

Pushing for Better:  
Confronting Conflict, Unsustainability & Colonialism  
Through Sustainability Assessment and  
Regional Assessment in the Ring of Fire

By

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## **Author's Declaration**

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

## **Abstract**

The Ring of Fire is a mineral resource-rich area of approximately 5,120 km<sup>2</sup> located in the James Bay Lowlands region of Northern Ontario, about 500 kilometers northeast of Thunder Bay. The Ontario Ministry of Northern Development and Mines generously estimates the Ring of Fire to contain \$60 billion worth of minerals. The Ontario government and industry envision that the Ring of Fire could be a region with multi-generational mining activity. However, the area has no historical or current industrial activity, and no road or rail access. Also, mining proposals in this resource rich, inaccessible and ecologically sensitive area have generated significant controversy and conflict because the potential for wealth generation is accompanied by the potential for significant and possibly serious net negative lasting cumulative effects and poorly distributed benefits and risks, particularly for First Nations communities, including Eabametoong First Nation.

One major method of anticipating and planning for the effects of industrial development is environmental assessment. However, my research finds that traditional assessment methods are woefully inadequate for considering the potential regional impacts of the Ring of Fire on the land, waters and communities. Conventional assessment is insufficient to identify and address cumulative effects, and it does not provide an adequate base for determining whether proposed developments are likely contribute to lasting well-being and sustainability. These inadequacies are particularly challenging for the most vulnerable communities, where these deficiencies threaten to perpetuate long standing colonialism and conflict.

The findings suggest that Canadian resource development processes at large would be considerably assisted if anticipatory assessment and decision making focused on the actual (in this case regional) scale of the potential effects, examined the potential for lasting overall gains, and integrated fair process with equitable relationships and substantive consideration of context-dependent sustainability. In this research, assessment criteria were developed in collaboration with Eabametoong First Nation for application in the Ring of Fire utilizing generic sustainability criteria, existing academic data and Eabametoong's own perspectives. Central to the resulting assessment framework is the need to foster consent, respect indigenous rights and utilize indigenous knowledge. My findings indicate that much of the mainstream discussion on the Ring of Fire has framed the key debates as economy versus the environment, and have situated

the current project-centred environmental assessment processes as a venue for battles over these priorities. A broader and more positive approach, using regional strategic assessments to find pathways to lasting overall benefits for the Ring of Fire communities and area, is not yet on the agenda. This research found that a more comprehensive package that utilizes assessment not simply as a box check, but as a means to enhance the lives of Eabametoong First Nations and other communities, would better ensure that development in the region contributes to a sustainable future.

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## **Dedication**

This dissertation is dedicated to the people of Eabametoong.

Additionally, it is dedicated to Virginia Stollery, my Grandy, who passed away before I began this process. However, I know she would have the good scotch out now. I miss you.

## Statement of Positionality

I am a settler, straight woman from a small town in Southern Ontario engaging in research with a remote Ojibwa community in Northern Ontario. My education has been supported not only by my parents, but the government and academia in the form of scholarships and fellowships. I am the only child of two university educated parents, one of whom is a professional. I moved home to my small town, with my husband in tow, when my grandmother was dying of cancer to assist my mother in caring for her. My heritage is mixed, and I am of Irish, English, Scottish and Italian heritage on my mother's side and Ashkenazi Jew and Scottish-English on my father's side. My family fled potato famines, Nazis, and Bolsheviks. Canada has been a safe harbour for my family, and we have benefited significantly from indigenous lands. I'm married to a university educated man who came from a less stable and comfortable background than mine. I'm in a committed relationship and I do not fear violence from my spouse. I have also travelled all over the world.

For this research, my position in life shaped how I understood the people that I met in EFN and the problems that they face. I understood storytelling cultures, hunting, and remote life from the lens of my own experiences in my own small town. I understood the dedication to family and to ones' elders from the lens of my own familial experiences. Other experiences and concepts were less familiar to me, including poverty, racism, not having clean drinking water, overcrowding, addiction, abuse, and violence. My conversations with friends and community members on these day to day struggles highlighted the extent of my privilege.

The successes of this research lie not only in the open hearts and hearths of the people of Eabametoong, but the significant trust built by the researchers that brought me into this community. Peter Siebenmorgen brought me into the community, and I relied and continue to rely on piggybacking on his deep relationship with the community and its members. His work was initiated through a longer-term research project with Dr. Ben Bradshaw. I rely on the bonds and trust built by academics to do the work outlined in this dissertation. This work is written under this context.

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# Chapter 1: Introduction

## 1.1 Introduction

One afternoon in August of 2017, I sat in the Fort Hope Community Hall with my fingers crossed. For three years, I had been coming up to the community to discuss the risks, challenges and opportunities that mining in the region presented and how the Eabametoong First Nation (EFN) might use next generation assessment tools to manage them. However, this meeting presented a much riskier attempt, an activity. I hand sketched a map of an island (called “Pine Island”) and wrote up a scenario about three remote, indigenous communities on this island facing development, government pressures and promises, and their own desired futures. Pine Island’s circumstances mirrored, in an oversimplified way, what all the members of EFN were facing. Groups of knowledge holders and youth, fishing buddies, hunters, mothers, grandmothers, and all those in between met to figure out what should happen to Pine Island in the face of development. After 3 hours, 45 people, in seven separate groups, had come up with 7 different ways forward. Each group had different reasons why they did what they did, how they prioritized, how they listened to each other, and how they planned their future. Some saw a future for Pine Island with holiday resorts and mines. Some saw the island’s future as identical to its current situation.

As each group presented, it became clear that Eabametoong was not lacking knowledge of what they wanted in the future, or unwilling to work to figure out the implications of those wishes, but they hadn’t had choices presented to them beyond yes or no related to development. The Ring of Fire, the massive mining development region that is the focus of this dissertation, presents itself on the horizon for every band member. With the province in the driver’s seat, the next steps have been only ever been to accelerate to one hundred. EFN wants to know if they can just travel 30 or go by boat. In this dissertation, we consider why and how those alternatives to the Ring of Fire can be considered and how decision-making can be made better.

The Ring of Fire is a mineral resource-rich area of approximately 5,120 km<sup>2</sup> located in the James Bay Lowlands region of Northern Ontario, approximately 500 kilometers northeast of Thunder Bay. Significant deposits of chromite, copper, zinc, nickel, platinum, vanadium, and gold have been found. The chromite deposit is the first discovery of commercial quantities in North America (Hjartarson, McGuinty, and Boutilier 2014) and is the fourth largest reserve in



the world after South Africa, Zimbabwe and Kazakhstan (Sudol, 2015). The Ring of Fire is generously estimated, by the Ontario Ministry of Northern Development and Mines, to contain \$60 billion worth of minerals. The Ontario government and industry envision that the Ring of Fire could be a region of multi-generational mining activity similar to the Sudbury Basin, as the deposits are thought to be significant enough to sustain activity for a century (Hjartarson, McGuinty, and Boutilier 2014; Sudol 2015). However, the largest chromite holding changed hands in March 2015 from Cliffs Natural Resources to Noront Resource Ltd. for a major loss and all activity remains highly speculative (Younglai & Marotte, 2015) in part because the area has no historical or current industrial activity, and no road or rail access. Also, mining proposals in this resource rich, inaccessible and ecologically sensitive area have generated significant controversy and conflict because the potential for wealth generation is accompanied by potential for significant and possibly serious net negative lasting cumulative effects and poorly distributed benefits and risks (Chetkiewicz and Lintner 2014).

Within the Ring of Fire there are five isolated First Nations communities, Webequie, Nibinamik, Neskantaga, Eabametoong and Marten Falls, and four other Indigenous communities that have road access to the south, Aroland, Long Lake 58, Ginoogaming and Constance Lake. Together, these First Nations make up the nine-member Matawa Tribal Council. There are also numerous other First Nations communities outside of the Matawa region that will be affected by the development, including those within the same watershed and those with long standing relationships with communities within the Matawa region.

The Ring of Fire region is part of Ontario's ecologically significant Far North, which contains the world's largest area of boreal forest that is free from large-scale human disturbance. The Ring of Fire is also in the James Bay Lowlands – part of the Hudson Bay Lowlands, which form the world's largest peatland. Jointly, the boreal forest and the James Bay Lowlands serve as a crucial carbon sink for Canada and the world (Chong 2014). Ring of Fire mining and infrastructure development would alter the regional landscape and ecosystems significantly with impacts including habitat fragmentation, potentially serious release of pollutants and effluents into watercourses, possible impairment of carbon sequestration functions, increased hunting and fishing pressures facilitated by easier access, and probable introduction of non-native species, among other concerns (Chetkiewicz & Lintner, 2014; Chong, 2014; Wildlands League, 2015).

The needs for economic development, employment opportunities, adequate infrastructure and services (especially potable water and sufficient housing) in these remote Indigenous communities have also been major factors in deliberations about the potential contributions of mining in the Ring of Fire. Poverty, addiction and unemployment are common in the area (Blizzard, 2010; Driben, 1983; Sudol, 2016), and the proposed mining development has left many community members with mixed feelings. The need for livelihood sufficiency is accompanied by the need to maintain the culturally and economically foundational access to and reliance on traditional lands for hunting, fishing and trapping. The fear of socio-economic and cultural problems associated with mines is accompanied by the desire for more opportunities for education and employment in remote centres for present and future generations (Driben, 1983; Kleinfelder & Yesno, 1984). The role First Nations play as ecological stewards, in tandem with their spiritual and cultural connection to the land, is poorly understood and generally not integrated into federal and provincial project level assessment mechanisms. Much of the mainstream discussion has framed the key debates as economy versus the environment, implicitly situating the project-centred environmental assessment processes as a venue for battles over these priorities (Chong, 2014; ECO, 2013; Sudol, 2016). A broader and more positive approach, using assessments to find pathways to lasting regional benefits, is not yet on the agenda.

Given these circumstances, this research has been driven by a simple question: how could decision making be made better in the Ring of Fire? As problems go, it is a particularly complex one and, over the course of the dissertation research, the potential answers have evolved considerably. However, the key background factors can be summarized as follows:

1. The current process is ineffective for all parties because:
  - a. Mining in an area that is largely untouched by industrialization requires considerable analysis of potential socio-ecological consequences and that has not been undertaken (Chetkiewicz & Lintner, 2014; Chong, 2014; Environmental Commissioner of Ontario (ECO), 2013b)
  - b. Eabametoong First Nations do not believe that the government has their best interests in mind, now or historically (Driben, 1983; Eabametoong First Nations & Neskantaga First Nation, 2017a; Kleinfelder & Yesno, 1984)
  - c. The provincial government authorities do not want to engage in new approaches beyond their current tool box and are frustrated by the lack of progress (Matawa First Nations and the Crown, 2014; Ministry of Northern Development and Mines, 2013)

2. History suggests that none of this development will end particularly well for the affected communities because of:
  - a. Colonialism- historic and on-going (Alfred & Corntassel, 2005; Coyle, 2014b; Snelgrove, Dhamoon, & Corntassel, 2014)
  - b. Indigenous world views and Western world views are different (Bartlett, Marshall, & Marshall, 2012; Ermine, 2007; Kleinfelder & Yesno, 1984)
  - c. The typical impacts that resource economies have on small communities are largely negative (Chambers & Winfield, 2000; Davis & Franks, 2011; Gibson & Klinck, 2005)
3. Consequentially, historic conditions and current process yield considerable, and potentially, intractable conflict (Brummans et al., 2008; L. Susskind & Agency, 1983; Susskind, McKearnan, & Thomas-Larmer, 1999)
4. Status quo approaches to decision-making, where conflict is dysfunctional, have demonstrated little potential to generate progress towards sustainability (Kaufman, Elliott, & Shmueli, 2003; Lederach & Maiese, 2003; Miall, 2004)

These points will be expanded and elaborated throughout this dissertation. This dissertation seeks to conceive of an alternative result by acknowledging points 1-3 and identifying and assessing potential means of intervening in point 4 to achieve more positive results or at least to raise more positive possibilities.

## **1.2 Dissertation Questions**

On this basis, the core dissertation agenda can be represented by three successively more focused questions:

- 1) What is the relationship between sustainability and conflict management and how can the concepts be integrated?
- 2) How can understandings from the integration of sustainability and conflict management be applied to mining in Northern Canada?
- 3) How might the combined insights inform and be informed by case application to the sustainability and conflict challenges in assessment and mining development in Northern Canada?
- 4) In particular, how might the insights inform and be informed by application to identify better approaches to the sustainability and conflict challenges faced by Eabametoong First Nation in the face of anticipated Ring of Fire mining and associated infrastructure development?

These initial questions inform how broad case application could improve the approach to sustainability and conflict in the Ring of Fire. Very generally and tentatively here at the outset, the answer appears to involve prioritizing sustainability and lasting well-being in decision-making, and respecting Indigenous rights and interests that may be affected by non-renewable

resource development, as a basis for sufficient management of conflicts to allow credible collaborative decisions to be made. This research attempts to determine how those concepts can come together in both theory and potentially in practice. Thus, a primary consideration of this dissertation is developing a framework to integrate understanding of and attention to:

- Sustainability (long term well-being)
- Conflict and conflict management
- Indigenous rights and interests
- Non-renewable resource development

The framework can then be utilized to appraise the effectiveness of existing and proposed approaches to development planning and decision making.

Eabametoong and the other Matawa communities are attempting to manage deep tensions, both with the broader world and within their community. Examined in the context of sustainability, Eabametoong is a community that is committed to respecting and utilizing the land and to intergenerational thinking. They are also committed to improving well-being as defined by the community (Bradshaw, Siebenmorgen, & Eabametoong First Nation, 2012), a concept that can easily be bridged into the community's understanding of future sustainability. However, material well-being considerations also include the opportunities that industrial development could generate. For Eabametoong, determining what to do in the context of Ring of Fire development possibilities requires careful examination of options for the future that have been generally missing from discussions. The standard options that have been on the table are development as normally conceived and pursued by industry proponents and government authorities and leaving the community in its current state. This research examines the potential for developing an alternative approach that recognizes that multiple considerations and possible futures need to be analyzed, integrated and compared as options for future development. This approach recognize the need to focus on more than just two futures, the need to incorporate indigenous world views into the decision-making and the need to be realistic about the impacts of industrial development in order to resolve EFN's own conflict between protecting the land and providing livelihoods. Sustainability-based approaches suggest that both objectives can be attainable. Integrating theoretical understandings of conflict into sustainability-based approaches encourage cross-cultural communication about substantive issues and historic relationships.

Sustainability objectives exist across cultures and are rooted in societies' concerns for lasting well-being (Throsby & Petetskaya, 2016). Eabametoong is seeking long-term well-being for their communities and their families, framed within their experience, context and understanding. Mining operations with limited life expectancy and long-term legacies create challenging dynamics for those seeking sustainable futures. This dissertation attempts to discover (i) where EFN finds its worldview can be presented and applied, its rights reasserted and its lasting interests served, in the Ring of Fire deliberations; and (ii) where EFN's understandings and preferences may align with, inform, reconfigure and/or make some adjusted use of notions and processes from sustainability and conflict management. The initial chapters develop a conceptual framework that integrates sustainability, conflict, indigenous rights and interests, and non-renewable resource development as a platform for evaluating potential policy approaches. In addition, sustainability is specified for the case through the criteria that were created with and for Eabametoong for application in its deliberations and decision making.

One of the major challenges for Eabametoong is that the Ring of Fire proposal is embedded within a Western worldview. Competing worldviews, major power differentials and colonialism have bred significant conflict. Recognizing the differences of viewpoint, this dissertation will attempt to include indigenous theory on conflict and represent Eabametoong's experience with colonialism historically and currently, particularly through the guidance of Eabametoong community scholar, elder and advisor Andy Yesno.

In general, this research is engaged with a particular community with specific problems and the material is being presented linearly. However, in practice, the approach has been iterative. The research is therefore also an inquiry into the potential for mutual learning concerning how there is a large gap between achieving assessment processes of this nature and the realities of most assessment on the ground. However, often the key to achieving sustainable outcomes is whether dialogue and collaboration, between government, proponents, and communities, can successfully be achieved or not. Sustainable outcomes are a reflection of multiparty innovation, guided by significant sustainability parameters. Fostering dialogue, innovation and collaboration requires the use of alternatives and visioning, and an investment of all parties in a common understanding of betterment. Sustainability-based and conflict management-based approaches can be useful in deliberations on potentially high conflict development projects with indigenous communities seeking better futures. The research findings

should also provide useful guidance to provincial departments and proponents on expanding their insights on how to incorporate sustainability and conflict management into their own practices. This case represents an important practical case where insights linking the literature could improve assessment practice, particularly for indigenous people that have tremendous administrative burdens, often have limited internal capacity, and face numerous assessments and other initiatives that require comment and consideration.

### **1.3 Methodology**

Broadly, methodology refers to “how research does or should proceed. Thus, methodology is a body of approaches and methods, rules and postulates employed by research” (Porsanger, 2004). This dissertation applies a mixed method, qualitative approach to research including literature review and integrated theory development, sustainability assessment criteria design, case study, participative engagement and experiential learning.

This research draws methodological approaches from Indigenous research methodology and participatory action research methods. Indigenous research methods “...can be summarized as research by and for Indigenous peoples, using techniques and methods drawn from the traditions of those peoples” (Evans, Hole, Berg, Hutchinson, & Sookraj, 2009). Participatory action research (PAR) methods,

“...employ frameworks that have potential to complement Indigenous methodologies. Congruent with IM, researchers employing a PAR framework challenge the historical privileging of Western positivist science that emphasize(d) neutrality and objectivity. Instead, PAR researchers highlight the centrality of power in the social construction of knowledge and assert an acceptance of alternative and multiple ways of knowing. Rather than the illusory ‘value-free’ knowledge of positivist scientific practices, PAR researchers seek emancipatory knowledge” (Evans et al., 2009).

Importantly, this paper is critical of the systemic and institutional barriers that have resulted in conflict and continued colonialism, and seeks to recommend methods to disrupt those patterns. However, it is reformist in nature as it focuses on examining how pre-existing institutional structures such as assessment law and conventional industrial development regimes can be re-examined to foster community well-being.

The research questions guide and modulate the research methodology into linear steps for analysis. Answering each dissertation question requires different and overlapping methodologies.

Understandings from one chapter integrate into the understandings from other chapters. For the following brief methodological overview, I divide the methods by research question. The insights garnered from responses to the preliminary questions guide understandings for the next question. Each chapter will include a methodological overview that explores the specific approaches undertaken in that section.

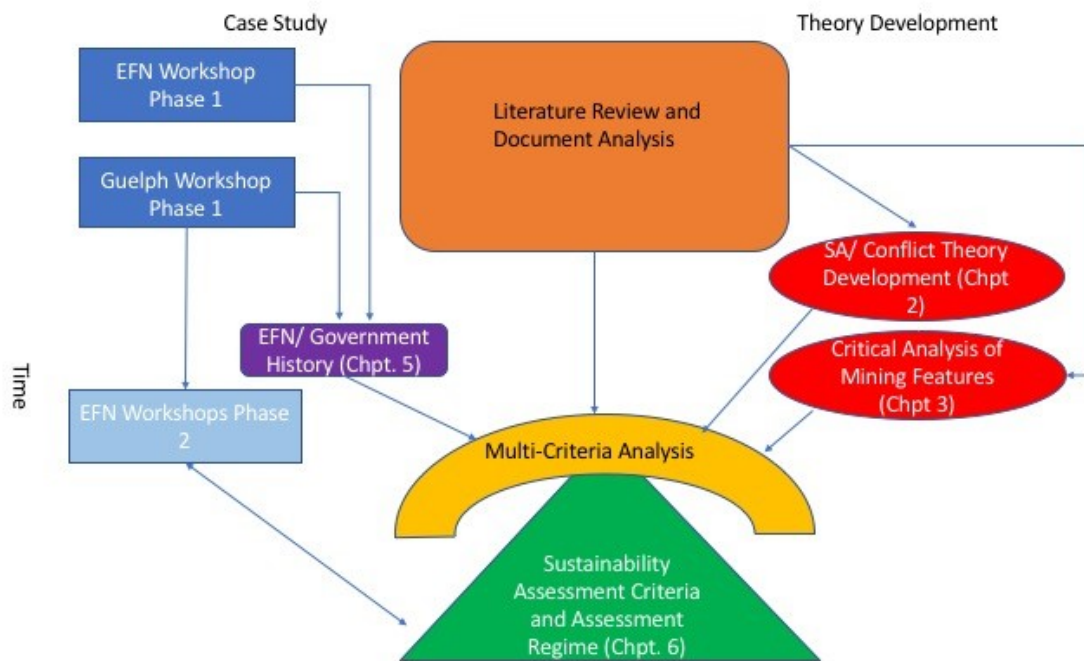


Figure 1-1: Methodology Flow and Relationship

### 1.3.1 Research Question 1

To answer the question: *What is the relationship between sustainability and conflict management and how can the concepts be integrated?* I will develop a conceptual framework.

### 1.3.2 Literature Review and Integrated Framework

The purpose of this section is to consider how sustainability and conflict management can be integrated, I analyzed the basic theoretical attributes of both concepts. As a result, this required an extensive review of sustainability and conflict management literatures (Berger, Kennet, & King, 2010; Brummans et al., 2008; Clarke & Peterson, 2015; Cruikshank & Susskind, 1989; Doelle & Sinclair, 2006; Gibson, 2006a, 2006b; Gibson, 2011; Susskind & Field, 1996; Susskind et al., 1999; Winfield, Gibson, Markvart, Gaudreau, & Taylor, 2010).

Conflict's progression from initiation, to escalation, to potential resolution has been analyzed by numerous scholars, as has the concept of sustainability. However, there has not been an analysis of how the basic components of each concept interrelate and might be usefully integrated. The obvious overlaps between sustainability and conflict management are identified and assessed to determine the relationship between the two concepts. The analysis is focused upon maximizing the combined strengths of sustainability assessment and conflict management more effectively – in concept and practice based on Moore's Triangle of Satisfaction (2004). From this conceptual construction, I developed a framework to integrate relevant aspects of the concepts for further analysis and case application.

In addition, I considered indigenous perspectives on conflict, relationships and sustainability.

### **1.3.3 Research Question 2**

For the next question: *How can understandings from the integration of sustainability and conflict management be applied to mining in Northern Canada?* It was crucial to examine the generalized impacts and trends of non-renewable resource development in Northern Canada to establish likely causes of unsustainability and conflict for regions generally, but also for EFN's specification.

#### **1.3.3.1 Literature Review and Integrated Framework**

Another framework that was required for the development of this dissertation was a foundation for analyzing the likely impacts of industrial development, particularly non-renewable resource extraction, on northern regions. To develop this framework, I extensively reviewed literature on industrial development, the political economies of these regions, ecological, social and cultural impacts, and international mineral pricing trends. I also integrated materials on Indigenous-settler relationships, as well as on Indigenous history and traditional knowledge. In addition, I reviewed grey literature produced by Indigenous peoples, government bodies, non-governmental organizations, and research think tanks. From this literature, I expanded existing conceptual foundations for analyses.

I identified a set of socio-economic, ecological and cultural characteristics almost universally present in Northern Canadian mining developments, expanded from Gibson and Klinck's work (Gibson & Klinck, 2005). This specification of characteristics for mining



applications incorporates insights from the work in previous chapters, particularly in considering latent conditions for conflict. The factors described in this chapter are reflective of common realities in mining, but these factors are often ignored or downplayed. They apply pressure to the conceptual framework based on Moore's triangle of satisfaction (2004) and lessen its capacity.

### **1.3.4 Research Question 3**

To answer the third question: *How might the combined insights inform and be informed by case application to the sustainability and conflict challenges in assessment and mining development in Northern Canada?* It is key to consider what best practices tools could be utilized in solutions.

#### **1.3.4.1 Literature Review**

Significant research exists on best practice environmental assessment methods for Canada. This dissertation's research attempts to build upon and integrate the understandings from assessment literature with others, in particular, conflict management research. Additionally, literature from indigenous scholars on assessment and planning is explored. The best practices strengthen the conceptual framework based on Moore's triangle of satisfaction (2004) by fostering desirable outcomes.

### **1.3.5 Research Question 4**

In the final and unifying question: *In particular, how might the insights inform and be informed by application to identify better approaches to the sustainability and conflict challenges faced by Eabametoong First Nation in the face of anticipated Ring of Fire mining and associated infrastructure development?* I seek a means of applying understandings from all other three questions to develop a critical understanding for Eabametoong's history, current situation and future options, utilizing insights from questions 1-3 and the constructed framework.

