053).
- GN. (2013). *"Working Together for Baffin Island Caribou" Workshop Report (August 2013)*. Available at: http://env.gov.nu.ca/sites/default/files/working_together_for_baffin_island_caribou_workshop_report_august_2013_eng.pdf
- Gordon, C. (1991). "Governmental Rationality: An Introduction". In G. Burchell, C. Gordon & P. Miller (Eds.), *The Foucault Effect: Studies in Governmentality* (pp. 1-52). Chicago: University of Chicago Press.
- Greig, L., & Duinker, P. (2014). Strengthening impact assessment: what problems do integration and focus fix?. *Impact Assessment and Project Appraisal*, 32(1), 23-24.
- Greig, L. A., & Duinker, P. N. (2011). A proposal for further strengthening science in environmental impact assessment in Canada. *Impact Assessment and Project Appraisal*, 29(2), 159-165.
- Gupta, A. (1998). *Postcolonial developments: Agriculture in the making of modern India*. Duke University Press.
- Hanna, K. S. (2009). *Environmental impact assessment: practice and participation*. Oxford University Press, USA.
- Henderson, G, Sheppard, E. (2009). "Marx and the spirit of Marx". Pp. 56-74 In: Aitken, S., Valentine, G. (Eds.) *Approaches to Human Geography*. Sage: London.

- Hoogeveen, Dawn, and Tyler McCreary. (2014). Fish Lake: struggles against a copper-gold mine on Tsilhqot'in territory. *Canadian Dimension* Jan.-Feb. 2014: 18+. *Academic OneFile*. Web. 13 Nov. 2014.
- Huntington, H. P. (1998). Observations on the utility of the semi-directive interview for documenting traditional ecological knowledge. *Arctic*, 237-242.
- Huntington, H. P. (2005). "We dance around in a ring and suppose": academic engagement with traditional knowledge. *Arctic Anthropology*, 42(1), 29-32.
- INAC. (2004). *Acquiring Mineral Rights in Nunavut*. Available at: <https://www.aadnc-aandc.gc.ca/eng/1100100027937/1100100027942>
- INAC. (2009). *Re: Comments on the Draft Guidelines for Baffinland Iron Mines Corporation's Proposed Mary River Project*. Retrieved December 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 090804-08MN053).
- Intrinsik. (2011). *Addendum To: Evaluation of Exposure Potential from Ore Dusting Events in Selected VECs*. Retrieved March 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 120221-08MN053).
- Isuma. (2013). *Zacharias Kunuk on Baffinland Iron Mine*. Retrieved April 1, 2013 from: <http://www.isuma.tv/lo/en/did/zacharias-kunuk-baffinland-iron-mine>
- Jay, S., Jones, C., Slinn, P., & Wood, C. (2007). Environmental impact assessment: Retrospect and prospect. *Environmental impact assessment review*, 27(4), 287-300.
- Jenkins, D.A., and J. Goorts. 2013. Baffin Island caribou consultations, 2012. Consultation Report, Government of Nunavut, Department of Environment, Pond Inlet, NU, 86 pp.
- Kalpagam, U. (2000). Colonial governmentality and the 'economy'. *Economy and Society*, 29(3), 418-438.
- Kappianaq and Nutaraq (2009). *Inuit Perspectives on the 20th Century: Travelling and Surviving on Our Land*. Eds. Oosten, J, and Laugrand, F. Nunavut Arctic College.
- Kidd, S. (1998). My Adventures at the Public Registry. *Eco-Journal* 11(3): 5-6.
- Kirchhoff, D., & Tsuji, L. J. (2014). Reading between the lines of the 'Responsible Resource Development rhetoric: the use of omnibus bills to 'streamline' Canadian environmental legislation. *Impact Assessment and Project Appraisal*, 32(2), 1-13.
- Kulchyski, P., & Tester, F. J. (2007). *Kiumajut (talking back): game management and Inuit rights, 1900-70*. UBC Press.
- Latour, B. (1988) *Science in Action: How to Follow Scientists and Engineers Through Society*. Cambridge: Harvard University Press.
- Latour, B. (1999) *Pandora's Hope: Essays on the Reality of Science*. Cambridge: Harvard University Press.