#### **1.3.5.1 Indigenous Community Collaboration**

Research often has been utilized as a tool of colonialization (Smith, 2013). Indigenous peoples have been the objects of research and have historically been 'problematized' by academia (Porsanger, 2004). Indigenous scholarship provides an important tool for decolonization by emphasizing indigenous worldviews and allowing indigenous people to break free of the frames of Western epistemologies (Smith, 2013),

“Indigenous methodology is a body of indigenous and theoretical approaches and methods, rules and postulates employed by indigenous research in the study of indigenous peoples. The main aim of indigenous methodologies is to ensure that research on indigenous issues can be carried out in a more respectful, ethical, correct, sympathetic, useful and beneficial fashion, seen from the point of view of indigenous peoples” (Porsanger, 2004).

This research attempts to respect indigenous knowledge and peoples, and is generated collaboratively with indigenous people for indigenous purposes. In this dissertation, I utilize the indigenous scholarship owned and generated for EFN as the basis for my understanding of Eabametoong First Nation, and I have been and continue to be directed by Eabametoong’s leaderships, elders and resource stewardship department. EFN has made the decision to engage with me in this research, direct my focus, and collaborate on the outcome. This dissertation research is still based predominantly on Western models and has Western outputs. The methodology employed utilizes primarily Western research lenses (assessment, industrial development, and conflict management) to consider the challenges and opportunities that Western parties are presenting with the development of Ring of Fire. Thus, I hesitate in calling it indigenous research. I am a white, Southern Ontarian woman receiving direction from a Northern Anishnabeg community to engage in mostly Western research. However, the goal of all of the work engaged in this dissertation is to be beneficial to the community, and be relationship driven, meaning that the work respects the relationships that I have built with the community and the trust that they have given me. At its heart, this research is an exercise in collaboration, considering industrial development, sustainability and conflict for EFN’s own purposes.

#### 1.3.5.2 Collaboration Process

Eabametoong is a remote Matawa First Nations community. I was asked to assist Eabametoong with integrating sustainability assessment and strategic assessment into their community’s approach in July 2015, at which point they hired me as a consultant to their assessment process. Since then, I have been actively involved with the band’s Resource Stewardship Department (RSD), preparing reports, presenting to the public and training staff in environmental assessment. I have visited the community four times, participated in events in Thunder Bay eight times, and have worked with community members and advisors in Southern Ontario as well. My work has

been primarily in tandem with RSD, which is made up of four to six community members and one Southern Ontario based consultant who has been working for the community for six years.

RSD works to achieve two objectives:

**Inform** EFN members with current data on projects and issues that may affect them, while building collective understanding of EFN's vision for resource stewardship

**Enable** EFN members to participate in community-based decision making through current processes and working to establish new recognition of rights and improved relationships with Treaty partners (EFN Resource Stewardship Department, 2017)

Due to my close ties with RSD and their capacity to engage community members, I have benefited greatly from the rigorous and comprehensive work that the community has done to inform their decision making. They have interviewed community members widely, held workshops that I have participated in and led, and modelled cumulative effects and future scenarios. I will be utilizing and referencing these studies widely in my dissertation. Some of the studies mentioned, such as the Community Wellbeing Study, within my report are confidential. Where materials are confidential, they will be noted within the paper. The EFN band office has provided me copies and permission to utilize the materials that I have been provided with in my dissertation, subject to their vetting and approval.

My engagement with the community at large has been facilitated by and under the direction of that department, as well as under the guidance of community advisor and elder, Andy Yesno. RSD is tasked with the primary objective of gathering feedback and bringing it to leadership for integration. RSD is also tasked with reviewing assessments, licences, permits, and other requests. This department is extremely active.

I have used RSD's materials to demonstrate community priorities and positions, particularly in relation to development, sustainability, and Western-Eabametoong relationships. Additional research, such as the Community Well-being study and the Ogoki Road Study, also contribute to understanding community perspectives. The Community Well-being Study was funded by the Ministry of Northern Development, Forestry and Mines, and undertaken by University of Guelph professor Dr. Ben Bradshaw and Peter Siebenmorgen. The research was based on questionnaires and the team contacted 215 households of the 223 within EFN, and completed 127 questionnaire surveys – a participation rate of 59 percent. The research sought to

determine what well-being looked like in the community and how the community was currently fairing based on their own metrics. The data from the research is strictly confidential. However, general themes from the research are reflected within this dissertation with community permission, particularly in chapter 6 where sustainability criteria are developed. The Ogoki Road study was conducted by Joyce Kleinfelder and Andy Yesno in 1984 where Mr. Yesno interviewed every member of the community to determine their perspectives on the proposed logging road, as well as, what they saw as fears and opportunities. This study is confidential and very few physical copies exist for public review. The report was only digitized in 2018. These studies provide longitudinal data related to sustainability and well-being. My work attempts to integrate and build from the work done by these previous studies.

My work helps to address large scale concerns over assessment in the region. The community is burdened by day to day operational challenges and has limited time to engage in meta-analysis of the type provided within this dissertation. This dissertation is complementary to my work for RSD and supplements their existing analysis and data. It also owes much to the community's and RSD's contributions for data gathering, analysis, and informed approaches to report and policy development.

#### 1.3.5.3 Participatory Workshops

In addition to utilizing materials provided to me from RSD and the Eabametoong Band Office, I participated in and developed workshops for RSD and the community at large. In part, these workshops were part of my contracted responsibilities with the community. However, they also provided clear direction for my research on the community and sustainability criteria. RSD has a significant commitment to ensuring that community members are informed about on-going development. The purposes of the workshops were primarily to confirm and gather community support for the approaches taken thus far. Additionally, they provided me with focus on community priorities and concerns, information deficits, and desired outcomes.

The workshops where field notes were taken for this research could be categorized into two workshop types: Information Gathering and Approach Confirmation.

“Information Gathering with RSD” workshops were focused on knowledge transfer between the RSD staff and myself, brainstorming and scenario development. I discussed regional assessment, sustainability assessment and cumulative effects. The staff similarly shared

community fears and expectations from economic development, which is documented in various reports, as well as providing direction for my research. Field notes were taken to document collective learning. Two such workshops occurred from December 9-15<sup>th</sup>, 2015 in Eabametoong, and August 15<sup>th</sup>- 17<sup>th</sup>, 2016 in Guelph, Ontario.

“Confirmation of Approach with Leadership and Community” workshops included presentations on environmental assessment and sustainability assessment, the development of a scenario-based game to model strategic assessment considerations, group activities and question and answer periods. Sessions where I was stationed to meet with community members one on one were also organized. I did not interview community members during these conversations but had dialogue about their expectations for the process. Field notes were taken to document collective learning. These workshops occurred on July 26<sup>th</sup>- 28<sup>th</sup>, 2017 in Eabametoong, and November 21<sup>st</sup>-24<sup>th</sup>, 2017.

#### 1.3.5.4 Case Study

Eckstein argues that case studies are an essential part of theory testing in political science research and in this dissertation, they play a similar role (Gomm, Hammersley, & Foster, 2000). The case study of Eabametoong provides an understanding of the depth of conflict and the lack of sustainability in current approaches to developing the Canadian North. It also demonstrates the poor relationship that the Crown has perpetuated with indigenous communities. Analyzing this case generates the basis for applying the framework developed in the previous chapters.

This case study explores the history of the community and contextual background factors important for understanding the relationship between the community and the province, as well as the challenges that the community has faced as a result of mandated economic development. The intention of a case study is to examine a phenomenon within its context (Harrison, Birks, Franklin, & Mills, 2017). This case study was informed by available written materials and experiential learning. Work reported in this chapter was guided by Eabametoong elder, scholar and resource advisor, Andy Yesno.

#### 1.3.5.5 Sustainability Assessment Criteria Design Methodology/ Multi-Criteria Analysis

A major outcome of this dissertation is the co-development of sustainability-based assessment criteria and a proposed tiered assessment regime for the use of Eabametoong in deliberations on the development of the Ring of Fire. The framework will be presented in chapter 6. To generate

these outcomes, a collaborative process with EFN's RSD to specify multi-criteria analysis methodology was employed. Within this process with Eabametoong, I collaborated with the RSD and community members in identifying 1) community objectives; 2) options for achieving the objectives; and 3) criteria to be used to compare the options. Step 4) analyzed the options in light of the criteria. Step 5) making a choice and step 6) feedback are beyond the scope of this dissertation (Dodgson, Spackman, Pearman, & Phillips, 2009).

Additionally, the outcomes and objective, the assessment criteria, and the tiered assessment regime reflect my interpretation of consultations with the Eabametoong First Nation, the government and NGOs. For the purposes of this dissertation, I was unable to employ a consensus-based methodology for the assessment criteria development, which I advocate in chapter 4, due to lack of resources and insufficient time. The work is therefore tentative. However, the work incorporates understandings from my participation with the community and information from the community well-being reports and other community sources. This work is continuing and is expected to include community iterations in coming months and years. Additionally, while I am a participant in this process, I am not leading this process. Much of the information and material that justifies a direction or concept is confidential. As a result, the product of this dissertation is less refined than the product that I am concurrently working on with EFN. This chapter will also be approved by the Eabametoong Chief and Council prior to distribution.

Thus, chapters 5 and 6 of my dissertation are framed within a participatory research style, meaning "methods are geared towards planning and conducting the research process *with* those people whose life-world and meaningful actions are under study" (Bergold & Thomas, 2012). Within it, this research falls into the category of critical participatory action research, meaning "a collaborative commitment to engaging in iterative cycles of planning, acting, observing, and reflecting to address untoward consequences of social practices, often rooted in global concerns (that is, concerns connected to social movements such as protecting the environment, or advocating for women's rights)" (Kemmis, McTaggart, & Nixon, 2013).

#### **1.4 Dissertation Overview**

Chapter 2 focuses upon the construction of a conceptual framework that links sustainability and conflict management. The concepts have been linked in practice, and their theoretical

foundations have numerous similarities, but so far there has been no careful examination of how the two could be most effectively integrated in concept and practice. This chapter analyzes the process and substantive components of both sustainability and conflict management and produces a framework to analyze the concepts utilizing Moore's Triangle of Satisfaction.

Chapter 3 focuses on the broader context of positive effects and opportunities as well as the adverse effects and risks within the mining sector in the interests of setting out a foundation for more specific elaboration of the conceptual framework developed in chapter 2. The elaborated framework is meant to recognize the context of assessment, inform prediction of general conflict concerns, and justify the application of next generation assessment processes that scope these concerns into their evaluation.

Chapter 4 provides an overview of how conflict management and sustainability could be integrated into next generation assessment at the conceptual level. These approaches will then be applied as an integrated framework in the Ring of Fire in Chapter 6. Chapter 4 focuses on next generation assessment practices, including sustainability-based criteria, regional assessment, scenario construction and comparative evaluation of alternatives, indigenous led assessment, etc.

Chapter 5 introduces a case study centred on Eabametoong and the Ring of Fire proposed development region. It provides the key background, emphasising issues related to colonialism, paternalistic decision-making, sustainability, conflict management and regional scale decision making related to the anticipated mining developments, highlighting multi-scalar concerns, government-Indigenous relationships, and demonstrates the sustainability and conflict management challenges for that reason. The history identifies the latent conflicts that Eabametoong has with Canada, the province, other Matawa communities, and the proponents. In order to help communities move towards sustainability, future scenarios must acknowledge and address those conflicts, the lack of trust and the systemic issues that have been perpetuated by colonialism.

Chapter 6 develops sustainability and conflict management criteria for application in the Eabametoong First Nation, based on the case study. It also outlines a tiered assessment and monitoring regime for theoretical application. This chapter will integrate conceptual framework developed in chapter 2, the mining characteristics and mining specified framework in chapter 3, and recognition of the key regional and community considerations in chapter 5 to develop a context-specified regime based on the best practice identified in chapter 4, for the application in

the case of chapter 5.

Chapter 7 looks to conclusions, implications for theory, broad practice, the case study area and actors, and next steps for research.

## **1.5 Summary**

This dissertation explores the case of the Ring of Fire regional mining development, particularly from the perspective of Eabametoong First Nations, and develops an idealized tiered governance framework of assessment and sustainability-based criteria for the community. It considers how procedural needs and associated interests have been highly prioritized by the government authorities in the Ring of Fire deliberations. The lack of consideration for substantive needs/interests, as well as relational needs/interests, when layered with latent understandings of colonialism and the negative impacts of development that underpin indigenous understandings of the decision-making process, has prevented resolution and caused unproductive forms of conflict to fester.

Conflict management and sustainability assessment have similar intentions. More conscious integration of conflict management within sustainability assessment may help to expand and improve practice. This dissertation seeks to identify and pursue opportunities to apply the theoretical insights from sustainability assessment and conflict management to an extremely challenging case: the Ring of Fire.

Please note that the work with Eabametoong has been on-going for three years and represents part of a longer process. The assessment regime is evolving and the proprietary interest of the band. However, for the purposes of this dissertation, the materials will be generalized and will present a snapshot in time. The broader implications for other communities in the Ring of Fire area, in mining regions in the Canadian northern and beyond will also be considered.

## **Chapter 2: Conflict, Sustainability and the Triangle of Satisfaction**

### **2.1 Introduction**

Resource development projects in indigenous traditional territories, especially in remote and ecologically sensitive regions have a long history of unfortunate results. Drawing from past



and on-going cases, we could anticipate that most new proposals today would generate at least some conflict between indigenous peoples and the proponents over the risk, potential legacies, impacts to traditional lands, etc., and conflict between indigenous peoples and government over decision-making authority and autonomy, the provision of infrastructure and services, the likely boom and bust effects, regulatory safeguards, etc. Questions related to indigenous authority and rights, ecological fragmentation, pollution, economic opportunities, etc. loom over each dialogue. Lack of trust due to colonialism and differing world views generate further challenges. Especially in recent years, industrial development has often generated conflict over understandings about what levels of risk are acceptable and to whom, what desirable futures are, and how any process should move forward (Atlookan, 2018; Goldenberg, Shoveller, Koehoorn, & Ostry, 2010; Hoogeveen, 2015).

Disagreements over acceptable risk, desirable futures, and worldviews raise innumerable questions related to alternatives, need and demand, legacies and infrastructure. What communities, companies and governments desire is a better approach where these identified issues can be explored in ways that generate integrative and credible solutions. In order to do that, future approaches need to understand conflict, ensure that the issues of substance are part of the solution, and adopt deliberative means that foster people's trust in the process and in those with whom they're collaborating (Lewiciki et al., 2003; Blackburn & Bruce, 1995; Sidaway, 2005; Susskind & Field, 1996).

In recent practice, many efforts to overcome these problems have focused on improved fair process (Hamilton & Wills-Toker, 2006). In practice, the process focus is insufficient because,

“the attempt to overcome technical dominance with democratic procedures has had the effect of reducing communication to fair procedural rules that do not recognize the full rhetorical complexity of public dialogue. Meaning generation or the sense-making process that is a part of public participation is not sufficiently accounted for in current participation theories and models. The sense-making process refers to negotiating and constructing knowledge in and through talk in which participants influence one another and produce new meanings” (Hamilton & Wills-Toker, 2006, p. 756).

The “fair process” experiment of environmental participation in decision-making has operated with mixed success (Hamilton & Wills-Toker, 2006; Norton, 2007). Fair process in and of itself is insufficient in generating positive outcomes for complex decisions.

As a corrective, Hamilton and Wills-Toker (2006) argue for a dialogic approach that emphasizes dialogue through the application of a sense-making discourse and a problem-solving discourse, which can work concurrently in practice. A sense-making discourse refers to: “orienting to essential differences and similarities; recognizing the struggle among diverse perspectives from which new meanings emerge; and creating a multi-voiced and ongoing dialogue that builds understanding and relationships over a period of time.” (Hamilton & Wills-Toker, 2006). Comparatively, “a problem-solving discourse focused on developing agreement among disparate views within democratic processes” (Hamilton & Wills-Toker, 2006).

Approaches that combine trust building (Ermine, 2007; Regan, 2006a) with sustainability as the substantive orientation (Adger & Jordan, 2009; Doelle & Sinclair, 2006; Gibson, 2006a) are especially attractive because they provide greater opportunity for sense-making discourse. In wicked problem areas, like those in the Ring of Fire, it is crucial to make sense of the problem prior to determining how to solve the problem. In current Canadian practice, we have often skipped the step of dialogue to define the problem and alternative possible responses, and gone straight to solutions building. In so doing, we have tended to exacerbate the underlying distrust (Booth & Skelton, 2011a; 2011b). Therefore, approaches require integrative dialogue on both the problem and the solution.

Given the challenges identified above, my goal is to build a conceptual framework that links conflict management and sustainability considerations as key contributors to the quality of decision-making. In modifying the conceptual framework, I paid particular attention to how one might guide approaches to complex decision-making in remote resource regions. In the discussion below, I develop my conceptual frame around the ‘triangle of satisfaction’ (Moore, 2004) to explore the interplay between and among relationships, process and substantive understandings and its potential role in developing common understandings of a problem and potential responses, and generating satisfactory resolutions. These elements can be designed to work together in mutually reinforcing ways to support the development of sense making and problem-solving dialogue.

## **2.2 Chapter Approach**

To build the conceptual frame I drew on literature from several fields to identify both a gap in research that has been under-explored and also the vast overlapping characteristics that the

literature reflects. In particular, this chapter rests on an extensive literature review of conflict theory, conflict management, conflict resolution, environmental disputes, environmental assessment, sustainability assessment, and next generation assessment. I utilized a nested search approach for the above terms on the University of Waterloo journal search engine and on Google Scholar.

The only articles located in my search that directly integrated conflict management and sustainability assessment were Dr. Gibson's 2006 "Sustainability assessment and conflict resolution: Reaching agreement to proceed with the Voisey's Bay nickel mine" and Doelle and Sinclair's 2010 "Mediation in Environmental Assessments in Canada: Unfulfilled Promise." Other areas of environmental decision-making have stronger links to conflict in the literature. Planning literature has historically been more directly engaged in managing conflict (Beierle, n.d.; Campbell, 2003; Godschalk, 2004; Susskind et al., 1983, 1999). Additionally, significant work has been engaged in linking conflict, Indigenous peoples and industrial development, particularly as related to impact and benefit agreements (Trebeck, 2007; Hitch & Fidler, 2007, 2007; Lertzman & Vredenburg, 2005; Tidwell & Zellen, 2015). Extensive literature on public participation in environmental assessment also considers conflict, particularly works by John Sinclair (2006, 2008) and Ciaran O'Faircheallaigh (2007, 2010). However, the literature primarily considers conflict as a result or consequence of the environmental decision-making process, particularly when limited outlets for public participation are available (Depoe, Delicath, & Elsenbeer, 2004; Diduck, n.d.; Doelle & Sinclair, 2006; O'Faircheallaigh, 2007; O'Faircheallaigh, 2010; Richardson & Razzaque, 2006; Sheldrick, 2014; Sinclair, 2001).

In the sustainability literature, the strongest link between conflict management and sustainability assessment emerges because sustainability requires context and dialogue to generate a common understanding within a given case (Adger & Jordan, 2009; Gibson et al., 2005; Neumayer, 2003; Norton, 2005). Pure conflict analysis literature gave limited insight into its relationship with sustainability because conflict management is primarily a functional construct to be utilized to generate an outcome (Church & Shouldice, 2003; Cruikshank & Susskind, 1989; Furlong, 2005; Rioux & Redekop, 2012; Robbins, 1978; Schmidt & Kochan, 1972, 1972). However, it did provide opportunities to see how next-generation assessment methods and best practice conflict resolution methods are similar. For example, it revealed that next generation assessment encourages use of scenarios and conflict resolution uses framing;

transparency and open communication are important in both; and sustainability assessment criteria are used to compare options for responding to unresolved, latent concerns and anticipate new ones while conflict resolution attempts to consider those elements as well.

Concerning indigenous scholarship on relationships, conflict and sustainability, I undertook a literature review that was guided by indigenous elders and scholars, and considered materials provided at conferences, meetings and by academics, scholars, and community members. My time spent with elders and indigenous community members in Eabametoong and Thunder Bay, as well as with elders in Northern Alberta, over the past four years also influenced my understanding of indigenous approaches to conflict, relationships and sustainability. Materials on indigenous approaches to conflict resolution, methodology and sustainability were reviewed and integrated into this understanding (Alfred, 1999, 2005; Alfred & Corntassel, 2005; Trebeck, 2007; Bankes & Sharvit, 1998; Bell & Kahane, 2004; Bradshaw, Siebenmorgen, & Eabametoong First Nation, 2012; Cooney, 2013; Corntassel & Holder, 2008; Coyle, 2010, 2014a; Evans, Hole, Berg, Hutchinson, & Sookraj, 2009; Napoleon, 2013; Noble & Udofia, 2015; O’Faircheallaigh, 2007; Throsby & Petetskaya, 2016; Victor, 2007).

Given my approach and the literature I considered, the discussion that follows explores thinking regarding conflict, sustainability, and modifying the triangle of satisfaction as a conceptual framework to consider issues within this dissertation.

### **2.3 Conflict**

Conflict is inevitable in resource development. Encouraging dialogue and conflict assists in generating new ideas and innovative solutions for sustainability in this context (Sinclair, 2001, 2008). However, conflict is normally understood primarily as destructive. Prior to entering into any further analysis, it is important to address this common misconception:

Conflict is not necessarily bad or good, but must be evaluated in terms of its individual and organizational functions and dysfunctions. In general, conflict generates pressures to reduce conflict, but chronic conflict persists and is endured under certain conditions, and is consciously created and managed by the politically astute administrator. (Pondy, 1967, p. 319)

Conflict is an unavoidable part of the human condition. Often it has beneficial results. Without conflict, major social progress, in areas such as improved civil rights, women’s rights, unionization and the fall of corrupt regimes, could not have occurred (Coser, 1964; Rioux &

Redekop, 2012; Thomas, 1992). However, conflict can be influenced to make it more functional and productive.

Conflict theory has a broad scope and applies to a variety of relationships, from interpersonal to organizational. As a result, the discipline encompasses aspects of sociology, psychology, organizational management, game theory and political science (Rioux & Redekop, 2012). The initial wave of conflict theory in the 1950s, 1960s and 1970s followed the perspectives of structural functionalism by suggesting that conflict was either negative and should be minimized as much as possible, or positive, and should be fostered in order to generate positive societal progress (Coser, 1964; Rioux & Redekop, 2012). Coser argued that innovations, institutional shifts and new political agendas emerge from conflicts. Coser's presumptions were later challenged (Schmidt & Kochan, 1972), but established an intellectual infrastructure for considering conflict as a functional process (Cerny, 1993; King, 1980; Thomas, 1992).

Pondy wrote *Organizational Conflict: Concepts and Models* in 1967, building on Coser's perception of functionality and this analysis became the standard model in the conflict literature (Mayer, 2010; Pondy, 1967; Schmidt & Kochan, 1972). Pondy suggests that conflict episodes can have "beneficial or deleterious effects on productivity, stability, and adaptability" (Pondy, 1967, p. 303). It is functional or dysfunctional depending on how it "facilitates or inhibits" these results (Pondy, 1967, p. 303). Pondy defines conflict broadly as involving the following four, often linked aspects:

... (1) antecedent conditions (for example, scarcity of resources, policy differences) of conflictful behavior, (2) affective states (e.g., stress, tension, hostility, anxiety, etc.) of the individuals involved, (3) cognitive states of individuals, i.e., their perception or awareness of conflictful situations, and (4) conflictful behavior, ranging from passive resistance to overt aggression. Attempts to decide which of these classes – conditions, attitude, cognition, or behavior – is really conflict is likely to result in an empty controversy. The problem is not to choose among these alternative conceptual definitions, since each may be a relevant stage in the development of a conflict episode, but to try to clarify their relationship. **Conflict can be more readily understood if it is considered a dynamic process.** (Pondy, 1967, p. 298)

Considering conflict as a dynamic system lays the framework for understanding the inevitable disputes present in resource development. Pondy's conflict episode process has five stages: (1) latent conflict (conditions) (2) perceived conflict (cognition), (3) felt conflict (affect), (4) manifest conflict (behavior), and (5) aftermath (conditions).

Stage (1), latent conflict, exists in the initial conditions. Latent conflict can be categorized in three basic types: “(1) competition for scarce resources, (2) drives for autonomy, and (3) divergence of subunit goals” (Pondy, 1967, p. 300).

The second episodal stage, perceived conflict, centres on cognition. In this stage, “conflict is said to result from the parties' misunderstanding of each other's true position. It is argued that such conflict can be resolved by improving communications between the parties... if the parties' true positions are in opposition, then more open communication may only exacerbate the conflict” (Pondy, 1967). Positions “summarize a party's definition of a problem and their solution” (Rotham, 1997). Frequently, in this stage, one party may be unaware of the existence of conflict. In issues of broader governance, often organizations are involved with more conflicts than they have the available time or capacity to manage properly (Pondy, 1967).

The third stage, felt conflict, represents the evolution from when a party perceives conflict to when it is felt. Felt conflict impacts interactions between parties and generates anxiety. The fourth stage, manifest conflict, follows quickly. It involves “behavior which, in the mind of the actor, frustrates the goals of at least some of the other participants... a member... engages in conflictful behavior if he consciously, but not necessarily deliberately, blocks another member's goal achievement.” (Pondy, 1967, p. 303). Pondy emphasizes that the interface between perceived and manifest conflict offers the greatest opportunity for interventions and conflict management (Pondy, 1967, p. 304). Other theorists suggest that conflict also requires a promotion of self-interest at this stage (Schmidt & Kochan, 1972).

Pondy's stage five is conflict aftermath referring to either resolution or reorganization, where a new latent conflict, not previously perceived, is pushed up to the surface and a new conflict episode emerges. If the new latent conflict is suppressed, the future conflict may be “aggravated and explode in more serious form until they are rectified or until the relationship dissolves” (Pondy, 1967, p. 300). Between steps one and three lie many of the challenges for Canadian resource development. Primarily, there are two major forms of latent conflict: a) the debate about “balancing” economic and ecological imperatives as opposed to aligning them to be mutually supportive, and briefly, b) a major governance challenge that exists between Indigenous peoples and settlers, relating to autonomy (Alfred & Corntassel, 2005; Ermine, 2007; Ford & Rowse, 2013; Regan, 2006a). Type a) relates to how resources should be allocated, where and how benefits and challenges are distributed, divisions among groups over whether given

developments are necessary or beneficial, etc. Type b) relates to determining who has authority to make such decisions, whether they have perceived legitimacy, and how that authority is delineated. Conflict related to rights and reconciliation is embedded within colonialism and be categorized as a latent conflict. Both types of conflict manifest in Canadian environmental decision-making. Both factors reflect the deep history and legacies of colonialism, distrust and differing worldviews present with Western-indigenous conflict. These problems will be discussed in the relationship issues section later in the chapter, as well as throughout the dissertation. These factors impact the tools we select and how the conflict cycle proceeds.

Another method of visualizing the conflict process is from Sidaway, who distinguishes between the pathways in processes of conflict and processes of cooperation (see Figure 2-1). For the purposes of this dissertation, that simple categorization needs more nuance, to recognize that conflict can be functional and will never be absent from processes. However, Sidaway points out usefully that processes, where escalation, confrontation and rigid decision-making prevail, tend to generate at best transitory resolutions. Processes where power is shared and information is dispersed between and among groups tend to result in more durable outcomes (Sidaway, 2005, p. 51).

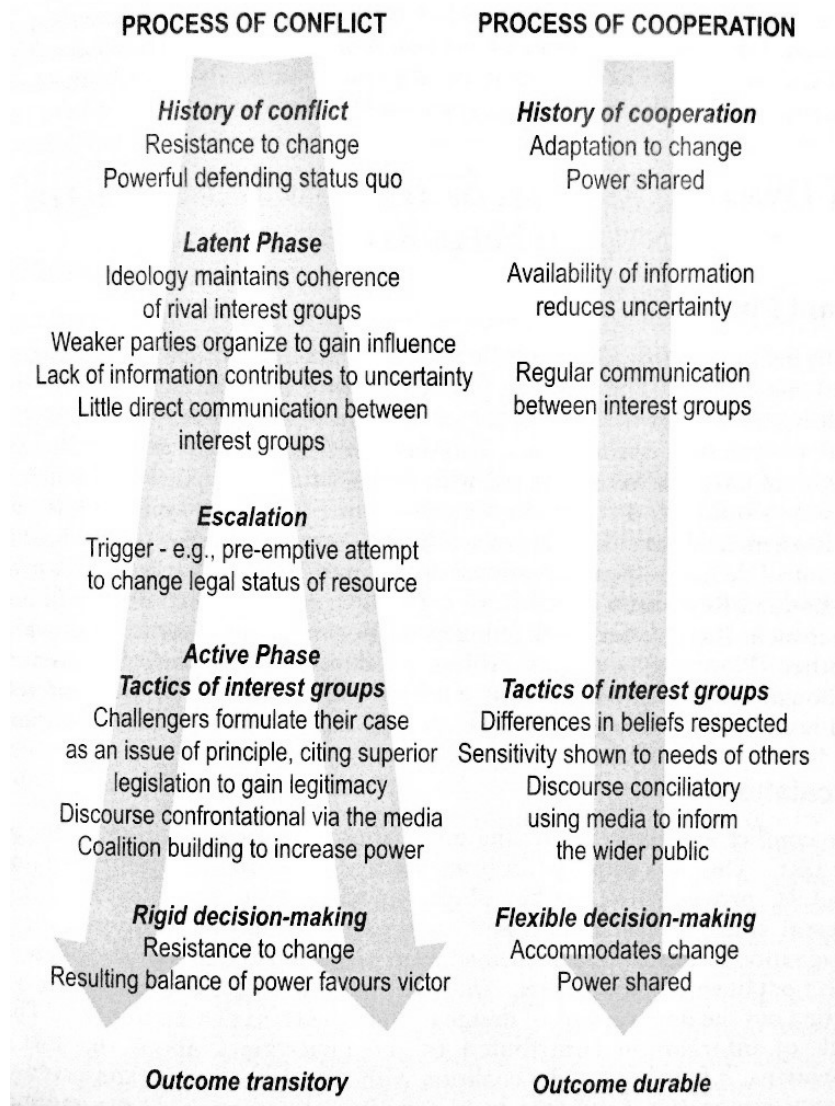


Figure 2-1 Dynamic analyses of natural resource conflicts and cooperation in natural resource management (Sidaway, 2005, p. 51)

Process and administrative tools can aid in managing dysfunction and pushing towards functional innovation between steps three and five. Conflict management is defined as “methods and processes used to minimize and contain the negative aspects of a conflict” (Rioux & Redekop, 2012). Managing conflict is important for reducing dysfunction and maximizing positive social innovation.



### 2.3.1 “Environmental” Conflict

There is also a sizable literature focusing on environmental conflicts in particular. Tensions involving environmental issues and development are not new. Conflict literature uses the term “environmental conflict” to encapsulate social conflict about issues involving the biophysical environment and related socio-economic and cultural considerations. Insofar as such issues have long term implications, we can categorize them as sustainability-related issues. Environmental conflict theory emerged in the late 1970s (Glavovic, Dukes, & Lynott, 1997), primarily from the work of planning professionals and mediators such as Lawrence Susskind (Susskind, 1983). Environmental conflict study “stems from divergent views about how to allocate and utilize land, air, water, and living resources. At its deepest level, environmental conflict is the division that arises over competing demands for individual and collective rights, fulfillment of basic human needs, and biophysical constraints, under conditions of political and scientific uncertainty” (Glavovic et al., 1997). Sidaway defines an environmental dispute as, “an unsolved disagreement between competing interest groups which has reached the public arena, is controversial and may have political consequences: i.e., one interest group is attempting to control the action of another, or its access to a semi-natural resource” (Sidaway, 2005, p. xiii). Environmental conflict has certain characteristics: it 1) is largely anthropocentric (though ecocentric positions may be involved); 2) is highly complex; 3) impinges on the public good; 4) generates significant uncertainty; 5) involves tensions that are multi-party with significant divergence in views, values and ideologies; and 6) is typified by challenges in setting conflict boundaries due to differing perspectives on jurisdiction, socio-ecological impact, temporal scale, and relevant stakeholders (Brummans et al., 2008; Cruikshank & Susskind, 1989; Glavovic et al., 1997; Susskind, 1994).

The results of past approaches to the management of environmental conflict for indigenous communities have often been perceived as extremely negative (Ali, 2009; A. L. Booth & Skelton, 2011; E. Cameron & Levitan, 2014; Mikisew Cree First Nation, 2016; Tidwell & Zellen, 2015). Indigenous communities bear great negative burdens from industrialization, and conflict management and resolution have often been used as means of “smoothing over” uncomfortable latent and substantive concerns regarding sustainability by focusing on “interests”, furthering Colonization and the Westernization of decision-making, and being utilized as a tool to marginalize communities (Walker, 2004). My research attempts to provide a more positive alternative to this approach.

However, that history does not mean that the potential for understanding conflict and the role that it plays in sustainability decisions, particularly for indigenous communities, should be dismissed entirely. Understanding the mechanics of conflict patterns can aid in anticipating and adapting methods to prepare for conflict. Indigenous legal orders also acknowledge the important role of managing conflict, though they utilize different tools in so doing (Napoleon, 2013).

Conflict can be anticipated as a complex and dynamic structure that requires positive interventions to ensure improved resolutions. Structures in environmental conflicts must recognize the importance of improving relationships, building trust, and clearly outlining the needs, objectives and alternatives of any approach forward. Additionally, approaches need to recognize that environmental conflicts pose extreme challenges because their overall objective, sustainability, sets a high bar.

## **2.4 Sustainability**

Contributions to sustainability are the substantive aim of any resolution in environmental conflict (Brummans et al., 2008; Doelle & Sinclair, 2006; Sidaway, 2005; Voss, Bauknecht, & Kemp, 2006). Substantive needs are “tangible outcomes or benefits that a party wants to have satisfied, receive or be exchanged as a result of negotiations” (Moore, 2014, p. 128). The substantive need that should drive all resource development is progress towards sustainability (Gibson et al., 2005; Norton, 2005). Sustainable development involves two crucial components – sustainability and development. Sustainability is the ability to last or continue for a long time (Frame & O’Connor, 2011; Gibson et al., 2005; Leach et al., 2010; Rogers et al., 2012). Development refers to the process of growing or becoming more advanced (Frame & O’Connor, 2011; Gibson et al., 2005; Leach et al., 2010; Rogers et al., 2012).

Sustainable development is the formation of a new path that includes concepts from opposing ideas. Sustainable development became a popular concept following release of the 1987 World Commission on Environment and Development report, *Our Common Future*, also known as the Brundtland Report (Gibson et al., 2005, p. 48). The report’s most concise definition of sustainable development is as follows, “[development that] meets the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987).

Sustainable development emerged historically out of recognition of two primary

considerations: needs and limits. Needs are the requirement to maintain intra-generational equity. Explicitly, Brundtland's definition identifies "*needs, in particular, the essential needs of the world's poor, to which overriding priority should be given*" (Brundtland, 1987). The needs focus emerges from two substantive considerations: 1) the presumption that economic growth yields material prosperity and will contribute to human welfare; and 2) the presumed moral imperative to alleviate global poverty (Brundtland, 1989; Collier & Dollar, 2002; Ferguson et al., 2010; Gibson et al., 2005; Giddings, Hopwood, & O'Brien, 2002; Jackson, 2011; Leach et al., 2010; Sachs, 2006; Stoesz, Guzzetta, & Lusk, 1999; Thirlwall, 2006; Todaro, 1985; Voth, 2004).

Limits primarily arise from biophysical system limits and prevailing human capacities and involve both intra- and inter-generational equity considerations. They acknowledge the constraints of "*...limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs*" (Brundtland, 1989). Limits re-emerged in policy dialogues in the 1970s as a response to environmental problems emerging from industrial growth. Limits to growth theory models how exponential growth impacts finite resources, demonstrating that if humans continue to exceed our biosphere's carrying capacity, disaster is likely (Barbier, 1987; Gibson et al., 2005; Leach et al., 2010; Meadows, Randers, & Meadows, 2004; Rogers et al., 2012; Winner, 1986). Current demands on the planet's resources are unsustainable and insufficient to meet the needs of our current population. Sustainable development thus attempts to jointly reduce pressure on the biosphere while enhancing sufficiency and opportunity for all (Dalal-Clayton, Bass, & Programme, 2002; Giddings et al., 2002; Sneddon, 2006).

Sustainable development emerged as a means to support economic development and its related benefits, such as poverty alleviation, while encouraging precautionary measures to prevent environmental collapse (Rogers et al., 2012; Voss et al., 2006). Sustainable development became a popular discourse for civil society, business, and government alike (Adger & Jordan, 2009; Brand & Jax, 2007), but it has proven challenging to implement (Frame & O'Connor, 2011; Norton, 2005; Sneddon, 2006). The perspective that social, ecological and economic considerations are easily met through a sustainable development paradigm is naïve in part because "In most debates about sustainable development either the environment or the economy is given priority" (Giddings et al., 2002, p. 189). However, sustainable development practices are

in play, to varied effect, around the world and the idea has garnered global traction (Dalal-Clayton & Sadler, 2005; Giddings et al., 2002; Norton, 2005).

Indigenous conceptions of sustainability vary slightly from Western definitions. Throsby and Petraskaya describe the difference between Western sustainability understandings and the understanding of the Aboriginals of Australia as follows:

... a key characteristic of the concepts of sustainability and sustainable development in the contemporary Western world is a focus on intergenerational equity, taking account of the needs of the earth's future inhabitants. A similar concern with the long run underpins indigenous cultures whose very existence is grounded on the inheritance of traditional knowledge and the transmission of cultural values to subsequent generations. In such cultures, the nature of sustainability is understood and experienced in terms of relationships to land, language, and knowledge systems. Linking these three dimensions together, the majority of indigenous societies recognize the importance of holism as a basis for interpreting the world (Throsby & Petetskaya, 2016, p. 123–124).

The concept of holism and integration of sustainability in indigenous society contrast with the atomistic understandings still dominant in the West, despite the rise of complex systems understandings. However, the need to consider intergenerational equity resonates across definitions. There is limited academic material that analyzes the Annishabeg definition of “sustainability.” However, the people of Eabametoong are capable of describing and implementing sustainability as a concept and have focused upon the topic in their negotiations with provincial officials (Eabametoong First Nations, 2018). The divergence between indigenous people and white people on how sustainability, among other concepts, is understood, is important to keep in mind when we discuss the relationship side of the model. In addition, this divergence typifies why sustainability is most effective when it is considered a boundary object.

Boundary objects are:

"[T]hose objects that both inhabit several communities of practice and satisfy the informational requirements of each of them. Boundary objects are thus both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use and become strongly structured in individual-site use... These objects may be abstract or concrete...but their

structure is common enough to more than one world to make them recognizable, a means of translation. The creation and management of boundary objects is a key process in developing and maintaining coherence across intersecting communities.” (Bowker & Star, 1999 pg. 297)

Brand & Jax elaborate on the definition, stating:

“Within the field of science and technology studies, this signifies a term that facilitates communication across disciplinary borders by creating shared vocabulary although the understanding of the parties would differ regarding the precise meaning of the term in question. Boundary objects are able to coordinate different groups without a consensus about their aims and interests. If they are both open to interpretation and valuable for various scientific disciplines or social groups, boundary objects can be highly useful as a communication tool in order to bridge scientific disciplines and the gap between science and policy.” (Brand & Jax, 2007)

Sustainability is a boundary object because it has a common identity, but is context dependent, making it a useful tool of policy making and communication. However, like other boundary objects, it can be captured by various value sets and interpreted for alternative means. This characteristic can be perceived as a limitation of the concept, but for a boundary object, it is an essential strength.

“Indeed, it is this vagueness and malleability, i.e., the potential variety of interpretations or applications of the term that makes boundary objects politically successful. For example, the boundary object sustainability has been highly successful in providing the common ground for ecologists and economists, which were formerly thought contrary, to engage together for the needs of future generations. In addition, the concept has helped to reconcile contrasting interests of industrial and developing countries.” (Brand & Jax, 2007)

As a result, various community members may have different understandings or perceptions about a concept like sustainability, but they are able to work together without consensus. For sustainability work, this is particularly important, because there is infrequently consensus. As Star & Griesmer note, “Consensus is not necessary for cooperation nor for the successful conduct of work” (2002:388), as is similarly understood in sense making discourse (Hamilton & Wills-Toker, 2006).

As a boundary object, sustainability is understood generally but its practical implications are context dependent and involve diverse objectives (Brand & Jax, 2007). If I said to a friend, I made soup, she would have a general understanding of the dish I created. However, there are many different kinds of soup, and some recipes are more failproof than others. Lobster bisque requires a finer hand than chicken noodle.

Sustainability “soup” is thus a mixture of history, experience, cultural and context determined factors. Through experience, we understand generally what sustainable practices are. Those histories feed into future sustainable practices, but do not define or predetermine their outcome. Nor do they anticipate all the challenges or opportunities that will be presented in a given scenario. However, they do guide policy and decision-making, and if the substantive sustainability characteristics are not directing a decision, it should not go forward. In the following section, I will outline the substantive components of sustainability.

#### **2.4.1 Sustainability Criteria: Substantive Components**

Gibson (2005) provides a synthesis of sustainability criteria based on the core requirements for progress towards sustainability as identified in the global literature at the time. The criteria are substantive in nature in that they guide the critical considerations in sustainability deliberations and frame contextual specification. This framework has recently been re-affirmed in federal assessment reform processes (Gelinias, Horswill, Northey, & Pelletier, 2017). However, Gibson's criteria imply the need for process characteristics because they are comprehensively scoped, systemic, democratic in the sense that it includes direct engagement to the extent possible to enhance learning and to build and mobilize diverse capacities. They also recognize that the criteria needs to be specified for case and context.

Table 1 Gibson's Generic Sustainability Criteria

<b>Socio-ecological system integrity</b>
Build human-ecological relations to establish and maintain the long-term integrity of socio-biophysical systems and protect the irreplaceable life support functions upon which human as well as ecological wellbeing depends.
<b>Livelihood sufficiency and opportunity</b>
Ensure that everyone and every community has enough for a decent life and that everyone has opportunities to seek improvements in ways that do not compromise future generations' possibilities for sufficiency and opportunity.
<b>Intragenerational equity</b>
Ensure that sufficiency and effective choices for all are pursued in ways that reduce dangerous gaps in sufficiency and opportunity (and health, security, social recognition, political influence, etc.) between the rich and the poor.
<b>Intergenerational equity</b>
Favour present options and actions that are most likely to preserve or enhance the opportunities and capabilities of future generations to live sustainably.
<b>Resource maintenance and efficiency</b>
Provide a larger base for ensuring sustainable livelihoods for all while reducing threats to the long term integrity of socio-ecological systems by reducing extractive damage, avoiding waste and cutting overall material and energy use per unit of benefit.
<b>Socio-ecological commitment/civility and democratic governance</b>
Build the capacity, motivation and habitual inclination of individuals, communities and other collective decision making bodies to apply sustainability requirements through more open and better informed deliberations, greater attention to fostering reciprocal awareness and collective responsibility, and more integrated use of administrative, market, customary and personal decision making practices.
<b>Precaution and adaptation</b>
Respect uncertainty, avoid even poorly understood risks of serious or irreversible damage to the foundations for sustainability, plan to learn, design for surprise, and manage for adaptation.
<b>Immediate and long term integration</b>
Apply all principles of sustainability at once, seeking mutually supportive benefits and multiple gains. (Gibson et al., 2005)

My interpretation of sustainability will draw on Gibson's eight sustainability criteria as the substantive basis, while recognizing what Stirling calls "processual" sustainability and Gibson's (2017) insistence that any set of generic criteria must be specified for the context of application. Gibson's sustainability criteria provide a guiding, generic and tested understanding of sustainability while processual sustainability "relates not so much to the outcomes but to particular features of the process of governance... it refers to attributes such as agency, accessibility, transparency, representativeness and equity of a kind that are held to be necessary, if not sufficient, in order to achieve more substantively sustainable outcomes" (Adger & Jordan, 2009, p. 197). These concepts interplay with ideas embedded within the sense-making and solutions making discourses (Hamilton & Wills-Toker, 2006), and the concepts of fair process outlined in Senec's trinity of voice (discussed below), as well as other mechanisms of deliberative democracy. Understanding sustainability does not require commitments to unchanging values and encourages flexible, context-based evaluation. Values are constructed from experience and can evolve based on changing circumstances (Norton, 2005). Norton refers to this concept as pragmatic sustainability (Norton, 2005), while Stirling similarly analyzes an approach that considers dynamic relationships and changes, complexity and uncertainty, and engagement in deliberations and decision-making as his "processual" sustainability construction (Adger & Jordan, 2009). A definition is challenging to provide, because "processual"/pragmatic sustainability is context dependent, process focused, and highlights the use of policies that enhance collaboration in the face of uncertainty as opposed to specific, concrete characteristics (Adger & Jordan, 2009; Doelle & Sinclair, 2006; Norgaard, 1989, 2005; Norton, 2005). Brundtland's sustainable development concept becomes a discursive tool or a process frame for policy development (Kaufman et al., 2003; Leach et al., 2010; Shmueli, Elliott, & Kaufman, 2006).

There are many other interpretations of the term "sustainable development" (Trainor, 2006) that will not be adopted here. Most focus on substantive considerations, but do not identify the importance of context and functional conflict in determining sustainable outcomes. Norton's sustainability spectrum defines three broad interpretation types (2005): a) cornucopian or weak sustainability, b) deep ecology or strong sustainability and c) moderate sustainability or pragmatic sustainability. Conflict theory conceptualizes these value sets as "frames" which are cognitive structures that guide interpretation of new experiences (Kaufman et al., 2003; Shmueli



et al., 2006). Certain definitions, such as weak or strong sustainability, could be referred to as *identity frames* or *risk and information frames* that exclude deliberative process considerations, whereas pragmatic sustainability would be considered a largely *process frame* that also incorporates substantive components and deliberative processes (Brummans et al., 2008; Kaufman et al., 2003; Lewiciki et al, 2003). All groups cling to the moniker “sustainable” and compete over relevance and applicability (Neumayer, 2003; Powell, 2011; Solow, 1991; Trainor, 2006).

The primary concern with framings that exclude process is that they tend to confine stakeholders to intractable positions (Adger & Jordan, 2009, p. 194), and in so doing, prohibit functional conflict by discouraging dialogue and interaction (Van Bueren, Klijn, & Koppenjan, 2003). Innovation is hampered by requiring sustainability to have concrete and explicit attributes (Adger & Jordan, 2009; De Clercq, Thongpapanl, & Dimov, 2009; Trainor, 2006) as opposed to broader substantive criteria based on requirements for progress towards viable and desirable futures (Gibson 2000). The substantive considerations of Gibson’s generic sustainability criteria include process aspects centred on participative engagement and learning, and respect context. They are principles that guide decision making, but they are contextualized by experience. In particular, “They have different time horizons, risk orientations, and different ways of viewing problem situations and opportunities” (Susskind, 1978, p.4).

Interpretations labelled as “weak sustainability” presume that manufactured capital of equal economic value can take the place of, or is ‘substitutable’ for natural capital. Capital is a “stock that provides current and future utility” (Neumayer, 2003, p. 8). Natural capital refers to stocks that provide humans with “material and nonmaterial utility” (Neumayer, 2003, p. 8). Manufactured capital includes machines, roads and factories (Solow, 1991). Weak sustainability is based upon research by economists including Robert Solow and John Hartwick and is an extension of neo-classical economic theory. Moderate and strong sustainability refer to maintaining, restoring or rehabilitating existing natural capital because it performs functions and fulfills societal needs that manufactured capital cannot duplicate, therefore it is ‘non-substitutable’ (Neumayer, 2003; Norton, 2005).

Weak sustainability relies on assigning monetary valuations to aspects of the environment (e.g., recognizing their worth in delivering valuable ecological goods and services). In theory, the greatest societal value would result from decisions that maximize utility for the

greatest number of individuals (Dietz, Fitzgerald, & Shwom, 2005, p. 342). Primarily, the market generates the price (which is assumed to represent the value) of many goods, while non-rival and non-excludable goods, such as air, become public goods. Economists advocate that the best way to determine the importance of public goods is through contingent valuation, or measuring willingness to pay (Hanemann, 1994). This approach is fraught with methodological controversy and can infrequently provide consensus. Contingent valuations differ especially greatly on goods with “non-use” value or “existence” value (Hanemann, 1994; Norton, 2005). For example, one party might pay greatly to protect a tract of undisturbed Boreal forest, while another party sees it as unimportant and will not pay for its protection. There is no actual market to determine what is a fair price for public goods, particularly “non-use” goods (Norton, 2005), or goods for future generations, who are not current market participants. As a result, contingent valuation is a step above treating nature as of zero value, but is insufficient by itself to establish values for sustainable decision-making. Economic valuation is very important in intergenerational and intragenerational equity considerations and can aid significantly in making development decisions. However, it cannot be the only determinant.