- Lawrence, D. P. (2003). *Environmental impact assessment: practical solutions to recurrent problems*. John Wiley & Sons.
- Li, F. (2009). Documenting accountability: environmental impact assessment in a Peruvian mining project. *PoLAR: Political and Legal Anthropology Review*, 32(2), 218-236.
- Li, T. M. (2007). *The will to improve: governmentality, development, and the practice of politics*. Duke University Press.
- Makita. (2012). *Makita not Surprised by GN Support for Uranium Mining*. Retrieved March 19, 2013 from: <http://makitanunavut.wordpress.com/2012/06/08/makita-not-surprised-by-gn-support-for-uranium-mining/>
- Makita. (2012B). Discussion Paper – Kiggavik Draft Socioeconomic Impact Statement retrieved April 15, 2014 from: <http://makitanunavut.wordpress.com/>
- Middle, G., Clarke, B., Franks, D., Brown, L., Kellet, J., Lockie, S., ... & Harris-Roxas, B. (2013). Reducing green tape or rolling back IA in Australia: What is each jurisdiction up to?.
- Mining Watch. (2012). *Introduction to the Legal Framework for Mining in Canada*. Retrieved March 19, 2013 from: <http://www.miningwatch.ca/sites/www.miningwatch.ca/files/Introduction%20to%20the%20Legal%20Framework%20for%20Mining%20in%20Canada.pdf>
- Mitchell, T. (2002). *Rule of experts: Egypt, techno-politics, modernity*. University of California Press.
- Morrison-Saunders, A., Pope, J., Gunn, J. A., Bond, A., & Retief, F. (2014). Strengthening impact assessment: a call for integration and focus. *Impact Assessment and Project Appraisal*, 32(1), 2-8.
- Morton, S. (2003). *Gayatri Chakravorty Spivak*. Routledge.
- Nadasdy, P. (1999). The politics of TEK: Power and the "integration" of knowledge. *Arctic Anthropology*, 1-18.
- Nellemann, C., I. Vistnes, P. Jordhøy, and O. Strand. (2001). "Winter Distribution of Wild Reindeer in Relation to Power Lines, Roads and Resorts." *Biological Conservation* 101: 351-60.
- NIRB. (2007). *Guide to the Nunavut Impact Review Board: Volumes 1-9*. Retrieved December 2013, from: <http://ftp.nirb.ca/>.
- NIRB. (2008). *Nunavut Impact Review Board Guide 5: Guide to the Impact Review Process*. Retrieved October 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. OT5E.pdf).
- NIRB. (2009). *Draft Guidelines: For the preparation of an environmental impact statement for Baffinland Iron Mines Corporation's Mary River Project*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 090624-08MN053).

- NIRB. (2009A). *NIRB Rules of Procedure*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 090903).
- NIRB. (2009B). *Guidelines: For the preparation of an environmental impact statement for Baffinland Iron Mines Corporation's Mary River Project*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 091116-08MN053).
- NIRB. (2009C). *NIRB Presentation for Public Scoping Meetings*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 090326).
- NIRB. (2009D). *Re: Draft Scope of the Mary River Project*. Retrieved October 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 090313).
- NIRB. (2009E). *Nunavut Impact Review Board: Rules of Procedure*. Retrieved October 2013 from: <http://ftp.nirb.ca/>. (NIRB File No. 090903).
- NIRB. (2011). *NIRB Public Information Meeting Summary Report*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 110271-08MN053).
- NIRB. (2012). *NIRB Compliance Review Work Sheet with Associated Baffinland Responses*. Retrieved March 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120314-08MN053).
- NIRB. (2012B). *NIRB Responses to Issues Raised in IR Submissions and Next Steps for the Board's Review of Baffinland's Mary River project proposal*. Retrieved March 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120405-08MN053).
- NIRB. (2012C). *NIRB's Final Hearing Regarding Baffinland's Mary River Project Proposal (Hearing Days 1-11)*. Retrieved March 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120723-08MN053).
- NIRB. (2012D). *NIRB Project Certificate: No.: 005*. Retrieved March 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 121228-08MN053).
- NIRB. (2012E). *NIRB's Final Hearing Baffinland's Mary River Project Proposal. Volume 6, Morning Session in Igloolik*. Retrieved Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 120723-08MN053).
- NIRB. (2012F). *NIRB's Final Hearing Baffinland's Mary River Project Proposal. Volume 8, Morning Session in Igloolik*. Retrieved Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 120725-08MN053).
- NIRB. (2012G). *NIRB's Final Hearing Baffinland's Mary River Project Proposal. Volume 8, Afternoon Session in Igloolik*. Retrieved Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 120725-08MN053).
- NIRB. (2012H). *NIRB's Final Hearing Baffinland's Mary River Project Proposal. Volume 4, Morning Session in Iqaluit*. Retrieved Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 120719-08MN053).