Conversely, strong sustainability advocates often assume that the environmental phenomena have intrinsic value, meaning that “they have value independent of the values that humans assign to them” (Dietz et al., 2005, p. 340). In biocentric intrinsic valuation, the essential aim is to provide moral standing to non-human nature. The two primary criticisms are philosophical – that of value-skepticism and that of “is-ought”. When human judgment and valuation are removed from the table, it is challenging to know what is valuable. Intrinsic value philosophers demonstrate little consensus on what possesses intrinsic value and how to act on recognition of intrinsic value, and thus it is challenging to design policy around the concepts (Norton, 2005; O’Neill, 1992; Powell, 2011; Weston, 1985).

Polarizing sustainability definitions, because they are linked to intractable value disagreements, inhibit our capacity to generate sustainable outcomes (Frame & O’Connor, 2011; Shmueli et al., 2006; Trainor, 2006). These approaches inhibit functional conflict management; they push stakeholder groups away from negotiated settlements because stakeholder groups assume negotiation would automatically result in a concession of values (Sidaway, 2005). They can foster colonialization and enforce Western understandings (Throsby & Petetskaya, 2016). In contrast, pragmatic and “processual” sustainability encourages pluralism (Norgaard, 2005) and

rejects the entity bias, “If we reject the assumption that environmental evaluation is basically a matter of sorting entities, and focus instead in evaluating processes and paths of change and the values experienced by people and cultures within these processes, it is possible to recognize a deeper source of value in nature, what might be called ‘nature’s creativity’” (Norton, 2005, p.188). Valuing the environment becomes relational to place, time and pluralism. Value becomes context dependent and the result of experience. Value is not endowed in the entity, but in a community’s relationship to an entity or concept. In perceiving value as a more fluid construction, “processual” sustainability emerges (Leach et al., 2010; Norton, 2005; Powell, 2011; Sneddon, 2006).

This circumstance exists when the definition of sustainability is negotiated based on context, is not arbitrarily pre-constructed, and applied in a given circumstance (Adger & Jordan, 2009; Doelle & Sinclair, 2006; Norton, 2005). Thus, in a circumstance where participatively developed criteria guide the process, sustainable development is the consensus that emerges from conflicting purposes and is “processual” (Adger & Jordan, 2009).

There are limitations of a process focus. The people involved in decision-making in process-dominant approaches will drive the agenda. In these situations, those individuals may not be sufficiently informed to make a good decision or care about the interests of others. In particular, the concerns of future generations can be left unconsidered in processes that highly favour the mutual benefit of represented interests. Education and constitutional requirements for consideration assist in ensuring that important concerns and rights are not excluded. Constitutions protect the removal of rights and the tyranny of the majority against the minority (Blaug, 2016, p. 193). Education assists in broadening the perspectives of those in power to make, challenge, expect and accept better and more fulsome decisions (Fien, 1993; Gruenewald, 2004; Stevenson, 2007, 2007). Therefore, the substantive sustainability concepts must be embedded in processual approaches, with those involved in the process having a full and complete understanding of sustainability and for the substantive elements of sustainability to be protected.

For the purposes of this research, pragmatic sustainability provides the basis for my conceptual framework and overall policy making (Farber, 1999; Mintz, 2004; Norton, 2005). Pragmatic sustainability is understood here to be a largely “processual” concept that embraces plural values and facilitates social learning. Strong and weak sustainability are hampered by their

intractable positionality. Pragmatic sustainability focuses upon the capacity of people involved to build collaborative solutions. Sustainability is not prescribed and understood to be a dynamic, fluid concept that is informed by substantive guiding criteria but also sensitive to the specifics of the case and context (Armitage and Plummer 2010; Doubleday 2007; Norton 2005; Gibson et al. 2005).

#### **2.4.2 Triangle of Satisfaction**

In life and conflict, each party has needs and interests that must be integrated into a resolution in order to achieve satisfaction when making decisions and managing conflict. Needs are “the basic necessities for human survival and psychological well-being” and interests are “desires, concerns, or wishes that people in dispute want to have addressed and satisfied” (Moore, 2014, p.127-128). In conflict management, procedural needs/ interests refer to “parties’ preferences regarding the process by which problem solving, negotiations, or dispute resolution occurs, and ways agreements are reached or implemented” and include “the efficient, fair and timely process; clearly understandable steps; and an opportunity to present their views” (Moore, 2014, p. 128).

Structured decision-making processes have been a major focus for development in Northern Canada. Additionally, process is prominent in Canada’s recent commitments to respecting Indigenous rights, with the processes favoured by conventional government authorities being primarily built out of Western models. Substantive needs are “tangible outcomes or benefits that a third party wants to have satisfied, receive or be exchanged as a result of negotiations” (Moore, 2014, p. 128). These needs include food, shelter, property, a job, equipment, tools or a means to earn a livelihood. Indigenous peoples’ understanding of substantive needs tends to be broader and includes maintaining traditional rights and economies, and ensuring inter-generational equity (Ermine, 2007; Kleinfelder & Yesno, 1984; Walker, 2001). Psychological and relational needs and interests “concern how individuals or groups are treated, both in the negotiation process and outside of it” and include “how participants feel or want to feel about themselves, their counterpart, and how relationships are valued or shaped through negotiations” including feeling trusted, respected, heard and having feelings of acknowledgment (Moore, 2014, p. 129).

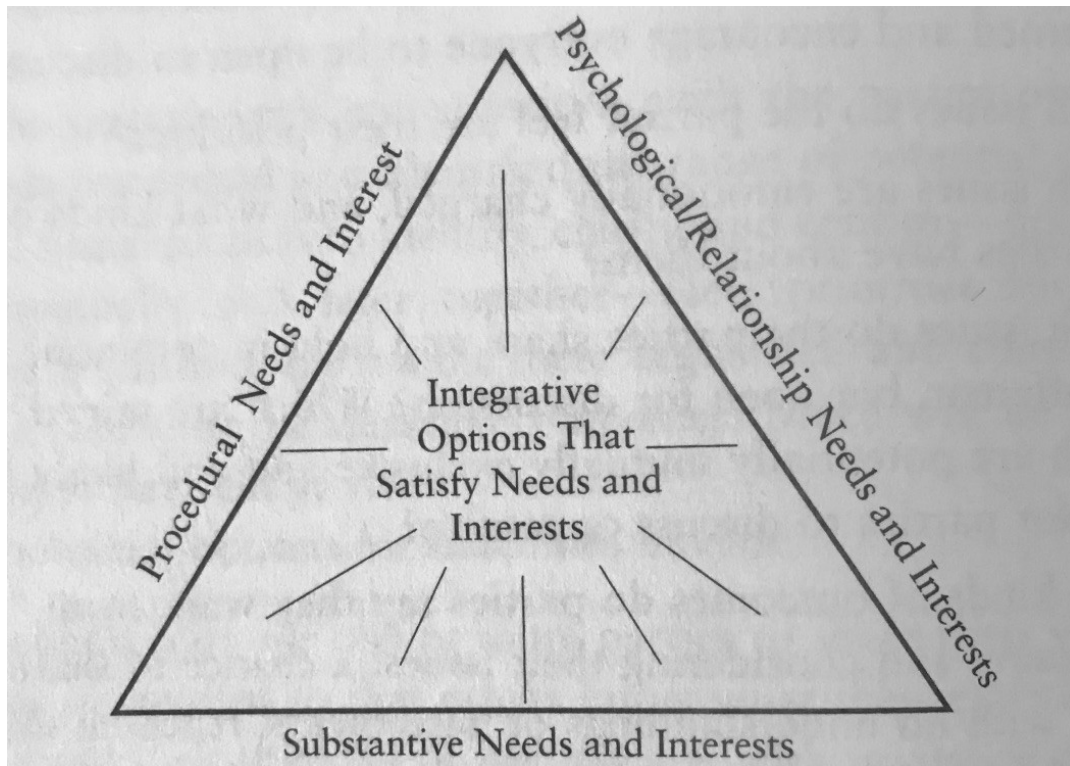


Figure 2-2: Triangle of Satisfaction (Moore, 2004)

Moore’s Triangle of Satisfaction (Figure 1) depicts the integrative relationships among procedural, substantive and relationship aspects of decision-making in order to achieve satisfactory resolutions as outcomes. The triangle of satisfaction provides the template for elaboration as a basis for developing sustainable, mutually beneficial, and harmonious resolutions. Other models of failed to sufficiently consider the dependence and integration of the concepts, or easily house all elements that were crucial to this analysis (Furlong, 2010; Susskinds, 1999, 1996). In this chapter, I consider the suitability of the triangle for application in the management of high tension development conflict in the context of long-standing indigenous-Western conflict and needs for transition to sustainability. Consideration of the literature outlined thus far leads me to consider the modification of Moore’s triangle of satisfaction to focus more substantively on sustainability and relationally on Indigenous-non-Indigenous interactions. I refer to this as the Triangle of Better Decisions. With this new model, I build a rationale for an integrated approach to conflict management and decision making for sustainability.

## **2.5 Designing the Triangle of Better Decisions**

### **2.5.1 Substance: Side 1**

Given that sustainability is a boundary object and its specifics are context dependent, sustainable development requires effective sense-making discourse to set criteria and define problems to maximize benefits. Previously, I briefly discussed conflict as a system, framing our perspective and emphasizing that we should strive to make the process of conflict as usefully productive as possible. Sustainable development generates conflict by attempting to unify apparently opposing value sets, including especially needs and limits (Frame & O'Connor, 2011; Sneddon, 2006; Trainor, 2006). Tensions in those opposing ideas will create the conditions for conflict (Frame & O'Connor, 2011; Norgaard, 2005; Sneddon, 2006) and out of that conflict may emerge innovation in the form of sustainable development (Kemp, Loorbach, & Rotmans, 2007; Leeuwis, 2000; Martin, 2009). Therefore, "It is not about an identifiable end state. Sustainable development is a never-ending process of progressive social change" (Kemp et al., 2007, p. 1). Sustainable development is a process that generates conflict to spark innovation but requires astute management to prevent dysfunction (Rogers et al., 2012; Sneddon, 2006).

Sustainable development and sustainability should not be approached as the substantive principle in and of itself because the concept is founded on the need to integrate plural concerns and manage dynamic conflict (Leach et al., 2010; Sneddon, 2006). Sustainability represents a package of crucial substantive considerations, though advocates recognize the tie between means and ends and typically include process considerations, for example concerning governance. Sustainability does not cover everything that matters and needs to be specified for particular cases and context. It is a package of crucial substantive considerations that can accommodate, align or complement other concepts.

Sustainability is not a "one-size fits all" concept. Thus, in my revisions to the model, sustainability is represented by a braided cord of rope, which is strengthened by the incorporation of multiple strings. Brundtland's definition is dynamic and instrumental if we presume sustainability to be a contested, discursive resource or a boundary object that facilitates dialogue to generate a stronger future well-being (Brand & Jax, 2007; Leach et al., 2010). The concerns about sustainable development are warranted if it is presumed as a "one size fits all" concept of sustainability (Sneddon, 2006). Sustainable development must be a dynamic, active process that can be guided by broad generic criteria based on common lessons about what is

required for progress towards long term wellbeing, but in all applications must be specified to context (Doelle & Sinclair, 2006; Norton, 2005).

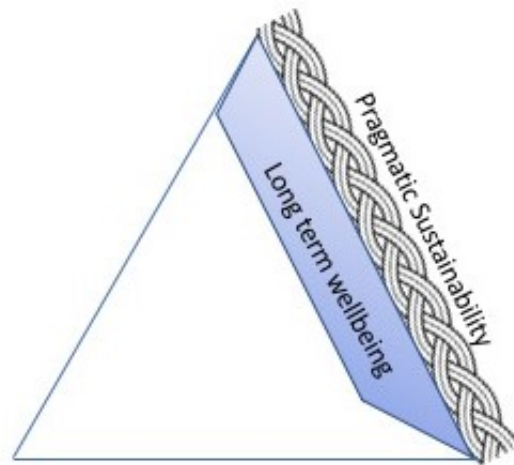


Figure 2-3: Substance Triangle Side

## 2.5.2 Process: Side 2

Fair, predictable process is necessary for better decisions and has been a major focus of Western administrations in recent decades (Hamilton & Wills-Toker, 2006). Within the triangle of satisfaction, “procedural needs” refers to “parties’ preferences regarding the process by which problem solving, negotiations, or dispute resolution occurs, and ways agreements are reached or implemented.” This procedural need includes “the efficient, fair and timely process; clearly understandable steps; and an opportunity to present their views” (Moore, 2014, p. 128). Procedural needs are culturally and contextually dependent. Adherence to cultural norms and practices, and respect for language and cultural needs are important considerations in process. Designing fair process can be explored in greater depth through the literature on public participation and conflict. The Trinity of Voice is an effective structure to capture the majority of public process consideration and provides the underpinning conceptualization for process within this chapter. The concept will be expanded and modified to suit the purposes of this research.

Senech’s concept of Trinity of Voice was developed to consider the communication needs specific to environmentally related conflict, in particular for public participants, but the logic of the construction can apply much more broadly, particularly in multi-stakeholder public

conflicts with power differentials. The components of the Trinity are access, standing, and influence. In this chapter, they have been expanded to include the “Right and Opportunity to Engage and Participate”, “Capacity to Participate”, and “Empowerment and Influence”. These concepts all contribute to achieving “Mutual Benefit”, the fourth process element. These concepts are embedded in conflict management processes because conflict management is an inherently process-oriented concept. The process components are the tools and procedures that contribute to achieving the substantive goals.

#### 2.5.2.1 Right and Opportunity to Engage and Participate

This element of fair process refers to ensuring that sufficient and appropriate opportunities exist for sharing, learning, and engagement in assessment and planning. However, it alone is insufficient in ensuring voice in decision-making. To have knowledge and capacity but the absence of civic legitimacy generates distrust in the system and prevents dialogue. Civic legitimacy refers to a process that “both observers and participants see as fair” (Clarke & Peterson, 2015, Chapter 6). Lack of civic legitimacy has been a major problem for environmental assessment in Canada recently, as is acknowledged by the federal government. They gathered a panel of assessment experts and sent them across Canada to determine recommendations for the federal assessment process, in part to restore public trust in assessment (Government of Canada, 2016). Lack of legitimacy manifests in multiple ways, including litigation against decisions, lack of open decision-making criteria and reasoning, lack of attention to alternatives, and public disengagement. The case of the Northern Gateway pipeline is a prime case of decision-making that lacked civic legitimacy (Axsen, 2014; Eglington, Mansell, Ruitenbeek, & Schlenker, 2012; Hughes, 2012; McCreary & Milligan, 2014). Multiple process components can contribute to reaching the goal of providing the ability, right and opportunity to engage based on the context, situation and needs.

The process based interpretations of key access-related means of respecting and facilitating the right and opportunity to engage and participate include:

- An attitude of collaboration
- Participant funding
- Early public involvement
- Adequate and widely disseminated notice
- Diverse opportunities to access information and education
- Readily available information and education



- Technical assistance to gain a basic understanding of the issues and choices
  - Ongoing opportunities for involvement
  - Convenient and sufficient times
  - Convenient places
  - Translation services
- (Adkin, 2009; Depoe et al., 2004, p. 253; Forester, 1999b; Laurian, 2009)

### 2.5.2.2 Capacity to Participate

The concept of capacity to participate relates to the right for people to be in the room but also that those people feel a civic responsibility to contribute to the process (Wilson & Sanyal, 2013). Thus, the capacity to participate is broader than simply standing. Technically in law, “standing” refers to the right to participate in particular processes. More broadly to Senech, standing means, “the civic legitimacy, the respect, the esteem, and the consideration that all stakeholders’ perspectives should be given. Access and standing are mutually dependent on each other to achieve influence” (Depoe et al., 2004, p. 24). Standing in both cases is the capacity for accountability (Walker, 2007). The capacity to participate also includes the confidence, the awareness, the knowledge base and the time to actively engage (Mandarano, 2015). Having the opportunity to participate without the capacity to, or the capacity to participate without the opportunity to will likely generate conflict. Conflict would emerge because the stakeholder cannot exercise influence and meaningful participation will be stifled. These conditions are likely to lead to conflict and tend to push the conflict towards dysfunction.

The process based interpretation of key standing-related means of respecting and facilitating the right and opportunity to engage and participate includes:

- opportunities for dialogue and deliberation
- active listening
- courtesy or an absence of discounting verbal and non-verbal behavior
- early and ongoing voice
- clear parameters of investment
- collaborative room arrangements
- reflections of genuine empathy for the concerns of other perspectives, dialogue, debate and feedback (Brummans et al., 2008; Depoe et al., 2004, p. 23; Blackburn & Bruce, 1995; Moore, 2014; Rahwan et al., 2003; L. Susskind & Agency, 1983; L. Susskind et al., 1999)

### 2.5.2.3 Empowerment and Influence

Empowerment considers that ability for participants to feel comfortable and confident with a given process to express their views, integrate new information, and participate in a process fully (Mandarano, 2015). Community empowerment is, “the capacity of a community to react effectively to shared issues” (Wilson & Sanyal, 2013). Empowered participants should also have influence. Influence is dependent on the full set of considerations surrounding access and standing. Influence does not mean that individuals can coerce or manipulate others to achieve their objective or position, “It means that my ideas have been respectfully considered along with other stakeholders and my representative or I was part of the process that, for example, determined decision criteria and measured alternatives against it” (Depoe et al., 2004, p. 25). Influence without access and standing is unattainable. Also “[i]nfluence does not necessarily mean that every stakeholder gets what s/he wants, nor does it mean that agencies can abdicate their authority over a decision. Influence is about stakeholders’ meaningful participation in processes where their ideas matter” (Walker, Senecah, & Daniels, 2006, p. 25). Therefore, a process that values influence will provide greater space and opportunity for participants to impact decisions made, including, “for learning, developing improvements, and achieving mutual goals before a project is completed or a decision made” (Walker et al., 2006, p. 25).

Processes that commit to empowering participants and allowing them to influence decisions rather than adopt more adversarial approaches generate better long term acceptance of decisions by stakeholders even if the decision does not align with a stakeholder’s position (O’Faircheallaigh, 2010, p. 67).

The process based interpretation of key empowerment and influence-related means of respecting and facilitating the right and opportunity to engage and participate include:

- transparent process that considers and compares all reasonable alternatives
- opportunities to scope alternatives meaningfully
- opportunities to inform the decision criteria
- thoughtful and explicit response to stakeholder concerns and ideas
- opportunities for transformative learning

(Depoe et al., 2004; Gibson, Doelle, & Sinclair, 2016; Hemmati, 2002; Sinclair, 2001; L. Susskind et al., 1999)

#### 2.5.2.4 Mutual Benefit

Application of the previous three categories should contribute to mutual benefit, a frequent aim of conflict management processes. Mutual benefit often depends on mutual influence, where multiple parties have been engaged in the process and the result, through dialogue and effective process design, is mutual benefit. Conflict has been effectively managed if there is overall benefit for multiple parties. Mutual benefit goes beyond the trinity of voice concepts where win-lose outcomes could still be considered acceptable (i.e., the trade-offs made are considered inevitable and least bad). Relative to mutual benefit, one-sided outcomes of decision-making represent inadequate resolution.

Mutual benefit requires agreement on the goals by interested parties who then take collective action to resolve mutual problems (Sidaway, 2013). As has been previously stated, conflict is cyclical and recurring, but if there is the foundation of the trinity of voice, trust in the process expands and mutual benefit becomes an option. Mutual benefit feeds positive relationships, making fair process and trust reinforcing.

Mutual benefit requires greater engagement in identification and comparative evaluation of alternatives and willingness to embrace social innovation. Social innovation requires a breaking away from positional bargaining towards collaboration (De Clercq et al., 2009). Leadership also plays a crucial role in consensus-building, and alternative seeking. Innovations that often result from conflict relate to how leaders perceive conflicts, not necessarily by siding staunchly with one party but by resolving the tension through the formation of new paths that include concepts from opposing ideas (Martin, 2009).

The underlying concepts embedded in achieving mutual benefit are process requirements already required in sustainability based assessment criteria and in advanced next generation assessment design (Gibson, 2006a, 2016a; Gibson, 2013; Gibson et al., 2016).

The process based interpretation of key mutual benefit-related means of respecting and facilitating the right and opportunity to engage and participate include:

- consensus- building approaches
- reframing
- backcasting and scenario building...
- mandatory assessment of the distribution of gains and losses, opportunities and risks
- open deliberation on trade-off rules
- provisions for mitigation (using the mitigation hierarchy), including legitimate offset requirements, etc.

In summary, process should satisfy parties' procedural needs, including the provision of standing, access and influence. Processes with these characteristics should also be focused on an objective of mutual benefit to ensure that resolutions are objectively fair. Mutual benefit becomes one of the positive and satisfying resolutions within the confines of the triangle (see Figure 3). The Trinity of Voice is based on Western constructions and engagement in legal Western traditions, but the concepts are evident in Indigenous law and governance as well where Indigenous interpretations of fair process using access to networks and information, traditional knowledge and holistic community-based dialogue (Ermine, 2007; Napoleon, 2013; Victor, 2007).

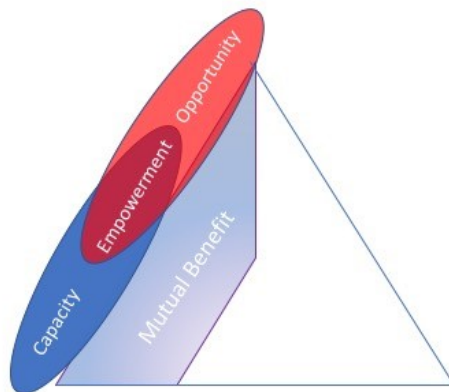


Figure 2-4: Process Triangle Side

### 2.5.3 Relationships: Side 3

#### 2.5.3.1 Relationships: Transformative Approaches to Conflict, Developing an Ethical Space and Two Eyed Seeing

Managing conflict in order to achieve sustainability also requires relationship-building. Psychological/relational needs and interests “concern how individuals or groups are treated, both in the negotiation process and outside of it” and include “how participants feel or want to feel about themselves, their counterpart, and how relationships are valued or shaped through negotiations” including feeling trusted, respected, heard and having feelings acknowledged (Moore, 2014, p. 129). A major challenge faced in many resource development cases is the

conflict between indigenous people, governments and proponents, and the major divergence of worldviews involved (Ermine, 2007; Kleinfelder & Yesno, 1984; Victor, 2007; Walker, 2004).

The Western world has long defined the context for indigenous-settler relationships, engagement and academic study (Alfred & Cornassel, 2005; Ford & Rowse, 2013; Smith, 2013; Walker, 2004). The historic and on-going effects of colonialism are poorly recognized or addressed in planning and decision making for industrial development. On-going distrust permeates indigenous-Western negotiations:

“First, in conflict situations that are characterized by generational mistrust, fear and anger, relationship building is a necessary part of processing conflict. However, the dominant Western models of conflict resolution privilege problem solving and do not address relationships in ways that are adequate to sustain positive change in protracted conflict in divided societies” (Walker, 2001).

The vast difference in worldviews between indigenous peoples and settlers means that building honest and trusting relationships requires approaches that acknowledge and identify those differences, particularly when the two parties are in conflict. Walker summarizes the massive difference between how indigenous people and settlers perceive conflict.

“...the central characteristics of the worldview underlying Australian Aboriginal, Native American and Native Hawaiian models of processing conflict: interconnectedness, emphasis on processes and relationships; inclusion of holistic experience; and expanded conceptualizations of time. These characteristics are contrasted with the central characteristics of the dominant Western worldview underlying problem solving models of processing conflict. This worldview is characterized by: a mechanistic paradigm which is atomistic and analytical; emphasis on technique rather than process; privileging the intellectual aspects of experience; and linear conceptualizations of time... due these differences in worldview, implementing Western problem solving models in conflicts involving Indigenous peoples at best leads to short term solutions to conflict, and at worst may exacerbate existing conflicts.” (Walker, 2001)

Additionally, Victor describes the primary points of divergence between worldviews as how cultures understand, “(1) the concept of individuality; (2) life as an indivisible whole; (3) concept of time; (4) modes of societal organization, especially in relation to kinship ties; (5) concept of land guardianship/ownership; (6) leadership; and (7) principle of reciprocity” (Victor, 2007).

Walker argues for the use of traditional methods of processing conflict for indigenous communities. These methods “...are based on many of the same underlying principles of

worldview. There are also significant methodological similarities including: the role of respected elders as facilitators; the integral role of spirituality, ritual and ceremony, and the natural world; flexible time frames; and reinforcement of traditional values” (Walker, 2001). While there is considerable diversity within Indigenous traditions about processing conflict, conflict is not generally considered negative, as Napoleon notes, “All peoples have conflict. Conflict in and of itself is not a problem. The challenge is not preventing conflict, but managing it effectively so that it does not paralyze people” (Napoleon, 2013, p. 12).

Walker advocates the use of Western transformative conflict resolution processes that offer approaches similar to indigenous methods using, “...a holistic approach that stresses the development of long term harmonious relationships.” Lederach defines transformative conflict as

“...a comprehensive set of lenses for describing how conflict emerges from, evolves within, and brings about changes in the personal, relational, structural, and cultural dimensions, and for developing creative responses that promote peaceful change within those dimensions through nonviolent mechanisms” (Lederach, 1997, p. 83)

Walker also stresses that... “*transformation* implies an understanding that conflict is not eliminated, rather it is a holistic process of changing the conflict in ways that improve both the situation and the lives of the people involved” (Walker, 2001).

Transformative approaches can thus acknowledge, reinforce and utilize indigenous approaches to conflict and reconciliation. Transformative conflict management has been utilized or recommended in intractable or high tension conflicts like those in Northern Ireland (Byrne, 2001) or the Balkans (Sandole, 2002). The appeal of transformative conflict approaches in these cases is its adaptability and iterative nature. Transformative conflict approaches can utilize indigenous conflict resolution approaches as its base, or Western, or a combination of both. It advocates a broadened frame and a re-oriented agenda that encourages functional conflict (Lederach, 2015).

Another method of framing relationship building and addressing serious conflict between worldviews is presented by Ermine. He advocates for the needed room for dialogue through the concept of the ethical space. The ethical space is understood as follows,

“Since there is no God’s eye view to be claimed by any society of people, the idea of the ethical space, produced by contrasting perspectives of the world, entertains the notion of a meeting place, or initial thinking about a neutral zone

between entities or cultures. The space offers a venue to step out of our allegiances, to detach from the cages of our mental worlds and assume a position where human-to-human dialogue can occur. The ethical space offers itself as the theatre for cross-cultural conversation in pursuit of ethically engaging diversity and disperses claims to the human order. The dimension of the dialogue might seem overwhelming because it will involve and encompass issues like language, distinct histories, knowledge traditions, values, interests, and social, economic and political realities and how these impact and influence an agreement to interact. Initially, it will require a protracted effort to create a level playing field where notions of universality are replaced by concepts such as the equality of nations. In the Canadian context, the immediate necessity is a protracted effort by the legal community to enable processes at the broader level that start the definition of Aboriginal rights. This must be done in a cooperative spirit between Indigenous peoples and Western institutions” (Ermine, 2007)

Within Ermine’s definition is a directive for practical application and operationalizes transformative approaches to conflict. New processes where both indigenous and Western cultures can meet to discuss substantive concerns including historic wrongs, and where power differentials are minimized, are needed to enable an “ethical space”:

“The idea of an ethical space, produced by contrasting perspectives of the world, entertains the notion of “engagement.” Engagement at the ethical space triggers a dialogue that begins to set the parameters for an agreement to interact modeled on appropriate, ethical and human principles. Dialogue is concerned with providing space for exploring fields of thought and attention is given to understanding how thought functions in governing our behaviours. It is a way of observing, collectively, how hidden values and intentions can control our behaviour, and how unnoticed cultural differences can clash without our realizing what is occurring. Attentive work on these issues has not occurred in Indigenous-West relations, nor has there been a framework that enables this discussion to happen. It is argued that the ethical space, at the field of convergence for disparate systems, can become a refuge of possibility in cross-cultural relations and the legal order of society, for the effect of shifting the status quo of an asymmetrical social order to a partnership model between world communities. The new partnership model of the ethical space, in a cooperative spirit between Indigenous peoples and Western institutions, will create new currents of thought that flow in different directions and overrun the old ways of thinking” (Ermine, 2007)

The development of new rules of law, nation-to-nation negotiations, and a re-emergence of indigenous authority over their lands is generally outside of the realm of this dissertation. However, this concept of developing new means to assess and plan for industrial development,

such as sustainability assessment, regional strategic assessment, and other next generation concepts could provide or facilitate an “ethical space” or a more “ethical space” than is presently available for considering development.

The concept of the ethical space is similar to the concept of “two eyed seeing”:

“As two-eyed seeing implies, people familiar with both knowledge systems can uniquely combine the two in various ways to meet a challenge or task at hand. In the context of environmental crises alone, a combination of both seems essential” (Aikenhead & Michell, 2010)

Another definition presents two-eyed seeing as follows:

Two-Eyed Seeing adamantly, respectfully, and passionately asks that we bring together our different ways of knowing to motivate people, Aboriginal and non-Aboriginal alike, to use all our understandings so that we can leave the world a better place and not compromise the opportunities for our youth (in the sense of Seven Generations) through our own inaction (Bartlett et al., 2012, p. 11)

Those with the capacity for two eyed seeing are invaluable in relationship building and sustainability, and can assist in the development of ethical spaces. However, the concept of “two eyed seeing” requires individuals with considerable training translating concepts between settlers and indigenous peoples. The concept is most often applied when discussing bridging traditional knowledge and science, but does not mean that the two worldviews or bodies of knowledge are integrated. Each body of knowledge is individually respected as a way of knowing.

The benefits of employing transformational conflict, the ethical space and two eyed seeing are an increased mutual understanding and increased empowerment for marginalized parties. Transformational conflict approaches do not try to mitigate conflict by burying it, but encourage open and transparent dialogue to understand other perspectives (Lederach, 2015). This focus on iterative learning is crucial to pursuing sustainability (Sinclair, 2001, 2008) but is also foundational to how an ethical space could operate. The ethical space is the hypothetical creation of a place and time where learning and understanding between parties can occur (Ermine, 2007). Two-eyed seeing is valuable for those participating in transformational conflict processes in order to reduce trade-offs and enhance mutual understanding (Bartlett et al., 2012). Within ethical spaces, those with two-eyed seeing can advocate for appropriate processes, acknowledge colonial approaches at the outset and to ensure parties with less power are afforded equal opportunities (Martin, 2012). Two-eyed seeing fosters learning and discourages trade-offs by



encouraging innovative thinking from a multitude of perspectives (Bartlett et al., 2012; Martin, 2012). Two-eyed seeing, the creation of ethical spaces and transformational approaches to conflict have the potential to improve relationships.

The bottom of the triangle is about relationships (Figure 7). The space is open and lacks formal Western structures to encourage transformative conflict processing and the formation of an “ethical space”. Improving the relationships increases trust in the process and better informs the substance of the conversation. In practice, much of this portion of the chapter centres on respect and changing the fundamental mindsets of the most powerful in a negotiation. Building trust requires long term commitment and patience. The ethical space, transformational conflict approaches and two-eyed seeing all require time to for participants to learn and understand from each other. Therefore, the relationship side of the triangle requires a significant investment of time and mutual trust infrequently documented in resource decision-making and refers to developing respect between parties when making a decision (Bartlett et al., 2012; Booth & Skelton, 2011; Booth & Skelton, 2011; Ford & Rowse, 2013).



Figure 2-5: Relationship Triangle Side

## 2.6 **A Strong Triangle**

With strong, substantively guided, context specified criteria, fair process, dialogue and trusting relationship, the role of those at the table is to manage the conflict towards sense-making and solutions building dialogue that hopefully leads to resolution, mutual benefit and understanding, and sustainability. Process, relationships and substance in sustainable development are interdependent and mutually supportive.

Above, I have established what makes up each side of the modified triangle of satisfaction (Moore, 2014), which I have referred to as the triangle of better decisions for application in the remote resource development context. However, I have not considered what is

contained within the triangle and what we're trying to foster with its creation. In some ways, the added components of consideration are self-evident to anyone who has tried to deal with multiple parties and a high degree of conflict: process needs should foster mutual benefit, substantive needs should foster sustainability as a boundary object with substantive understandings, and relationship needs should foster an ethical space for dialogue towards reconciliation. Considered collectively, the triangle is attempting to foster pragmatic sustainability.



Figure 2-6: Triangle of Better Decisions

A major implication of this reimagined triangle of satisfaction is that best practice sustainability-based decision-making processes can and should contain conflict management components, emphasize process elements and provide more “ethical spaces” for decision-making in ways that accommodate and respect Indigenous world view understandings. Within chapter 4, specific examples of processes that can foster these capacities and deliver progress are explored. Substantive requirements in resource decision-making towards sustainability include clear objectives that link to larger regional or sectoral policy objectives, use of sustainability as the benchmark to measure against, and comparative evaluation of alternatives to identify facilitate deliberations seeking best options. Process requirements in resource decision-making include the appropriate use of conflict management tools like mediation, scenarios and alternatives, early planning stages, transparency, and accountability. Relationship requirements in resource decision-making include respecting free, prior, and informed consent, indigenous traditional and

treaty rights, and including Indigenous governments as decision-makers. These concepts are all already part of the next generation assessment approach (Gibson, Doelle, & Sinclair, 2015; Gibson et al., 2016). Ideally, this research continues to situate this approach as more desirable because it contains the elements likely to foster positive outcomes in conflict.

The triangle of better decisions provides justification to integrate relationship-building and conflict management as a means of resolving wicked sustainable development challenges. Conflict theory suggests that the pursuit of sustainability will inevitably generate conflict amongst parties. Sustainable development conflict over the allocation of resources to meet the needs of multiple different groups satisfies the conditions for latent conflict over scarce resources (Pondy, 1967). Managing such a conflict requires consideration of both the a) beneficiaries and those at risk and b) time scale. When considering the beneficiaries in a simple case with two key parties, it is important to determine whether options “optimize the welfare of one of the parties (a partisan choice), both parties (a joint-welfare choice) or the larger system of which the parties are members (a systemic choice)” (Thomas, 1992, p. 270). Sustainable development must generate a systemic choice. If a plan only benefits one group, it is a partisan choice; it will be unlikely to deliver benefits to all members of society, and will not result in sustainable development. Therefore, one of the primary considerations for environmental conflict to optimize welfare is to gather multiple alternatives to seek options that maximize benefit while avoiding significant negatives (Bacow & Wheeler, 2013, p. 9). Optimizing welfare requires a means of navigating conflict and developing mutual benefit.

Progress towards sustainability requires consideration of both short and long-term concerns. For problems with short-term considerations, Thomas suggests contingency theory as it focuses upon coping strategies. He states, “...one does not try collaboration if there are competitive incentives and procedures, if the parties have insufficient problem-solving skills, if time is too short, and if neither party trusts the other; instead, one may encourage competition or compromise” (Thomas, 1992). But contingency theory has limited potential in sustainability applications because it focuses upon “short-term, local optimum, and makes them in essence reactive to these conditions”(Thomas, 1992).

Often, in regional resource decision-making in Canada, contingency decision-making primarily considers the needs of the short/limited-term and leads to decisions that fail to anticipate longer term problems (e.g., boom and bust) (Pegg, 2006). For longer term problems,

the need to consider problems beyond current limitations is necessary. This longer term vision is called the “collaborative ethic” (Thomas, 1992). One must improve the conditions for decision-making to evoke the collaborative ethic. Thomas argues that collaboration is needed “...to change the incentives (or procedures, skills, norms, time limitations, trust, etc.) that might move away from competition toward some alternative mode... There is also the issue of trying to ‘change the system’ in some way - to change the structural variables that result in suboptimal processes and outcomes” (Thomas, 1992, p. 171).

Sustainable development requires collaborative effort, where access, standing, influence and mutual benefit can be applied and filtered through substantive sustainability characteristics to achieve new systemic understandings or alternatives. In order for any process of this kind to be effective, it requires effective relationships built on trust and open communication. Without respectful relationships and processes that ensure fairness, the latent power imbalances cannot be addressed, mutual benefit cannot occur, and sustainable development criteria cannot be effectively applied. The variety of differences among people ideologically, culturally, economically, etc. must be properly integrated into process and be recognized that this approach can generate unanticipated conflict because, “Conflict arises not only because of the distributional consequences but because people assess probabilities, outcomes and risks differently” (Bacow & Wheeler, 2013, p. 9). These major conflicts will rarely be addressed adequately within an episodal conflict, but are likely to deepen over decades or centuries of failure. Parties must consider the underlying, latent conflict conditions that generate episodal conflict because these latent conditions prevent the development of satisfactory resolutions and sustainable outcomes. This process requires visioning for the future, considering many options and fostering a means of collaboration through changing our approach to white-settler dialogues.

Zero-sum or win-lose games, where one party wins and the other party loses, are frequently discussed in conflict management and are often in play in Canadian resource management. In sustainable development scenarios, zero-sum games are to be avoided. In resource conflict cases, we can illuminate the truly challenging problem of integrating substance, process and relationships: sometimes mutual benefit between/among parties can occur, but it may not be sustainable. Process focuses on negotiated settlement and seeking benefit for the parties at the table. An outcome such as this can improve relationships for a short term. Sustainable development requires those distributed benefits for parties at the table, but also it

requires consideration for considerations beyond the table, including ecosystem services, future generations, and cumulative impacts. The scale of sustainable development expands beyond the negotiation table and thus strong policy processes are required. In scenarios where win-win solutions are unavailable, Gibson's trade-off rules apply, meaning that if comprehensive mutual benefit is not possible, the undertaking should still seek to make maximum net gains and minimize adverse effects, including with emphasis on enhancing equity. Additionally, the burden of the argument is on the proponent, that significant adverse effects are avoided and are not displaced to future generations, and that the process is open (Gibson 2013), meeting the conflict management needs set out earlier in this chapter.

Sustainable development as pragmatic and "processual" requires plural voices to collaborate and reach a mutually beneficial decision (Sneddon, 2006). Transformational conflict management must be employed to manage the worldview differences that will inevitably emerge. Value, identity and interest divergences generate the conditions for conflict (Kouzakova, 2012). In the following section, I identify how different value interpretations create latent conditions for conflict in sustainable development.

Sustainable development presents society with a significant challenge. It must engage in two types of conflict management: short term, contingency thinking to consider current beneficiaries and a long-term commitment to the collaborative ethic to consider the future and respect the interests of future generations. While challenging, many process characteristics, such as transformative conflict management, scenario building, public participation, cumulative effects consideration, open and transparent public participation, etc. can contribute to such an end (Dalal-Clayton, Bass, & Programme, 2002; Gibson et al., 2005; Sonntag et al., 1987). In addition, "successful conflict management seems to require that organizational leaders engage in both pragmatic coping and visionary improvement. The combination represents a kind of 'pragmatic idealism' which would seem to be very powerful" (Thomas, 1992, p. 271). Pragmatic sustainability requires this pragmatic idealism to work effectively.

The triangle of better decisions, revised from the triangle of satisfaction, as a model of conflict management, requires that process, relationships and substance should be foundational to sustainability processes to consider the beneficiaries and the time scale as required aspects of sustainability, allowing for an inclusive approach for conflict management. The application of

the sustainability process components and conflict management substantive components is necessary for context-based decision-making in each substantive sustainability criterion.

Thus, this dissertation's conceptual framework is grounded in the understanding that substance, in the form of sustainability, process in the form of deliberative democratic approaches and conflict management, and relationships, in the form of respecting Indigenous people and building an ethical space for dialogue, are required to generate satisfactory resolutions. In the following chapters, my conceptual frame as revealed in Figure 8 will evolve to consider both the significant pressures that prevent the application of this framework in Canada's remote resource region, as well as the tools and approaches that can foster relationships, sustainability and fair process.

## **2.7 Summary**

Conflict is cyclical and builds on pre-existing characteristics. Conflict is thus most effectively dealt with if those latent conditions are addressed. To generate strong solutions, ensuring that the problem is mutually understood is crucial and requires real dialogue. Broadly participative, deliberative processes assist in assuring fairness, but in and of themselves are insufficient. Context dependent understandings of sustainability that become the substantive rationale for dialogue and decisions are crucial for parties engaging in conflict. Crucially important to the process is the need to build trust and create spaces that are respectful, ethical, and transform ignorance and asymmetrical power dynamics into mutually beneficial and reciprocal accords. Substance, process and relationships support and feed into each other to form the framework by which effective decision making for processual conflict can occur. The "processual" component can be best understood as the implementation of the trinity of voice and mutual benefit into policy (Depoe et al., 2004; Walker et al., 2006). Therefore, the outcome must have respect for substantive concerns, but the only way to meet any of these criteria fully is through effective process.

The Triangle of Better Decisions serves as a conceptual framework to drive this dissertation and is a revised version of Moore's triangle of better decisions (2004). Overall, this dissertation attempts to determine "How can decisions be made better for communities like Eabametoong?" The research undertaken in this chapter suggests that process, substance and relationships are mutually reinforcing sides of an equilateral triangle. A better decision is created

by the strong and mutually supportive sides of the triangle. If one side of the triangle is broken, it is unlikely that the decision will be sustainable and beneficial.

An unsustainable decision will occur if the approach used considers only two sides of the triangle. A decision that maintains strong relationships and strong process, but fails to ensure a substantive understanding of the problems and their consequences is likely to end in contingent understandings and a re-instigation of conflict once intended outcomes do not come to pass. A decision that maintains strong relationships and strong substance, but not strong process, could result in the exclusion of parties that were provided with insufficient notice or an opportunity to participate. This limitation includes the lack of funding for parties that may require it to participate or the knowledge and time require to participate. A decision that maintains strong substance and strong process, but poor relationships risks public and party distrust in the resolution, even if it is strong. Working towards building all sides of the triangle requires significant effort, time and resources. Achieving a strong triangle can be particularly difficult given the complex impacts that resource development fosters, as outlined in chapter 3. Anticipating these concerns and integrating them into process, substance and relationships is crucial to achieving a strong triangle. In the following chapters, I will apply this conceptual framework to a case and contribute to its theoretical underpinnings by considering the pressures that weaken it and the policy structures that strengthen it.

## **Chapter 3: Learning by Example: Common Characteristics and Concerns in Mid-Northern Canada's Mining Regions**

### **3.1 Introduction**

In the previous chapter, I overviewed the crucial integration between relationships, substance and process in sustainability-based decision-making and how conflict needs to be anticipated in resource development. This chapter will explore the factors that generate the latent and visible conflict conditions in Canada's mid-North corridor and consider how these factors influence sustainability-based decisions. The main contribution of this chapter is to consider what elements prevent the formations or put significant pressure on the Triangle of Better Decisions and examine the contextual essentials of mid-northern Canadian mining on Indigenous lands. This examination will assist in specifying the conceptual framework for application to the Ring of Fire.

There are common threads related to people's experience with industrial development and assessment of proposed development projects within the mid-North. The historical and current development process has created unfairness and disrespect, fear of being victimized and/or being denied opportunities, concerns about the loss of valued qualities (of nature, community, culture, combinations) and loss/denial of influence and opposition to impositions (Beierle, n.d; Lewicki, Gray & Elliot, 2003; Sidaway, 2005). These outcomes are based on previously lived experience and historic patterns (Sidaway, 2005).

Conflict emerges around lack of transparency and accountability, but it also emerges in the thoroughness of examining likely futures, scenarios and alternatives. In order for sustainable decision-making to occur, those involved must have a place at the table and understand the full spectrum of opportunities and limitations. Speculation, ignorance and focusing on short term considerations, as discussed in chapter 2, will breed dysfunctional conflict and prevent sustainability. In mining, the stakes are particularly high.

In Canada, mining is big business, and governments have historically worked actively to promote mining growth. Mining contributed \$56 billion to Canada's Gross Domestic Product (GDP) in 2015 and an international ranking put Canada in the top five countries in the global production of 13 major minerals and metals (The Mining Association of Canada, n.d. p. 20). The sector has been promoted through advertising (CBC News, 2016), chronically weak enforcement of environmental controls and reclamation funding requirements (Bellringer, 2016;



Environmental Commissioner of Ontario (ECO), 2013a), de-regulation or privatized agreements through voluntary monitoring measures (Noble & Birk, 2011; Schiavi & Solomon, 2006), large infrastructure projects to support further development (Gramlich, 1994; Hendriks, Raphals, & Bakker, 2017) – such as the Site C hydropower project, the Northwest Transmission line in BC, and the Amisk Dam in Alberta – and low royalties and tax breaks (Boadway & Dachis, 2015).

Ideologically, mining development in Canada operates on four basic presumptions that I have identified in both the literature and in the media:

- a) economic growth is automatically beneficial overall, with the mitigation of adverse environmental effects being an adequate objective (Tasker, 2016);
- b) poverty and inequity can and are being addressed adequately by the trickling down of growth benefits, in particular job growth rate (Cantillon, Marx, & Van den Bosch, 2003; Kenworthy, 2004);
- c) biophysical and social systems are best dealt with at the project level and these systems can absorb mitigated abuses (Manning, 2018); and
- d) Indigenous people should be assimilated into the wage economy, and most conveniently in the mid-North through mining and other capitalistic options only (Anderson, Dana, & Dana, 2006; Cameron & Levitan, 2014; Cooney, 2013; Wotherspoon & Hansen, 2013).

Conflict often emerges in mining when these pre-conceptions are challenged. In addition, much of the most accessible or highest grade ore bodies are now depleted and mining the lower grade reserves profitably has required more extensive and damaging processes including open pit extraction (NRCAN, n.d.; Tilton, Eggert, & Landsberg, 2015).

Challenging these preconceptions is particularly difficult when they are so embedded within the public discourse. Lobbying from the sector provides the message that in order to stay competitive in the global mining industry, tax breaks, assessment streamlining, and other policy accommodations are required (N. R. C. Government of Canada, 2014; Peckham & Budgell, 2008; Price Waterhouse Cooper (PWC), 2016). The need for “regulatory streamlining” for profitability in Canada is questioned (Bond, Pope, Morrison-Saunders, Retief, & Gunn, 2014). However, there are strong linkages to profit generation through increased mechanization and improved supply chain management, where refining and processing occurs in areas closer to markets or with lower costs (Dix, 1988; Price Waterhouse Cooper (PWC), 2016; Proulx & others, 2014; Roman & Daneshmend, 2000). This approach to mining additionally decreases

direct exposure and injury to miners but has resulted in less direct and indirect employment and less government tax revenue, particularly since refining and processing occur wherever they are most profitable. Socio-economic and ecological legacy concerns remain a constant challenge.

This reality is in many ways at odds with the government messaging about mining (Government of Canada, 2014; Peckham & Budgell, 2008; NRCAN 2011). The Canadian government's imperative for mining development echoes a pre-globalized understanding of the sector, when direct and spin-off jobs were plentiful and there were few legal powers that Indigenous peoples could employ to challenge a decision. This chapter seeks to illuminate the realities of the mining sector, with particular attention to considerations that affect the potential contributions of mining to lasting wellbeing (sustainability) – e.g., in light of cumulative effects, employment, legacies, boom and bust economics, revenues and opportunities. Additionally, it acknowledges the changing relationship between industry and Indigenous governments.

Canada has significant experience with mining and its positive and adverse effects. This chapter aims to delineate the lessons from experience, while recognizing new challenges and opportunities, and emerging possibilities – all with a focus on what may have implications for better strategic and project level deliberations, decision making and better management of conflict. As discussed in Chapter 2, anticipating challenges and incorporating those considerations in decision making reduces dysfunctional conflict and increases the likelihood of a sustainable outcome. In the following sections of this chapter, I will overview issues surrounding resource regions and cumulative effects, and outline the twelve common characteristics of the mining industry's effects and implications in the mid-North. The objective of this chapter is not to tar the industry or suggest resource sector development is wrong. It is to suggest that government, the public and Indigenous governments should go into decision-making with the best and most fulsome information possible, and plan for the likely eventualities that will emerge from extractive sector industries in Canada's mid-North. If that objective is met, conflict is more likely to be functional and progress towards sustainability could be achieved.

### **3.2 Chapter Methodology**

This chapter addresses a deficit in literature and public materials related to mining in Canada. Specifically, I was unable to find a document that summarized the major underlying micro and macro scale issues that influenced and distinguished mining towns and mining regions from

other areas of Canada. These characteristics will also become a latent condition for conflict. However, the characteristics are infrequently identified or well-integrated into planning and assessment.