- NIRB. (2014). Nunavut Impact Review Board: Mandate. Retrieved August 7, 2014. From: <http://www.nirb.ca/mandate-and-mission>
- NIRB. (2014B). Nunavut Impact Review Board: NIRB's Process. Retrieved August 7, 2014. From: <http://www.nirb.ca/nirb-processes>
- NLCA (1993). Nunavut Land Claims Agreement. Retrieved November 2012, from: <http://www.gov.nu.ca/sites/default/files/files/013%20-%20Nunavut-Land-Claims-Agreement-English.pdf>
- Noble, B. F. (2000). Strengthening EIA through adaptive management: a systems perspective. *Environmental Impact Assessment Review*, 20(1), 97-111.
- NPC. (2000). North Baffin Regional Land Use Plan. Retrieved December 2013, from: <http://www.nunavut.ca/files/North%20Baffin%20Regional%20Land%20Use%20Plan.pdf>
- NTI. (2000). *Mining and the Nunavut Land Claims Agreement*. Available at: http://www.tunngavik.com/files/2011/03/mining_and_nlca.pdf
- NTI. (2000B). *Exploring the Potential of Inuit Owned Lands*. Nunavut Tunngavik Incorporated. Available at: http://www.tunngavik.com/files/2011/03/lands_brochure.pdf
- NTI. (2000C). *Map of Inuit Owned Lands in Nunavut*. Available at: <http://www.tunngavik.com/files/2011/03/iolmap.pdf>
- NTI. (2009). *Exploration Overview 2009*. Available at: http://www.tunngavik.com/files/2011/03/nunavut_2009_-expl_overview.pdf
- NTI. (2009B). *Exploration Overview 2009 Map*. Available At: http://www.tunngavik.com/files/2011/03/nunavut_2009_-expl_overview.pdf
- Nunatsiaq News. (2012). *NIRB nixes caribou board request for new cumulative effect assessment on Kiggavik*. Retrieved March 19, 2013 from: http://www.nunatsiaqonline.ca/stories/article/65674nirb_nixes_caribou_board_request_for_new_cumulative_effect_assessment/
- Nunatsiaq News. (2012B). *Nunavut board says yes to Mary River, with conditions "Many Nunavummiut feel caught between two worlds"*. Retrieved March 19, 2013 from: http://www.nunatsiaqonline.ca/stories/article/65674nunavut_board_says_yes_to_mary_river_with_conditions/
- Nunatsiaq News. (2012C). *Uranium lobby group dumps on Nunavut board over spring meetings: Nunavummiut Makitagunarningit says NIRB could "discredit" itself*. Retrieved March 19, 2013 from: http://www.nunatsiaqonline.ca/stories/article/65674nunavut_board_says_yes_to_mary_river_with_conditions/

- Nunatsiaq News. (2013). *Nunavut board wants new project proposal for Bathurst port-road project*. Retrieved March 19, 2013 from:
http://www.nunatsiaqonline.ca/stories/article/65674nirb_wants_a_new_project_proposal_for_bathurst_port_and_road_project/
- Nunatsiaq. (2014). *Nunavut Iron Producer Proposes Big Changes for Mary River: Baffinland Seeks Expansion of Milne Inlet, Winter Shipping, and Ramped up Iron Ore Volumes*. Retrieved November 2014, from:
http://www.nunatsiaqonline.ca/stories/article/65674nunavut_iron_producer_proposes_big_changes_for_mary_river/
- Obed, N. (2009). "Inuit Values and the Implementation of Land Claims Agreements" Pp. 511-514 in *Northern exposure: peoples, powers and prospects in Canada's North*. Institute for Research on Public Policy.
- Öosten, J., & Laugrand, F. (2001). Interviewing Inuit Elders Volume I: Introduction. *Iqaluit: Nunavut Arctic College*.
- Osborne, T. (1994). Bureaucracy as a Vocation: Governmentality and administration in nineteenth-century Britain. *Journal of Historical Sociology*, 7(3), 289-313.
- Petts, J. (2003). Barriers to deliberative participation in EIA: learning from waste policies, plans and projects. *Journal of Environmental Assessment Policy and Management*, 5(03), 269-293.
- Petrone, P. (Ed.). (1988). *Northern voices: Inuit writing in English*. University of Toronto Press.
- Price, J. (2007). *Tukisivallialiqtakka: The things I have now begun to understand: Inuit governance, Nunavut and the Kitchen Consultation Model* (Doctoral dissertation, University of Victoria).
- QIA. (2007). *Qikiqtani Inuit Association: About Us*. Available at:
<http://www.qia.ca/i18n/english/about.shtm>
- QIA. (2009). *Re: Draft Guidelines for the Preparation of an Environmental Impact Statement - Baffinland Iron Mines Corporation, Mary River Project*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 0900731-08MN053).
- QIA. (2011). *QIA Table Re Adequacy of BIMC IR Responses*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 110504-08MN053).
- QIA. (2012). *Appendix B: Compiled QIA Information Requests*. Retrieved March 2014, from: <http://ftp.nirb.ca/>. (NIRB File No. 120330-08MN053).
- QIA. (2012B). *Revised QIA Presentation*. Retrieved December 2013, from: <http://ftp.nirb.ca/>. (NIRB File No. 120715-08MN053).
- QIA. (2014). *Qikiqtani Inuit Association: About Us*. Retrieved November 2014, from:
<http://www.qia.ca/en/About>.