During my initial literature review, I identified Ginger Gibson and Jason Klinck's approach in their 2005 article, "Canada's resilient north: The impact of mining on aboriginal communities" as a key methodological framework to identify latent conflict conditions in mining. However, over the course of my review and conversations at conferences such as the International Association for Impact Assessment Conference, Mining and Community Solutions Conference, and the Ontario Association for Impact Assessment Conference, as well as attending the Expert Panel on Environmental Assessment's consultation sessions in Toronto, Thunder Bay, and Fort St. John, the public, proponents and practitioners often faced challenges related to other major trends, including the financing, infrastructure development and social structure of mining communities. These concerns are of a breadth beyond the boundaries of an individual mining operation. The factors that Gibson and Klinck identified, as well as the additional factors that were identified through literature analysis, represent conflict conditions that will affect the durability of a solution and its contribution to sustainability. The list that I developed in this chapter is not exclusive and can be expanded to consider other factors that impact the well-being of communities and ecosystems in Northern mining regions.

The literature review that I engaged upon for this chapter was broad, and included conference papers that I had seen presented, as well as financial reporting, regional planning literature, macro and micro economic theory, feminist theory, and Indigenous research. Database search terms utilized included "gender AND mining", "women AND mining", "indigenous rights AND mining", and "indigenous people AND mining". For information on international market volatility and commodity prices, production, and industry growth, searches primarily concentrated in trade and finance online magazines, materials from professional organization, including the Canadian Mining Association, materials from domestic and international press, and limited academic journals, including Canadian Mining Journal and the Journal of Natural Resources Policy Research. Snowball information gathering approaches were utilized, considering the cited materials listings or "similar to" functions on Google Scholar, particularly from Gibson and Klinck's original article. Literature for this section was gathered over the span

of eight months, and included materials recommended by academics, practitioners and experts, as well as materials identified through database searches and Google scholar searches.

### **3.3 Extractive Industries, Resource Regions and Cumulative Effects**

There has been intermittent ad-hoc rapid economic development in resource sectors in the mid-North of Canada and this development has resulted in cumulative effects that have been challenging to manage. In 1967, retired Major General Richard Rohmer proposed the Mid-Canada Development corridor to Prime Minister Pierre Trudeau. The corridor included the area from Newfoundland and Labrador across to British Columbia and up through the Northwest Territories and Yukon. The Southern area was bordered by settlements, while on the North, the region was roughly delineated by the treeline. Rohmer wished to develop a national strategy to develop and populate the area based on its rich natural resource base (VanNostrand, 2014). Rohmer's proposal hinged on Canada's potential to become a world leader in resource extraction. Central to achieving this plan was infrastructure development, including North-South arteries and East-West linkages. As Rohmer said to the *National Post* in 2016, "It was a very simple concept; the country needed long range policies and plans for the future orderly development of this vast land that we have" (Hopper, 2017). By 1971, however, the plan failed to attract sufficient political will. Rohmer's plan did not have sustainability based outcomes in mind, but aimed rather to maximize economic development benefits, similarly to Prime Minister John Diefenbaker's "Roads to Resources" program in the late 1950s (Isard, 2010). Given its national perspective, it also lacked consideration for local priorities and variation. Additionally, it provided a means of neo-colonial industrialization on Indigenous lands and limited consideration for non-economic consequences. However, a lack of national strategy did not prevent many of the corridor's components from being developed. The corridor, with its plentiful resources, has been developed in an ad-hoc manner, devoid of comprehensive strategy and plan (VanNostrand, 2014).

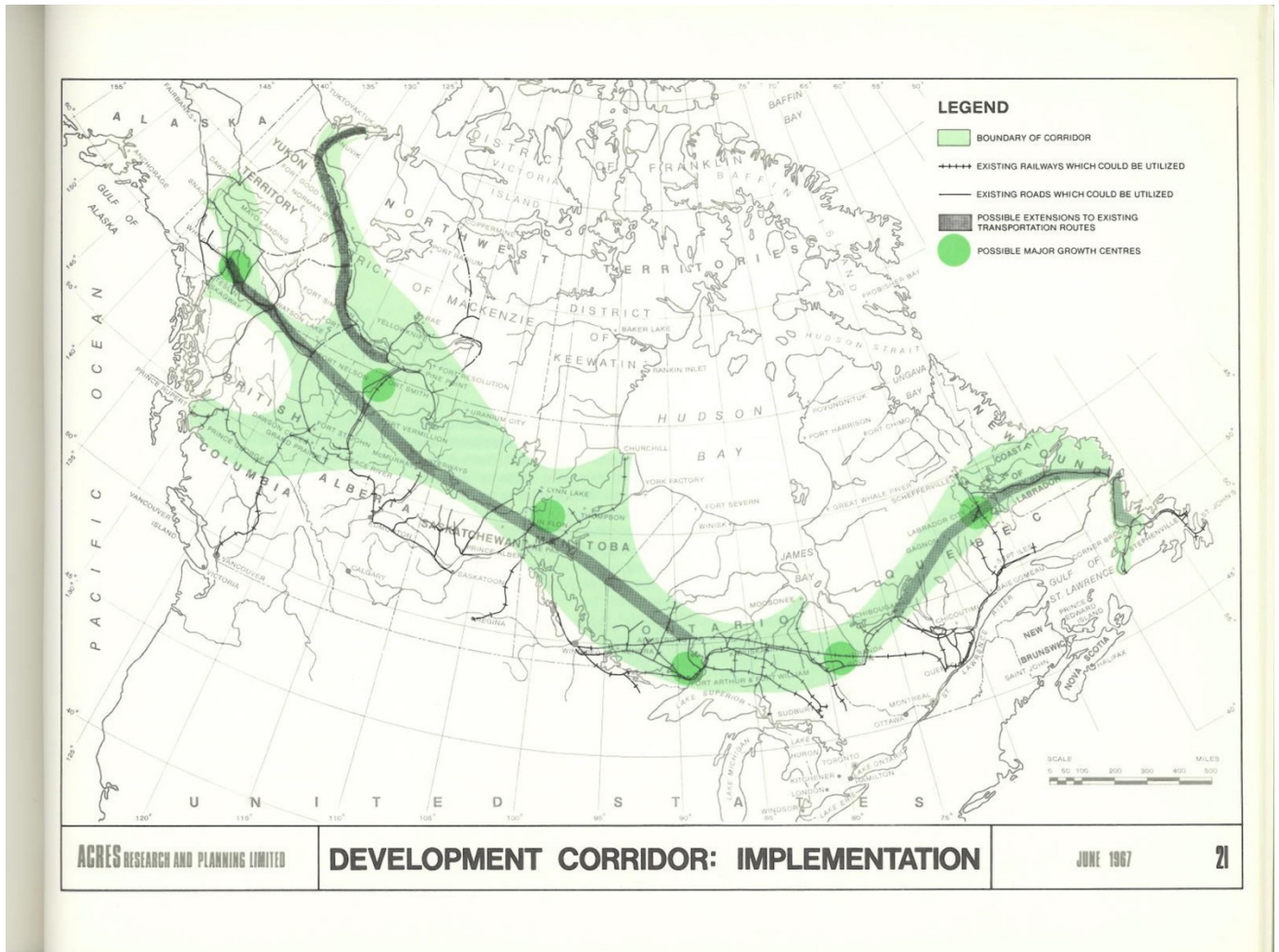


Figure 3-1: Proposed Mid-North Development Corridor From 1967 (Isard, 2016)

# The Mid-Canada Development Corridor

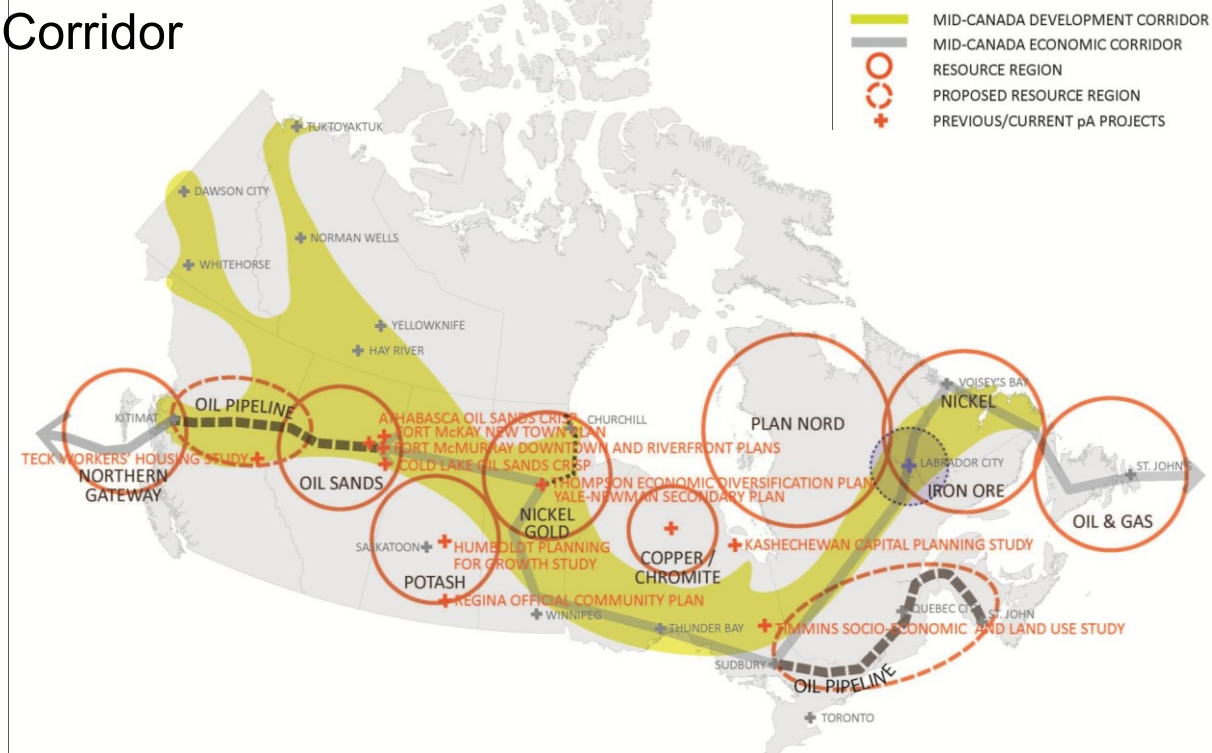


Figure 3-2: Actual Mid-North Corridor Development, Superimposed Over The 1967 Plan. Source: Planning Alliance/ Replan

The ad hoc development of this corridor has resulted in multiple resource regions across the mid-North. Resource regions in this area are remote and underserved, typified by boom and bust growth cycles. They occur within Rohmer’s corridor, but their development is not centralized or strategically considered, primarily due to the federal nature of Canada and the constitutional division of powers where resource development falls largely within a province’s purview (Drylie, 2014).

In Canada, the political authority to make environmental decisions is shared between various levels of government (D. Scott, 2017). However, that division is complicated and resource management in Canada has changed significantly since 1867. As LaForest J. says in *Friends of Oldman River v. Canada (Minister of Transportation)* [1992] 1 SCR 3, “It must be recognized that the environment is not an independent matter of legislation under the *Constitution Act, 1867* and that it is a constitutionally abstruse matter which does not comfortably fit within the existing division of powers without considerable overlap and uncertainty”(p.2).

LaForest's comments confirm that there is no absolute allocation of environmental responsibility arising from the Constitution, but a grey spectrum based on interest, interpretation, and available tools (Benidickson, 2009, p. 32–33). This understanding is particularly important where jurisdictional overlap is inevitable. Projects will likely have components that fall under Federal jurisdiction, if they are on federal lands, involve cross-provincial effects, etc. and others under Provincial jurisdiction if they involve resource development. In addition, First Nations are another jurisdictional consideration in many resource development cases in Canada's mid-North (Chadwick, 2013; Lambrecht, 2013).

These regions are frequently the site of land use conflicts. Additionally, it is difficult to predict population growth, which presents challenges for accommodating workers. In these regions, there is a distinct need for economic diversification and post-closure planning. Additionally, the development of this corridor has resulted in significant cumulative effects by focusing on project by project approval, as opposed to a sustainable long term strategy for developing the region (Drylie, 2014).

### **3.4 Cumulative Effects**

This ad hoc decision-making has resulted in significant environmental degradation and social disruption due to cumulative effects. Cumulative effects are defined as “changes to the environment that are caused by an action in combination with other past, present and future human actions” (Hegmann et al, 1999) or “...cumulative impacts are the successive, incremental and combined impacts of one, or more, activities on society, the economy and the environment. Cumulative impacts result from the aggregation and interaction of impacts on a receptor and may be the product of past, present or future activities” (Franks, Brereton, and Moran 2010, 300). Anticipating cumulative effects is a major conceptual consideration within this dissertation as they are poorly integrated into modern assessment practice and the cause of significant conflict in the Canadian mid-North.

Long term cumulative effects are crucial in mining cases because orebodies are exhaustible resources and mines have limited and uncertain life expectancies. Also, the legacy effects from mining operations have often been negative. These legacy effects include the depletion of resources, boom/bust effects, residual socio-economic damage, residual contamination and risks, inappropriate infrastructure, and adverse cultural effects in Indigenous

communities (Gibson 2014). Legacy effects will be discussed at greater depth later in the chapter.

The actual effects of any undertaking are always cumulative; they result from new stresses that build upon existing natural and anthropogenic stresses and their interactions. Actual cumulative effects include socio-economic and cultural as well as ecological aspects, which always interact and are not often separable (Weber, Krogman, and Antoniuk 2012). Also, cumulative effects usually are both positive and adverse, with the positive effects including opportunities and the adverse ones including risks. The effects occur in dynamic complex social and/or ecological systems and may be direct or indirect, immediate or delayed, simple and linear or interactive and non-linear (MacDonald 2000). Cumulative effects, therefore, involve combinations and interactions among factors that influence existing social and/or ecological systems or their components. The effects may be additive, synergistic, magnified (e.g., biomagnification of toxic contaminants up a food chain), compounding, or compensating across multiple scales (Harriman and Noble 2008; Noble 2015; Spaling and Smit 1993).

The diverse characteristics of cumulative effects can be re-categorized as four types of impacts particularly relevant to mining: i) coincident effects<sup>1</sup>; ii) induced effects<sup>2</sup>; iii) lifecycle effects<sup>3</sup>; and iv) legacy effects<sup>4</sup>. Most importantly, all these effects interact and need to be considered together. Also, cumulative effects include the full range of impacts, positive and adverse, near and long term, social, economic and cultural as well as biophysical effects and their interactions (Atlin and Gibson, 2017).

### **3.5 Characteristics of Extractive Resource Regions**

One point of contention within assessment can be the presumption that effects, particularly cumulative ones, can be anticipated with some accuracy. Certainly, even with the best available models and predictive capacity, there is need for precaution and expecting the unexpected. Additionally, there is context dependence in each assessment. Policy processes must be

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<sup>1</sup> Coincident effects are independently initiated activities in the same system

<sup>2</sup> Induced effects are where one effect or set of effects leads to others; e.g., where one project and its infrastructure in an area facilitate additional projects and associated effects

<sup>3</sup> Lifecycle effects are through product chain, cradle to grave, cradle to cradle.

<sup>4</sup> Legacy effects are effects that follow and may extend far beyond the active life of the focal undertakings, such as decommissioned mines with tailings facilities that may entail monitoring and management in perpetuity.



sufficiently adaptive to include those aspects. However, resource regions within the mid-Northern resource corridor have significant socio-economic and ecological similarities, and it can be presumed that broadly similar concerns will emerge in any development. Many similar patterns, characteristics and potential outcomes can be acknowledged, planned for and incorporated into assessment in mining developments and the communities that support them. The following section outlines twelve characteristics common in mining regions in the mid-North of Canada.

Ginger Gibson and Jason Klinck presented five characteristics of large scale mining operations that impacted Aboriginal communities in Canada:

- 1) *high wages;*
  - 2) *cyclical;*
  - 3) *high mobility;*
  - 4) *remoteness; and*
  - 5) *risks of injury and exposure*
- (Gibson & Klinck, 2005).

These characteristics are universal to all Canadian mining communities and are consistent with historic understandings of mining. The additional research undertaken led to the addition of seven additional characteristics. They are:

- 6) legacy concerns, including socio-economic and ecological considerations (Bellringer, 2016; Gibson, 2014; Ruddell & Ortiz, 2014; Weller, 2009);
- 7) mechanization and technological advancement (Karhnak & Marovelli, 1982; Robbins, 2000)
- 8) insufficient assessment and planning processes (Doelle, 2012; Duinker & Greig, 2006; Nikiforuk, 1997)
- 9) globalized processing and markets, both of which are indicative of international and transnational networks directly dictating and shaping the future of communities within the mid-North resource corridor of Canada (Price Waterhouse Cooper (PWC), 2016);
- 10) short-sighted royalties and taxation policy (Boadway & Dachis, 2015; McAllister, 2007)
- 11) impact on the exercise of Indigenous and treaty rights, reflecting both i) a history of colonial oppression in Canada (Corntassel, 2008; Ermine, 2007; Kleinfelder & Yesno,

1984; Napoleon, 2013), as well as, b) the growing acknowledgement of the need to respect and partner with Indigenous people within resource development on their traditional lands (Ali, 2009; Cameron & Levitan, 2014; O’Faircheallaigh & Corbett, 2005) and;

12) inequitable gender impacts (Greed, 1994; Kilanski, 2015; Kuyek, 2003; O’Shaughnessy, 2011).

In the following sections, I will overview these twelve factors. These factors require both short term and long term consideration, and when included within decision-making, they paint a more complete picture of extractive industry futures. Integrating these understandings into assessment and planning can fundamentally shift assessment design towards effective sustainability based decision-making.

### **3.5.1 High Wages**

Mining is the highest wage resource sector occupation in Canada. Overall in Canada, those who worked in mining had an average annual income exceeding \$115,000 in 2016. This wage level is more than double the average earnings of workers in forestry, manufacturing, finance and construction sectors, whose salaries were in range of \$32,000 to \$43,000 (The Mining Association of Canada, 2016). Assessment and planning processes should anticipate high wage effects from a small portion of the local population or that those incomes will not necessarily benefit local economies, due to the fly in/fly out nature of mining today (Storey, 2010).

### **3.5.2 Cyclical**

Mining generates boom and bust economic patterns. ‘Boomtowns’ are the manifestation of these economic patterns, where communities establish or grow at a rapid rate, as a result of resource extraction or processing. The typical boomtown is connected to a single industry or sector. Its economic development is controlled primarily by market factors (Gibson & Klinck, 2005). The establishment of boomtowns in direct proximity of a mine is now rare, and fly-in/fly-out operations dominate the industry. This style of operation will be discussed in greater depth in following sections. However, centers in mining regions have taken on much of the role of boomtowns, such as Fort McMurray, AB, Fort St. John, BC, etc. The rise and fall of these communities is dependent on global commodities prices, federal or provincial government

initiatives, corporate machinations or sectoral change (Markey, Halseth, & Manson, 2012; Weller, 2009).

These communities have limited control over their economic futures and only benefit from raw resource extraction, since most mines ship ore or ore concentrate to other places for processing. Additionally, these boomtowns often develop so rapidly, and with a large itinerant work force, that social services, infrastructure and other community supports cannot develop correspondingly. Economic diversification is also limited, with a focus on supporting the primary industry. However, supporting tertiary industries spring up rapidly (Kassover & McKeown, 1981; Kilanski, 2015; Marchand, 2011; Ruddell & Ortiz, 2014; Shandro, Veiga, Shoveller, Scoble, & Koehoorn, 2011; Urwin, 2016). Marchand analyzed the local employment effects of boom economics in Western Canada's energy regions and found, "The generalized boom estimates indicate that for every ten energy extraction jobs created, a boom period creates roughly three construction jobs, two retail trade jobs, and four and a half service jobs." The ratio in Western Canada's energy regions is approximately for every 10 energy extraction jobs, 9.5 jobs are created in the community (Marchand, 2011). Land use planning occurs haphazardly and demand drives development, despite ecological or social concerns (Jacquet & Kay, 2014). Therefore, you have rapidly growing communities with fragmented social structures that are dependent on volatile market forces to determine their well-being, leaving them extremely vulnerable to change.

When change occurs and extractive sector industries close, communities are left with 'bust' realities. 'Bust' refers to the rapid decline of these communities and the inability to manage the legacies that the industry generates, both socio-economic and ecological. Poverty, rapid de-population, increasing physical and mental health concerns (Shandro et al., 2011) and other challenges leave communities in sub-optimal conditions. These issues are exacerbated for Canada's Indigenous communities, who may have lost access to traditional economies through contamination or ecological change and residents are tied to the region and less willing or able to migrate for work (Gibson & Klinck, 2005; Gibson, 2014).

Additionally, a secondary cyclical component of mining is its rotational nature. Miners may live on site for a two week period and then return home for two weeks. Shifts can be longer and concentrated, often lasting twelve hours. Therefore, miners cycle between "complete immersion in work and total lack of it" (Gibson & Klinck, 2005). Also, given the mining cycle

and the vulnerability that the sector has, miners are frequently subject to temporary or permanent mine closures and layoffs (Gibson & Klinck, 2005; Storey, 2010). This employment cycle adds to the boomtown challenges mentioned in the previous paragraph. Additionally, it contributes to the high level of mobility in the sector that will be discussed in the next section.

### **3.5.3 High Mobility**

There are high employment turn-over rates in mining. Recent data sets from the Mining Industry Human Resources Council suggest that the mining in Canada only had a 10% turnover rate in 2017 based on surveys provided to employers (Mining Industry Human Resource Council, 2017). However, certain regions and types of employment in the industry may make turnover rates higher in certain mines than others (Mining Industry Human Resource Council, 2017). Historically, turnover has been much higher. Gibson and Klinck report that the turnover rate for Nanisivik mine on Baffin Island in 1979 was 106% for northern males, and 63% for southern male staff. This rate of turnover supports an Australian study that found that the turnover rate in mining was the highest of all professions (Gibson and Klinck, 2005). The challenge with high turnover rates is that it generates lower production and morale, while increasing corporate overhead, with more training needs and increased risks due to inexperience (Gibson & Klinck, 2005).

Another impact of high mobility relates to what Ginger and Klinck call, “geographic and temporal transience,” meaning that as a mine reaches closure stage, workers are forced to move to communities with operating mines. Thus, mining communities for miners are temporary in nature. Some miners have required that their families frequently move (Allan, 2011). However, comparatively, in a globalized world with easy access to transportation, many mine employees reside part-time in remote mining communities, living on-site during a shift and returning to their urban or suburban Southern home when off shift. This model is extremely different from the post-war model of company-built mining towns that emerged in the immediate periphery of a mining site. Comfortable northern camps now accommodate migrant workers while on shift. Intermediate sized hubs or larger centres are then the primary communities where workers reside (Proulx et al., 2014; Storey, 2010). Many of the secondary and tertiary economic benefits (and adverse effects) of a mine are then absent from nearby communities.

### **3.5.4 Remote**

Accessing remote ore bodies has required the building of housing, infrastructure, tailings ponds and other developments in previously undisturbed ecosystems. The building of temporary housing at sites, with air travel and other forms of commuting, has discouraged the building of actual communities. The centralized community that acts as a departure point for workers becomes the de facto mining town. This approach has prevented the emergence of ‘ghost towns’ and has minimized many concerns related to remote mining. However, many of the social concerns have migrated to these de facto mining towns and has entrenched the transience of mine employment. Additionally, managing the legacy wastes and other residues of remote mines in perpetuity creates major issues for communities (Gibson & Klinck, 2005; Storey, 2010). Legacy concerns will be discussed in greater depth later in the chapter.

### **3.5.5 Risk of Injury and Exposure**

The industry has historically posed a significant occupational health risk. Risks emerge from numerous sources, from physical risk of collapse or injury at a site, to long term exposure to health hazards. The safety record of mining companies has improved greatly over the century, for example the annual fatality rate of miners fell from 329 (average rate from 1911-15) to 25 (1996-97) (Gibson & Klinck, 2005). However, many of the health legacies from mining relate to long term exposure. Even preventative methods for exposure have generated long term consequences. For example, from 1943 to 1980, roughly 10 000 Ontario miners inhaled McIntyre powder, with a large concentration of aluminum, as an antidote to lung disease. The powder was industry sponsored and utilized in gold and uranium mines across the North. However, in significant doses, aluminum is a neurotoxin. In a sample of 368 former miners exposed to McIntyre powder, one third had a neurological disorder, and 3% had ALS, compared to the provincial average of 1 person in 1000 with a motor neuron disease. However, the evidence of aluminum’s neurotoxicity is still insufficient for Ontario’s Workers Compensation Board (Mojtehdzadeh, 2017). This risk of exposure is not limited to direct health impacts on miners. Mining “affects their health in many ways, from environmental exposures to air, water, soil, and noise pollution, to disasters and pit closures” (Kuyek, 2003). Rates of cancer, respiratory disease, fertility issues, and other health issues occur with greater frequency in extractive sector communities (Eisler, 2004; Kuyek, 2003; Morgan & Usher, 1994; Sudol, 2015).

### **3.5.6 Insufficient Assessment and Planning**

Assessment in its current form is insufficient for dealing with complex emerging problems at different scales and over time. Standard assessment processes are unable to consider the breadth and depth of interconnected problems. Most environmental assessment laws have been designed chiefly, if not exclusively, for application to individual proposed projects, usually physical works of some kind. In many jurisdictions, including in Canada at the federal level, project assessment is narrowed further by a focus on biophysical impacts and the mitigation of adverse effects (Bond, Pope, Morrison-Saunders, Retief, & Gunn, 2014). The assessment of adverse effects refers to assessing whether an undertaking will result in significant negative consequences for the environment, defined narrowly or broadly. Determining adversity is the primary consideration in pollution regulation, and as pollution regulation is the main precursor of assessment processes, it became the base for many jurisdictions' assessment law. Consequently, the requirements in most regimes have focused narrowly on the anticipated effects of individual projects for which an approval was sought. It is unrealistic to capture the overall interactive and cumulative impacts of developments in an area or a sector through project level assessment with a limited scope and jurisdiction through narrowly scoped project-based assessment with most impact assessment work assigned to the proponent seeking approval for an individual undertaking (Duinker & Greig, 2006).

Project level assessment is particularly problematic as the main approach to regional mining development. Mining is not a challenge simply because of its direct impacts and legacy concerns, but also due to the great likelihood of cumulative effects. In order to assess cumulative effects, the analysis must attempt to predict and assess impacts resulting from multiple projects and activities taking into account the effects of activities in the past, present and in the reasonably foreseeable future. The primary concern of relying on single project decision-making is that individual undertakings with apparently innocuous or at least “acceptable” adverse effects may contribute to highly negative cumulative effects (Atlin and Gibson, 2017; Gibson, 2006).

The mitigation focus is especially problematic where adverse effects may already be unsustainable (as they are globally in many key areas) (Atlin & Gibson, 2017). Moreover, it does not provide the information required to make decisions in wicked problem areas featuring complex and dynamic interactions among multiple factors, or cover the range of considerations involved in meeting expectations for social license or social “acceptability” (Prno & Scott

Slocombe, 2012; Weber & Khademian, 2008). Also, communities, governments and other stakeholders will be unprepared to deal with unavoidable or emerging adverse cumulative effects. Similar considerations apply to positive cumulative effects and effects, such as boom-bust phenomena which is discussed in greater depth in this chapter, that switch from positive to adverse. Mining is frequently a regional problem because ore and mineral deposits are generally distributed within a narrow proximity and often across provincial and territorial jurisdiction (Gibson, 2014).

Another primary contention is the frequent focus of assessment on biophysical components, without integration and with attention to socio-economic, cultural and other human system concerns. Processes in some Canadian jurisdictions (e.g., Ontario, the three territories and some other assessment processes established through land claims agreements) have defined environmental effects broadly to include social, economic and cultural as well as biophysical effects, but even in these jurisdictions biophysical effects have often received the most attention in assessment practice (Gibson 2002; Gibson et al. 2005). Old assessment practices have been slow to incorporate recently improved understanding of complex socio-ecological systems, especially when the implications threaten to make assessment work more difficult and expensive. Additionally, attention to alternatives in traditional assessment is limited. Most assessments consider the project as proposed and then determine the acceptability of that project and what conditions might need to be implemented. The most desirable assessment process compares the reasonable options (including the null option) and picks the option that is most in the lasting public interest (Duinker, 2010; Gibson et al., 2005; Spyce, Weber, & Adamowicz, 2012).

Although assessment is expected to be a purely scientific exercise, actual practice involves unavoidable choices in a realm of complex, wicked problems. For example, under the *Canadian Environmental Assessment Act* (1992 and 2012 versions), projects can be approved if their anticipated significant adverse effects are “justified in the circumstances,” but this undefined concept introduces worrisome uncertainties. The potential justifying “circumstances” or overstated positive effects are not examined with any rigour in public assessments. The result is an understandable motivation for project proponents to concentrate on establishing that no significant adverse effects will result from their proposed project. The accompanying temptation concerning cumulative effects is to claim that if the project itself will have no significant adverse

effects, it will not contribute to significant regional cumulative effects (Aschemann et al. 2012; Duinker and Greig 2006; Harriman and Noble 2008).

Moreover, traditional assessment does not provide the information required to make decisions in wicked problem areas featuring complex and dynamic interactions among multiple factors, or cover the range of considerations involved in meeting expectations for social license or social “acceptability”. This characteristic of project assessments, centred on “significance”, conflicts with the basic concept of cumulative effects, which recognizes that multiple minor effects can combine to have serious implications for ecological and socio-economic wellbeing. Not surprisingly, the result also conflicts with regional community and public interests that seek to avoid serious overall damage and risks to gain lasting benefits from multiple projects (MacDonald 2000; Odum 1982).

The result of these many inadequacies is a lack of public trust in the process and conflict. Assessment becomes an obvious battleground where dissatisfied impacted parties point to the process’ inadequacies (Gelinas et al, 2017). In addition to the challenges listed above, other process elements that generate conflict include constrained timescale, lack of assessment of alternatives, and concurrent but disconnected policy instruments. Assessments often operate under unduly limited timescales. These timescales generate contingency decision making without ensuring long term wellbeing (Clarke & Peterson, 2015). Additionally, traditional assessment processes limit the potential for alternative seeking and dialogue, as people become locked into positions (Campbell, 2003). The resulting lack of alternatives provided in these project assessments reduces the scope of the assessment. Without comparative evaluation of broad and advanced alternatives, the opportunity for consensus and collaboration erodes, as does the ability to find sustainable solutions (Susskind & Field, 1996). Concurrent but disconnected policy instruments prevent those without spare time and expertise from process engagement and strains the capacity of those involved. When focus is split between multiple assessments, as well as other policy exercises, it embeds power differentials. In the end, no one trusts the results.

This mistrust is well placed. The estimated costs of remediating total unfunded mine clean-up legacies in British Columbia totalled \$1.2 billion in 2015 (Bellringer, 2016). The legacies from industrial development often go unmanaged and the public has lost trust in the processes that should protect them (Bellringer, 2016; Gelinas et al., 2017; Lenihan & Bennet, 2015). The public becomes warier with each proposed project, proof of which comes in the form



of the mounting social costs for proponents (Davis & Franks, 2011; Franks et al., 2014). Project EA becomes a space to operationalize latent conflict conditions and discuss larger scale issues because no other venue exists to air these considerable grievances. These issues are particularly problematic in regional scale development in the mid-Northern corridor of Canada where large scale infrastructure, extractive industries, areas without development and lower populations dominate the dialogue. Conflict, boom and bust economic conditions, legacy concerns with projects and infrastructure emerge but infrequently does assessment address any of these salient issues.

### **3.5.7 Mechanization and Increased Technological Capacity**

The mechanization of the mining sector has fundamentally altered this industry and the assumptions made about its economic impact. Mechanization has led to safer mines, with fewer accidents. Additionally, it has significantly cut operational costs. The increased technological capacity has also allowed for new mining sites to be explored that might not previously have been accessible or viable (Bouw, 2016; Robbins, 2000; Karhnaak & Marovelli, 1982).

Additionally, with mechanization, mining has moved from a low skill trade that employed a large workforce to a small highly technical workforce. For example, in Northern Quebec 459 workers were used to extract one million tons of iron in 1950s. However, this number dropped to 153 in 2010 – so similar production requires one-third the people. Now new projects will require even fewer staff, perhaps as few as only 51 workers for every million tons of iron extracted (Proulx, 2014). The impact of mechanization is frequently compounded with the effects of reduced markets for products and dwindling quantities of high quality ore, reducing overall production and therefore, the overall production and therefore, the need for staff. For example, in January 1999, the Cape Breton Development Corporation (Devco) announced the impending closure of the Prince coal mine and the planned sale of the Phelan Mine. In 1967, the Devco mines employed 6300 workers. By 1995 that number had fallen to 2,200, and early in 1999 Devco employed only 1667 miners. Overall in Canada in 2016, 62,195 people worked directly in mining and quarrying. This number has only fluctuated by a few thousand since 2012, with 2016 as a five-year low, and 2014 as a five-year high with 65,540 people employed directly in mining. Similar statistics exist for oil and gas industries, ranging from 57,349 in 2012 to 64,346 in 2016 (S. C. Government of Canada, 2017). Overall, mining is an important employer,

particularly in Northern communities. However, employment levels are stable, and the industry requires few unskilled individuals.

### **3.5.8 Globalized Process and Volatile Markets**

The Canadian mining sector is dependent on international markets and the demand for mineral commodities is volatile. Additionally, globalized production approaches have increased corporate profits, but decreased local employment opportunities and revenue streams. Both the volatility of the commodities market and the global nature of processing and manufacturing are realities of mining confronting Northern Canada that are unlikely to change. The Canadian government tries to protect the industry and related employment through low royalty rates and other incentives (McAllister, 2007).

External factors are generating change for the mining industry. Processing and manufacturing primarily occur outside of Canada (Tilton, 1989). Much of the demand for commodities in recent years has been driven by unprecedented growth in China, representing approximately 40% of global demand. However, as China transitions away from manufacturing, its demand for raw materials will reduce. In 2015, the world experienced decline of 25% in the commodities price index from 2014 levels, related to both a decrease in Chinese demand (Price Waterhouse Cooper (PWC), 2016) and a larger scale decrease in consumer purchasing in developed countries related to generational purchasing decline, meaning that Millennials and other young generations are buying fewer goods (Godfrey, n.d.; Thompson, 2016). This change also relates to low birth rates in developed countries (Yew, 2012). Without an identified emerging market like China or traditional demand for large consumer items, market demand for certain commodities will continue to be volatile. Additionally, recycling in industries, like consumer electronics, has drastically increased providing replacement materials, thereby reducing the demand for raw materials. Metals utilized in solar power generation, like copper and silver will continually be in demand as renewable energy development continues to expand, but the material demand may be met increasingly through recycling (Bouw, 2016).

The net asset positions on the balance sheets of mining companies eroded significantly in the face of these market conditions. Current financial accounting rules require mining companies to identify when the carrying book value of individual mining projects is less than the potential economic benefits that will arise from continuing to develop and mine a project. When

anticipated economic benefits are less than the development and extraction cost, the project is considered impaired. In 2015, for Canada's top 40 mining companies, impairments of \$53 billion represented 77% of the annual aggregate capital expenditure – the highest proportion ever recorded. From 2010 to 2015, the Top 40 have impaired the equivalent of 32% of their capital expenditure incurred.

While market volatility is a factor in the declining value of corporate capital assets, so too is boom-related economic approaches. During the 2014 boom, in order to increase production, companies employed aggressive expansion techniques, including unrestrained capital spending programs and high priced mergers and acquisitions. Subsequently, Glencore, Vale, Freeport and Anglo-American have acknowledged asset impairments totaling nearly \$36 billion, or 68% of the total impairment recorded across the Top 40. The result of this asset impairment and the bleak economic future has resulted in a heavy debt load for companies and a shedding of assets at low prices (Price Waterhouse Cooper (PWC), 2016).

The volatility in 2015 is not unique to the industry. Shedding impaired or declining assets and re-selling them is the historic approach taken by mining companies and this creates significant unknowns for local communities. The transitional nature of the industry creates significant turnover in mine ownership and a very long period between discovery and operation. A 2016 study found that for mines operating in BC, there was an average of 77 years between discovery and operation, and there was an average of seven different project owners per mine (Thomson, 2016, p. 33). It is also important to consider that many proponent-led approval and compliance processes, including environmental assessment, will be undertaken by different companies, while the actual mining might be under a different company, and decommissioning with another company as well. As Thompson notes, “Changes in management and/or ownership at mineral properties and mining projects can cause regression in corporate-stakeholder relationships, as the changing faces and attitudes can lead to breakdowns in communication, misunderstandings, and conflict.” Communities are constantly reforming relationships, losing institutional memory and having to hold new players to pre-existing or changing rules.

### **3.5.9 Royalties and Taxation**

Volatility is not dependent on the industrial sector alone. The government contributes too. When the mining industry is less lucrative, governments may provide support through subsidies and

relaxed regulatory requirements that may have short term positive economic effects but will not improve long term economic gains. The government therefore attempts to bolster and insulate the industry from market volatility through low royalties and other tax incentives, often to the government's detriment. For example, the mining industry's payments to Canadian federal and provincial governments totaled \$71 billion in taxes and royalties over the last decade (2003-2012). In BC, for the 2012/13 year, expected natural gas royalties were a mere \$157 million, 0.3% of budgeted revenues, and down from the heady days of 2005/06 when gas royalties brought in a record \$1.9 billion to the Treasury. This shortfall comes even as production increases, with 2011 representing a record total of 41.4 billion cubic metres, one-third higher than 31.9 billion in 2005. Concurrently, the personal income tax revenues on \$110 000 of annual taxable income earned by 60 000 mine employees generates approximately \$1.25 billion dollars in tax revenue a year. It is unlikely that government expenditure on infrastructure, clean up and potentially lost opportunity costs are covered by personal and corporate tax produced by the mining sector. For example, the province of BC has \$1.23 billion in unpaid mining legacies in 2016 (Hoffman, 2017).

Mining royalties in Ontario are less than 2 per cent of the value of the minerals extracted. Ontario is the largest mineral producer in Canada, with about 25 per cent of total production. However, provincial mining revenues from taxes and royalties fell from a high of \$236-million in 2008 to just \$18.6-million in 2014 (Leslie, 2015). This low royalty income is insufficient to pay the long term costs of mining legacies and requires governments to consider mining from a more sustainable perspective.

### **3.5.10 Legacy**

Legacy effects dominate much of the public conversation on mining, including concerns about a) risks of lasting contamination from spills and leakage during and after mine life (e.g., in light of the tailings dam failure at Mt. Polley in British Columbia); b) the premature closing of mines with insufficient clean-up security (e.g., the Jericho diamond mine in Nunavut), c) residual contamination problems and associated costs; d) post-mining economic bust effects on local and regional communities; e) mine bankruptcies affecting pensions and liabilities; and f) continuing downstream effects (e.g., Alaskan worries about the cumulative regional effects of mines in northwest British Columbia watersheds).

The major mining legacy factors may be summarized in five interconnected categories (Gibson, 2014): depletion of a non-renewable resource; boom/bust effects; residual adverse effects on or risks to the land, waters and wildlife; inappropriate residual infrastructure; and effects on local, especially Indigenous communities. For the purposes of this work, I will focus on depletion of a non-renewable resource; residual adverse effects on or risks to the land, waters and wildlife; and inappropriate residual infrastructure as primary legacy concerns, because the Indigenous issues will be considered within a separate characteristic and boom and bust effects were considered within the cyclical characteristic. These characteristics are extracted directly from Atlin and Gibson “Lasting regional gains from non-renewable resource extraction: The role of sustainability-based cumulative effects assessment and regional planning for mining development in Canada” (2017).

*Depletion of a non-renewable resource* is inherent in mining, which develops but also extracts and removes a valuable resource that will longer be available for future generations. That reality inevitably raises questions about whether what is gained in the long run compensates for what is lost.

*Residual adverse effects on or risks to the land, waters and wildlife*, are well known in the record of mining in Canada and elsewhere where public authorities face a huge and costly backlog of responsibilities for remediating abandoned and orphan mines. While regulatory obligations and corporate practices have improved, some mines still leave negative biophysical and associated economic legacies. Mines generate tailings and other residuals that can have highly detrimental ecosystem effects and require careful treatment, storage maintenance and monitoring, sometimes in perpetuity. If heavy metals or other potentially toxic substances enter the ecosystem, they can cause adverse effects for hundreds, if not thousands, of years (Eisler, 2004; Eisler and Wiemeyer, 2004; Miranda et al., 2003; Franks et al., 2010; DeNicola and Stapleton, 2002). Unfortunately, monitoring and enforcement efforts are unsatisfactory (e.g., Bellringer, 2016) and changeovers in mine ownership from initial exploration to closing often leave declining mines in the hands of poorly resourced small operators unable to meet remediation obligations (Botta et al., 2014; Thomson, 2015).

*Inappropriate residual infrastructure* results if the extensive development of transportation networks, power generation, waste storage and human settlement that accompanies mining development is not designed with other purposes and post-mining realities in mind. In some cases, the infrastructure can be built to serve the lasting needs of regional communities and other livelihood options. Otherwise, once mines close, the infrastructure may be insufficient for continuing purposes, maintainable only at undue expense, or represent another

remediation problem for regional communities and the public purse (Stacey et al., 2010).

### **3.5.11 Indigenous Peoples**

In a speech to the Association for Canadian Universities for Northern Studies, Sen. Murray Sinclair said, “It took seven generations to create it. It will likely take seven generations to heal it.” The “It” Sinclair refers to is colonial oppression, assimilation and continuing injustice against Indigenous peoples. This analysis looks at resource development in the North as a vehicle of historic and continuing colonial oppression and considers the implications for mining industry obligations to contribute to the reconciliation process. The dependence that Indigenous communities have on the land, economically, culturally and spiritually, means that Indigenous communities are particularly vulnerable to the negative legacies of mining developments (Baker and McLelland, 2003; Booth and Skelton, 2011; Cameron and Levitan, 2014; Canadian Foundation for the Americas, 2008; Howitt, 2001; O’Faircheallaigh and Corbett, 2005). Mining companies, provincial and federal governments, and all other parties involved in mining undertakings in Canada now have increasingly clear legal, moral and practical obligations to engage Canada’s Indigenous peoples in the development process. This section will briefly describe the most recent case law that considers better integration of Indigenous concerns into resource development.

Resource development generates significant challenges for Canada’s Indigenous communities, as the ecological and social burdens of resource development have historically affected Indigenous communities most significantly and often negatively, and these communities have typically had insufficient recourse to address damage and little to no access to financial benefits. However, resource development also implies significant potential opportunities for employment and economic development (Anderson et al., 2006; Canadian Foundation for the Americas, 2008; Gibson, 2014; Lertzman & Vredenburg, 2005). For example, mining is the largest private sector employer of Aboriginal peoples in Canada on a proportional basis (The Mining Association of Canada, n.d.).

In Canadian resource regions, Aboriginal rights and interests have largely been ignored. However, Aboriginal rights have been reinforced as legal obligations under the Canadian Constitution, clarified in recent Supreme Court of Canada rulings (Chadwick 2013; McIlwraith and Cormier 2016), and supported by international obligations (e.g., the United Nations

Declaration on the Rights of Indigenous Peoples and promotion of the concept of “free, prior and informed consent” prior to approval of proposed activities on Indigenous lands). Claims to traditional lands and resources are essential to nation-hood. Land claims assist in building new opportunities and rebuilding Indigenous traditional economies to improve socio-economic circumstances (Anderson et al., 2006; Cornell, 2015). Indigenous people earn on average 30% less than other Canadians (Wilson & Macdonald, 2010), and these limited financial resources have impacted health, education, housing, perceptions of identity and mental health (Anderson et al., 2006; Corntassel, 2008; Scholtz, 2006).

The right to self-determination also includes the right to limit or exclude development on treaty land. Indigenous communities are interested in controlling the form, impacts and benefits from economic development on their land, as well as over-all self-determination (Alfred, 1999; Anderson et al., 2006; Chadwick, 2013; Corntassel, 2008, 2008; Mercredi & Turpel, 1993; Slowey, 2008). Both development and self-determination relate to continuing Colonial oppression of Indigenous peoples and Indigenous people’s goal of exerting autonomy over their lands (Corntassel, 2008; Mercredi & Turpel, 1993; Victor, 2007). Historically, latent power imbalances have prohibited mutual gain (Victor, 2007) from resource development. The results are reflected in the unfair distribution of negative legacies to Indigenous peoples and benefits to the Canadian private sector and government (Bell & Kahane, 2004; Gibson, 2014; Lertzman & Vredenburg, 2005). Power refers to the ability of one party to persuade another party to do or put up with something against their interest (Rioux & Redekop, 2012). Perceived power often emerges from money, authority, education, race, or gender. It can define jurisdiction and boundaries (Pasternak, 2014). Indigenous peoples are in a power deficit position due to structural barriers in combination with fewer resources, less available expertise and underlying legal title determinations made by colonial courts (Victor, 2007).

The Canadian government and the private sector have often treated land claims dismissively, and have exploited resources despite Indigenous opposition (Coyle, 2010, 2014a; McCann-Magill, 1989). The concept of the “social licence to operate” has improved Indigenous-private sector relations in many cases (Bridge, 2004; Prno & Scott Slocombe, 2012). However, Indigenous people gained increased Western common law legal authority in 2014 as a result of the Supreme Court of Canada’s (SCC) ground-breaking decision on Aboriginal title<sup>5</sup> in *Roger*

William (on behalf of the Tsilhqot'in Nation) v BC. This victory came as a result of changing jurisprudence related to Indigenous rights in Canada (Coyle, 2010; Papillon & Rodon, 2010; McNeil, 2017). The court granted the Aboriginal title based on pre-Colonial land usage (Palmer, 2017). This decision forms a precedent for future resource and land claim disputes and affirms the need for meaningful consultation to include First Nations (Palmer, 2017). This SCC judgment increases the negotiating power that Indigenous parties have. This legal precedent provides Indigenous peoples with improved land use and negotiating opportunities (McNeil, 2017; Palmer, 2017) as well as better opportunities for co-management and impact-benefit agreements (Doubleday, 2007; Gibson, 2014; Hipwell et al., 2002; Prno & Scott Slocombe, 2012; Sosa & Keenan, 2001).

In addition, the SCC's recognition of pre-colonial rights in Williams may contribute to broader future reconciliation and decolonialization (Palmer, 2017; Thomson, 2015; McNeil 2017) by generating more legal support for Indigenous self-determination. Indigenous self-determination would require a conscious de-construction of colonial oppression (Alfred, 1999; Corntassel, 2008; Lederach, 1995; Lederach & Maiese, 2003; Regan, 2006b, 2006b; Victor, 2007). Reconciliation is philosophically and procedurally complex (Borneman, 2002; Green & Sonn, 2006; Lederach, 1995; Nader, 1991; Regan, 2006b; Schaap, 2006). The tensions of acknowledging wrong-doing while also encouraging healing through forgiveness create a challenging balancing act (Lederach, 1995; Regan, 2006b; Stasiulis & Yuval-Davis, 1995).

The first major Supreme Court case on Indigenous constitutional rights, *R. v. Sparrow*, [1990], stated that "The government is required to bear the burden of justifying any legislation that has some negative effect on an aboriginal right protected under s.35(1)." Presumably, the cumulative effects of industrial development from multiple development projects would meet that concept. For greater detail on this argument see, Tim Thielman's article on "the Duty to Conserve" (2010). However, for policy makers, there is a challenge to determine how to protect against cumulative effects and encourage industrial development at the same time in a Canadian political landscape bereft of positive examples.

The need for and challenge of managing development for cumulative effects is well illustrated by the on-going industrial developments in Treaty 8 and the Blueberry River First Nations court case. The Blueberry River First Nations (BRFN) have filed a suit in the British Columbia Supreme Court asserting that the effects of incremental provincial approvals of



industrial developments throughout their traditional territory has interfered with their constitutional and territorial rights to hunt, fish and trap. The case has brought serious questions concerning development trajectories to light (*Blueberry River First Nations v. British Columbia*, 2015 BCSC 1302, Supreme Court of British Columbia (N. Smith J)).