- Qikiqtani Truth Commission. (2010). QTC Final Report: Achieving Saimaqatigiingniq. *Qikiqtani Inuit Association*.
- Raffles, H. (2003). Intimate knowledge. *International Social Science Journal*, 54(173): 325-335.
- Reimers, E., B. Dahle, S. Eftestøl, J. E. Colman, and E. Gaare. (2007). "Effects of a Power Line on Migration and Range Use of Wild Reindeer." *Biological Conservation* 134: 484-94.
- Rose, N., O'Malley, P., & Valverde, M. (2006). Governmentality. *Annu. Rev. Law Soc. Sci.*, 2, 83-104.
- Sadler, B. (1996). *Environmental Assessment in a Changing World. Evaluating practice to improve performance-final report*. Canadian Environmental Assessment Agency.
- Scott, D. (1995). Colonial governmentality. *Social Text*, 191-220.
- Shani, G. (2010). De-colonizing Foucault. *International Political Sociology*, 4(2), 210-212.
- Simpson, L. (2001). Aboriginal peoples and knowledge: Decolonizing our processes. *The Canadian journal of native studies*, 21(1), 137-148.
- Sims, L., & Sinclair, A. J. (2008). Learning through participatory resource management programs: Case studies from Costa Rica. *Adult education quarterly*, 58(2), 151-168.
- Sinclair, A. J., & Diduck, A. (2005). *Public participation in Canadian environmental assessment: Enduring challenges and future directions* (pp. 53-74). Don Mills, Ontario: Oxford University Press.
- Sinclair, A. J., & Diduck, A. P. (2001). Public involvement in EA in Canada: a transformative learning perspective. *Environmental Impact Assessment Review*, 21(2), 113-136.
- Spak, S. (2005). The position of Indigenous knowledge in Canadian co-management organizations. *Anthropologica*, 47(2), 233-246.
- Spivak, G. Chakravorty. (1988) 'Can the Subaltern Speak?', in Cary Nelson and Lawrence Grossberg (eds) *Marxism and the Interpretation of Culture*, London: Macmillan, pp.271-313.
- Spivak, G. Chakravorty. (1990) *The Post-Colonial Critic: Interviews, Strategies, Dialogues*, Sarah Harasym (ed.), New York and London: Routledge.
- Spivak, G. Chakravorty. (1994). "Responsibility". *Boundary 2* 21(3): 19-64.
- Stevenson, M. G. (1996). Indigenous knowledge in environmental assessment. *Arctic*, 278-291.
- Stewart, J. M., & Sinclair, A. J. (2007). Meaningful public participation in environmental assessment: Perspectives from Canadian participants, proponents, and

- government. *Journal of Environmental Assessment Policy and Management*, 9(02), 161-183.
- Tester, F. J., & Irniq, P. (2008). Inuit Qaujimagatuqangit: Social history, politics and the practice of resistance. *Arctic*, 48-61.
- Usher, P. J. (2000). Traditional ecological knowledge in environmental assessment and management. *Arctic*, 183-193.
- Veyne, P. (1997). "Foucault Revolutionizes History". In A. Davidson (ed.) *Foucault and His Interlocutors*, Chicago: University of Chicago Press.
- Vistnes, I., C. Nellmann, P. Jordhøy, and O. Strand. (2004). "Effects of Infrastructure on Migration and Range Use of Wild Reindeer." *Journal of Wildlife Management* 68: 101-8.
- Wachowich, N., Awa, A. A., Katsak, R., & Katsak, S. P. (1999). *Saqiyuq* (Vol. 19). McGill-Queen's Press-MQUP.
- Wainwright, J. (2011). *Decolonizing development: colonial power and the Maya*(Vol. 36). John Wiley & Sons.
- Walters, W. (2012). *Governmentality: Critical Encounters* (Vol. 3). Routledge.
- Weir, J.N., S.P. Mahoney, P. McLaren, and S.H. Ferguson. (2007). "Effects on Mine Development on Woodland caribou, Rangifer tarandus, distribution." *Wildlife Biology* 13: 66-74.
- Wenzel, G. W. (2004). From TEK to IQ: Inuit Qaujimagatuqangit and Inuit cultural ecology. *Arctic Anthropology*, 41(2), 238-250.
- White, G. (2006). Cultures in collision: traditional knowledge and Euro-Canadian governance processes in Northern land-claim boards. *Arctic*, 401-414.
- Wiles, A., McEwen, J., & Sadar, M. H. (1999). Use of traditional ecological knowledge in environmental assessment of uranium mining in the Athabasca Saskatchewan. *Impact Assessment and Project Appraisal*, 17(2), 107-114.
- Wolfe, S.A., B. Griffith, and C.A.G. Wolfe. (2000). "Response of Reindeer and Caribou to Human Activities." *Polar Research* 19: 63-73.