The Blueberry River First Nations argue that the cumulative effects of multiple industrial developments in their traditional territories (dams, mines, oil and gas exploration and development with supporting infrastructure) have not been addressed well enough in BC's approval regime and that the resulting long term social, economic and cultural, as well as biophysical effects, are unacceptable (Askew, 2015). Only 14 per cent of the Blueberry territory remains intact forest landscape compared to the 60 per cent average in British Columbia (Macdonald, 2016). Also, less than one per cent of BRFN' traditional territory has been conserved in parks and protected areas. The British Columbia average is 14 per cent. In the court case, BRFN sought an injunction to prevent the BC government from selling 15 timber licences. The application was dismissed because the court was unable to establish "the balance of convenience," despite acknowledgement by the court that there was potential for irreparable harm from not granting the injunction (*Blueberry River First Nations v. British Columbia*, 2015). The court's ruling illuminates the daunting challenges of dealing with cumulative effects in a post-hoc way that is centred on individual decisions. The judge stated,

However, it must be remembered that the irreparable harm alleged by BRFN is a cumulative negative effect that infringes on its treaty rights. Since BRFN seeks an injunction against conduct that is only one part of that cumulative effect, I must consider the relationship between the alleged treaty breach and the specific activity that BRFN seeks to enjoin. It would be unjust to weigh the full inconvenience to the Crown and the public against the full inconvenience to BRFN because BRFN alleges that the irreparable harm stems from a number of sources, many of which would not be affected by this injunction. Accordingly, the strength or weakness of the connection between the conduct that BRFN seeks to enjoin and the cumulative negative effect that poses a risk of irreparable harm affects the balance of convenience.

Given the small proportion of the territory that these new licences covered (less than 0.1% of the traditional territory), the court deemed the effects of these licences to be insignificant. Additionally, the ruling concluded that amending those licences now would generate a "moving target" for this and other cases that would be unacceptable for the necessary predictability of Courts and Crown. However, this ruling will not prevent further attempts at injunctions aimed at

managing proposed new activities on such lands, since the court acknowledged that the irreparable damage of cumulative effects applies as evidence for other cases. Specifically, the court indicated that “public interest will not be served by dealing with the matter on a piecemeal, project-by-project basis” (Blueberry River First Nations v. British Columbia, 2015). Blueberry River First Nations are now pursuing a lawsuit against the province for “unprecedented industrial disturbance,” including the liquefied natural gas projects and the building of the Site C dam, that threatens their way of life and violates the terms of Treaty 8, signed in 1900. The lawsuit was launched in March 2015 and has yet to be resolved (Proctor, 2015).

Project level assessment and current approaches to mining do little to alleviate the concerns that the BRFNs have brought forward, as the 2014 ruling and 2015 legal action indicate. These concerns mirror those of Indigenous people throughout Canada and will continue to echo throughout mining developments across the country. Irreparable damage may occur, but it is not feasible to manage these problems through individual project or licensing decisions. The ruling indicates that current processes are insufficient in effectively considering cumulative effect. The incremental establishment of path dependence results in more damage from future development schemes, despite evidence of growing adverse effects. The results also point to the need for and current absence of appropriate regional scale remedies.

### **3.5.12 Gender**

Boomtown mining communities can have undesirable aspects for everyone, but are particularly problematic for low income women and especially Indigenous women (Manning, Nash, Stienstra, & Stinson, 2018; McHenry-Sorber, Schafft, Burchfoot-Rochford, & Hall, 2016). Natural resource development frequently increases levels of crime, violence, anti-social behaviour and disorder in nearby communities. In a 2014 study of 3000 respondents in a Canadian boomtown, residents “...expressed concern about the reductions in quality of life due to anti-social behavior, drug use, and aggressive, impaired or dangerous driving” (Ruddell & Ortiz, 2014). Boomtowns also are linked to eroded senses of community and ugly forms of hyper masculinity. Employment is primarily geared to men (O’Shaughnessy, 2011). Sex work, spousal abuse, racism and lack of social services are common consequences (Kilanski, 2015; McHenry-Sorber et al., 2016). The recent economic slowdown in Fort McMurray has resulted in even greater stress on women’s shelters and services related to violence and intimate partner violence

(Ruddell & Ortiz, 2014). Bust further exacerbates other problems. For example, a 2011 study of Tumbler Ridge, BC, found: Health and social service providers report on increases in unplanned pregnancies, sexually transmitted infections, and mine related injuries during booming mine activities. During bust times, mental health issues such as depression and anxiety were reported. Overarching community health issues prominent during both boom and bust periods include burdens to health and social services, family stress, violence towards women, and addiction issues (Shandro et al., 2011).

Women's experiences are impacted based on race, sexuality, economic status, and other factors. In particular, "racial minority women experience discrimination in a completely different way than racial minority men or even women as a gender" (Ontario Human Rights Commission, 2016).

Under the pressure of historic and on-going colonialism, Indigenous women have proven resilient and represent a key to the survival of their community and culture (Anderson & Lawrence, 2003; Findlay & Wuttunee, 2007). Indigenous women "play a critical role in the survival of families and communities and in healing the effects of social trauma, maintaining cultural vitality and fighting for recognition of Indigenous rights" (O'Faircheallaigh, 2013, p. 1791). The role that First Nations and other Indigenous women play in their communities, including in mining development negotiations (O'Faircheallaigh, 2013), is crucial for community well-being and development. First Nations and Indigenous women experience significant inequality (Findlay & Wuttunee, 2007), but in spite of these challenges,

"...women remain important stewards of the world's linguistic and biological diversity, active promoters of social change and vital economic players where gender equality is promoted. Recognizing that "social ills within our communities are not because of who we are but because of what has been done to us", Aboriginal women in Canada accept their own and their communities' responsibilities to make a difference."

Despite the clear and important leadership function that Indigenous women play in their communities (Collins, 2017; O'Faircheallaigh, 2013; Settee, 2016), their role is only beginning to be acknowledged through government support (Boutilier, 2017; Dorrell, 2009; Parks Canada, 2014; Sadiq, 2017). Likelihoods of boom and bust economies, isolated highways, lack of affordable safe housing, lack of transit, high costs of living and inadequate social services impact women differently, particularly in male dominated remote mining communities.

### 3.6 Summary

Non-renewable resource extraction is challenging to position in the sustainability agenda. Non-renewable resources are inherently unsustainable as they cannot be replenished or replanted. Additionally, their extraction fundamentally alters the landscape and future opportunities of the region. Mining and associated changes to the physical structure of the environment leave multiple negative by-products in the form of tailings, declining infrastructure and open pits, and make areas more vulnerable to economic collapse. Additionally, once a reserve of wealth and opportunity is extracted, it is inaccessible for the subsequent generations, who are often left with costly cleanup costs and fewer opportunities than previous generations.

Compounded, these features make unfettered mining development a less than desirable development option for many, including the government. The approach of Canadian mining policy makers, through taxation and regulatory measures, continues to reflect models of economic development from the 1880s, when demand was significant, the supply chain domestic and the financial dividends more extensive (McAllister, 2007). However, if mining can be used as a bridge to a better future, then it may be able to make lasting positive contributions to sustainability.

The concept of “bridging” allows us to better situate mining into sustainability based discussion. As Ali notes,

“But the question still remains: Is mining compatible with sustainable development? The answer must take two parts. First, there is no doubt that mining under present technological conditions does have a certain degree of permanent impact on a region. Second, mining involves extraction of nonrenewable resources. By these measures, the answers at one level is no, mining is not sustainable. However, while the landscape may be permanently changed by mining in certain ways, this does not necessarily mean that communities cannot thrive if the project is appropriately planned. Mining can therefore be a prelude to sustainable development if we are willing to absorb a certain degree of permanent impact. The key then is to be able to use mining as an entry point toward a more stable industrial or service-based economy that is not inherently obsolescent.” (Ali, 2009, p. 21)

The role that mining thus plays is that of an economic “bridge”, connecting communities and regions to new opportunities (Gibson, 2014). Therefore, the goal of mining in many scenarios is to act as a catalyst for other sustainable economic opportunities, diversifying the economy and provide a more resilient socio-economic state and ecosystem.

The negative legacy of mining is a frequently heard story, where boom and bust economies leave communities in the end with massive adverse social, economic and ecological consequences. Government and corporate planning focuses upon the short term. The most important methods of moving mining towards a sustainable agenda are to move government and corporate planning beyond their current short term focus. Extending mine life softens the booms towards a longer period for building diversified economic foundations, while cushioning the bust by transitioning the economy to other sectors. In tandem, the ecological and socio-economic initiatives must go beyond mitigating adverse effects. Mining should lead to the betterment of life for people within a community for future generations as well as in the short term. If that goal cannot be achieved, contributions to sustainability cannot occur.

As noted in the previous chapter, strong decisions arise from strong process, a substantive focus on sustainability, and building trusting relationships. The concerns noted within this chapter can prevent one or more of the triangle sides from forming, or apply pressure to a side of the triangle. Therefore, within the conceptual framework, the integrity of decision-making can be eroded. However, if these risks are assumed and integrated into decision-making, they can improve the strength and foresight of decision-making. In Table 2, below, I link where these concepts can impact the components of the Triangle of Better Decisions. Each element in chapter 3 is likely to have an impact on separate components of chapter 2. This table demonstrates the inter-relationship.

For community well-being, assessment and planning need to acknowledge, anticipate and avoid adverse cumulative impacts to the land and nearby communities as much as possible. The exploitation of non-renewable resources often delivers short-term economic benefits but the potential gains and losses are unevenly and inequitably distributed and accompanied by short and long term socio-ecological problems that include negative socio-economic and ecological legacy issues, negative cumulative effects from multiple mines and poor regional planning, and damage to the interests of Indigenous communities (Bankes & Sharvit, 1998; Chambers & Winfield, 2000; O’Faircheallaigh & Corbett, 2005).

In the previous chapter, I discussed how latent conditions for conflict continually manifest and the results spiral downwards. Conflict is inevitable when many of the issues presented above are not openly discussed in the decision-making process, or properly addressed in comparative evaluation of alternatives or approval rationales and conditions. Overall distrust

results from lack of transparency and consideration of the problems apparent within any development. Canada's historic and present approach to resource development and its legacies has bred public distrust and communities' disenfranchisement. In order to foster better decisions, over-arching governance models and practical policy tools must be designed to orient conversations away from positional arguments and towards transformational dialogue. Innovative policy tools that are embedded within a sustainability discourse can provide an answer.

Historically, the post-closure legacies of many mines have been negative, with an inequitable distribution of legacy burdens placed on communities, regions and future generations, as opposed to investors and governments today. However, mining and associated activities have a considerable, but largely unrealized potential to generate positive legacies. The majority of policy instruments applied to the mining industry are ill-fitting for achieving sustainability. Public dialogue concentrates on "balancing" or "necessary trade-off" rhetoric as opposed to focusing on the opportunities for and challenges in achieving sustainable development. The following chapter will focus upon next generation assessment practices and the opportunities that emerge once they are applied in mining cases.

Table 2: Framework to Integrate Chapters 2 and 3

Theoretical Framework															
Requirements	Elements of Requirements		Pressures that Erode or Impact Effectiveness												
			<i>Remoteness</i>	<i>Inequitable Gender Impacts</i>	<i>Indigenous Rights</i>	<i>Poor Assessment and Planning</i>	<i>High Mobility</i>	<i>Cyclical</i>	<i>Legacy</i>	<i>Royalties and Taxation</i>	<i>Mechanization and Technological Advancements</i>	<i>Globalized Markets</i>	<i>Risks of Injury and Exposure</i>	<i>High Wages</i>	
Process	Capacity		x			x	x	x	x						
	Empowerment			x					x					x	
	Opportunity		x					x							
	Mutual Benefit				x			x	x						
Substance	Defined Objective/ Purpose					x									
	Linked to Upper and Lower Tier Objective/ Purpose					x				x					
	Sustainability	Socio-ecological system integrity					x				x			x	
		Livelihood sufficiency and opportunity		x	x	x	x	x	x	x		x	x		
	Intragenerational equity		x	x	x	x	x	x	x				x		
	Intergenerational Equity		x	x	x	x			x	x	x	x			
	Resource maintenance and efficiency									x	x	x	x		
	Socio-ecological commitment/civility and democratic governance			x	x	x	x								
	Precaution and adaptation								x	x	x		x	x	
	Immediate and long term integration														
Indigenous Knowledge	Acknowledgement of importance of IK & agreement in how it will be applied		x	x	x	x				x	x				

		Acknowledgement of differing worldviews & time for mutual learning				x				x				
		Application of indigenous conflict management and legal approaches				x								
Relationships	Ethical Space	Acknowledgement of differing worldviews & time for mutual learning	x		x	x								
		Application of indigenous conflict management and legal approaches	x		x	x								
	Transformational Conflict Processes	Acknowledgement of conflict & desire to use conflict to innovate towards resolution		x	x	x								
		Application of indigenous conflict management and legal approaches			x	x								
	Two-Eyed Seeing	Existence of individuals/ organizations that can provide training, support & mediation services		x		x								
		Application of indigenous conflict management and legal approaches				x								



## **Chapter 4: Preparing for Problems- Best Practice Approach to Forge Sustainable and Functional Outcomes**

### **4.1 Introduction**

The problems identified within chapter 3 cannot be resolved without a transformation of how development is conceptualized and undertaken. Minor reform of practices of assessment, planning and post-closure monitoring does little to alleviate the major challenges that the process causes, including the fostering of colonialism and the embedding of dysfunctional conflict. Decision making capacities are inhibited by inadequate attention to the recurring patterns of adverse cumulative effects and unfortunate legacies of non-renewable resource development. As Chris Tollefson states, environmental assessment in Canada requires a “tear-down”, and “not a renovation” (Tollefson, 2016). This chapter identifies some interventions that can be undertaken prior to development, which would be useful to Eabametoong and other communities facing major development. It also considers the role that assessment law and processes play in planning and decision making on proposed new major non-renewable development projects and considers their potential for incorporating conflict management approaches. It also incorporates the role of Indigenous peoples in these processes and the need for early engagement. For assessment law and practice to foster better decisions, the practice of assessment must embrace the major transitions that have been integrated into the “next generation assessment” package.

In order to address the problems identified in chapters 2 and 3, this chapter will consider six crucial areas where assessment reform is needed, based on next generation assessment considerations, community needs and anticipated conflict. These areas include: 1) adoption of a sustainability base; 2) respect for Indigenous rights, knowledge, consent, and assessment processes; 3) effective attention to cumulative effects and response options including regional/strategic assessments; 4) meaningful community engagement starting with early planning; 5) trade-off minimization, and 6) conflict management. The topics considered within this chapter do not address all the requirements of next-generation assessment, but reflect the primary concerns identified in chapter 3 for mining in the mid-North. Adopting these practices and approaches assists in acknowledging and planning for the instability that resource sector-based development can generate which can erode or impact the effectiveness of the Triangle of Better Decisions. Additionally, these considerations can assist in preventing and mitigating

negative consequences for communities. This list of potential avenues for assessment transformation in this chapter should not be considered exhaustive but part of a suite of best practice considerations.

#### **4.2 The Essentials of Next Generation Assessment**

This chapter begins with the core principles of next generation assessment. Next generation assessment is a proposed package of sustainability-centred transitions in key areas of assessment law and practice. Next generation assessment has been advocated throughout Canada (Doelle & Sinclair, 2006, 2006; Doelle & Tollefson, 2009; Forbes, Hazell, Kneen, Paterson, & Sinclair, 2012; Gibson, 2016a; Gibson, 2000, 2013; Gibson et al., 2015; Morrison-Saunders, Pope, Gunn, Bond, & Retief, 2014;. Noble, 2009).

Sustainability assessment as a full assessment regime is elaborated by the next generation assessment concepts. Gibson et al. state that sustainability assessment’s “basic demand is that all significant undertakings must make a positive contribution to sustainability.” The next generation assessment transitions require improvements in individual project assessment practice – especially a shift from a focus on mitigating “significant adverse effects” to requiring “positive contributions to sustainability” as well as avoiding adverse effects. It will also demand regional and strategic level efforts provide attention to the cumulative regional effects of multiple projects (e.g., mines, hydrocarbon exploration and extraction, hydropower dams), associated infrastructure and other past, current and anticipated activities. Such broader work would provide a better examined context, more authoritative guidance and a more credible process of implementation for individual project planning and development than what we now have.

Gibson, Doelle and Sinclair explain that next generation assessment includes five main “transitions” from prevailing current practice.

*Table 3: Five Primary Transitions to Next Generation Assessment*

Five Primary Transitions to Next Generation Assessment (Gibson et al., 2016)	
(i)	In contrast to the prevailing focus on mitigating significant adverse effects, next generation environmental assessment would expect proposals to represent the best option for delivery of lasting wellbeing, preferably through multiple, mutually reinforcing and fairly distributed benefits, while also avoiding adverse effects. The key new global and domestic conditions for assessment work include deepening unsustainability, greater understanding of complexity and its implications for interactive effects and precautionary approaches, links between financial and

	ecological debt, skepticism about the capability and credibility of governments and other authorities, and rising public expectations to be actively involved in decision making on important matters including beyond the project level.
(ii)	In contrast to the common notion that economic, ecological and social objectives are inherently in conflict, can be addressed separately and will be accommodated through trade-offs that are “acceptable in the circumstances,” next generation environmental assessment would recognize that sustainability-enhancing economic, ecological and social objectives are interdependent. While some trade-offs will be unavoidable, they will be acceptable only in the last resort and under clearly delineated rules.
(iii)	In contrast to the assumption that effectiveness, efficiency and fairness are competing objectives, next generation environmental assessment would see that they too are logically and practically interdependent. Efficiencies would be sought by emphasizing assessment requirements where they can be most effective, especially through assessment in the development of policies, programmes and plans that are best suited to addressing cumulative effects and broad alternatives and to providing efficient guidance for projects and other more specific initiatives, and by fostering upward harmonization of the disparate assessment regimes (and associated regulatory permitting and post-approval monitoring) across Canada to compatible versions of a high next generation standard.
(iv)	In contrast to environmental assessment being one, unusually open contribution to the broader set of largely inaccessible decision-making processes affecting individual projects, next generation environmental assessment would be the main public vehicle for deliberations and decisions on significant undertakings. It would adopt comprehensive sustainability-based purposes and their elaboration in criteria, and it would apply to strategic level policies, plans and programmes as well as projects. In effect, environmental assessment would evolve into a tiered and integrated sustainability governance process.
(v)	In contrast to treating assessment as hoops for proponents to jump through to gain project approval, next generation environmental assessment would be centred on learning, building a culture of sustainability and serving the long as well as short term public interest.

In the context of this next generation assessment agenda, this chapter focuses upon the adoption of a sustainability base, respect for Indigenous rights, knowledge, consent, and assessment processes, effective attention to cumulative effects and response options including regional/strategic assessments, meaningful engagement starting with early planning trade-off minimization, and conflict management.

**4.3 Methodology**

This chapter is based heavily on Gibson, Doelle and Sinclair’s next generation assessment framework. EFN specifically sought assistance from me to engage in sustainability assessment

and strategic assessment research. Thus, their request grounded the focus. I undertook an extensive literature review, engagement in the field, and professional experience. For the literature review I used a snowballing technique, moving from papers recommended from the Next Generation package to look at similar papers recommended electronic journals and Google Scholar. The determination of “similar” on these websites refers to papers that cite an article, are cited by the article, or are often viewed in similar searches by a reader. Terms such as “strategic assessment”, “scenarios”, “futuring”, “sustainability assessment”, “conflict management”, “environmental conflict”, “environmental assessment”, “environmental assessment AND indigenous people” and “indigenous mining conflict” were primary search terms. I also used materials gathered from the Federal Expert Panel on Environmental Assessment Reform and materials from conferences specializing in assessment, including conferences of the Ontario Association for Impact Assessment and the International Association for Impact Assessment. There is a significant body of literature from across Canada by recognized scholars on next generation assessment theory and practice. This chapter draws from that scholarship, as well as papers on conflict management and resolution, and Indigenous perspectives on economic development.

#### **4.4 Adoption of Sustainability Base**

Sustainability is the cornerstone of this work. Sustainability-based assessment is not about balancing economic needs against ecological ones, but rather aims to identify and facilitate progress towards desirable futures in which social, economic, ecological and cultural, etc. objectives can be served in mutually supporting ways. Such work needs explicit criteria for effective evaluation and decision making (Gibson, 2017).

These basic principles need to be accompanied by generic sustainability-based criteria that set out what is broadly required for contributions to sustainability. In turn these generic criteria must be specified for the particular context of each application and applied in ways that recognize the interactions among effects and criteria categories. For a strong example of the application of Canadian context-specified sustainability-based criteria, see the report of the Joint Review Panel in the Mackenzie Gas Project case (MGPJRP, 2009; see also Gibson, 2006b; TransCanada Corporation, 2014). Context-specified criteria are especially valuable for comparative evaluation of alternative regional options. More detailed discussion of criteria

generation will be presented in chapter 6. As opposed to determining whether a proposed undertaking should go forward as proposed or be stopped, the comparison of alternatives using credibly developed, context-sensitive criteria opens assessment processes to broader, potentially more positive opportunities (Valve, 1999). At the project level, alternatives may involve: 1) the pace and scale of an operation; 2) the nature and placement of infrastructure; 3) the means of revenue sharing and other benefit enhancement for local communities; and 4) the approaches to using non-renewable resource royalties and other opportunities to build more sustainable livelihood foundations (Atlin & Gibson, 2017; Gibson, 2016a; Gibson, 2014; Rozema, n.d.). In regional level planning and assessment where cumulative effects are a major concern, alternatives should be based on different scenarios and packages of options to avoid adverse cumulative effects, enhance prospects for positive effects and minimize trade-off risks. The selection of the best option is guided by the application of context-specified sustainability-based criteria (Aschemann et al., 2012; Cornish, 2005; Duinker, 2007).

In mining decisions, broad based sustainability assessment and its full suite of processes should be able to deal with the breadth of identified concerns. As discussed in chapter 3, mining generates a multitude of sustainability concerns. Cumulative effects, Indigenous rights, regional concerns, project legacies and protracted and deep seated conflict often require additional means of integrating understandings of diverse authorities and stakeholders.

#### **4.5 Respect for Indigenous rights, knowledge, consent, and assessment processes**

Respect for Aboriginal rights and interests, and the duty to consult and accommodate those rights and interests, when they are relevant, is a legal obligation in Canada. This duty is a reflection of treaty responsibilities, Constitutional requirements, Supreme Court decisions and international commitments including UNDRIP (Boutilier, 2017; Coyle, 2010; Sadiq, 2017; Tidwell & Zellen, 2015). This mounting legal recognition reflects the reality that industrial development is occurring upon lands of Indigenous peoples, who bear the greatest legacy burdens from development, and who have been and continue to be subjected to colonialism, assimilation and racism. This section will briefly outline multiple considerations regarding Indigenous inclusion into assessment, including the use of Indigenous knowledge, requirements for free prior and informed consent (FPIC), and the emerging practice of Indigenous assessment. Indigenous environmental assessment is a process where undertakings are assessed independently by and/or

for the purposes of Indigenous authorities. While there is limited academic literature on the topic, there is emerging practice (e.g., Sauteau First Nations, 2016).

Indigenous knowledge, FPIC and Indigenous assessments reflect the inherent jurisdiction of Indigenous peoples in decision making. However, there are significant differences of opinion between the Crown and Indigenous peoples “with respect to the nature, extent, and scope of Indigenous rights and interests in decisions made about resource development in Indigenous territories” (Sadiq, 2017). Conflicts between the Crown and Indigenous communities are among the most critical on-going conflicts concerning mining in Canada and a large component of this conflict is cultural (L. Davis et al., 2017; O’Faircheallaigh, 2002; O’Faircheallaigh & Corbett, 2005; Regan, 2006b; Smith, 2013; Snelgrove et al., 2014). LeBaron and Pillay outline the three dimensions of conflict: “material, symbolic, and relational.” The material elements are the concrete components of the conflict (e.g., a project and its proposed impacts). The symbolic element relates to people’s identities, values and worldviews. The relational element relates to the way that conflict develops between people. Culture is present within all three elements. Culture is understood by LeBaron and Pillay as the shared and unspoken understanding of a group that determines what is important and motivates our decisions. It is an integral influence in all actions (Clarke & Peterson, 2015).

For Indigenous peoples and the Crown, cultural differences and differences in worldviews influence each party’s understanding of the three elements of conflict: material, symbolic and relational. However, embedded power dynamics put the Crown in the position to ensure that their cultural perspective is paramount. Indigenous people have fought to gain power outside of their own cultural institutions and have utilized Crown systems, such as the court and litigation as a means of gaining more power. These mechanisms are part of Western legal norms and thus, the product of the dominant, oppressive culture (Alfred & Corntassel, 2005; Corntassel, 2008; Napoleon, 2013).

Similarly, the application of conventionally legislated approaches to decision making – assessment, litigation, planning, etc. – means that Indigenous communities are still operating within the rules of their oppressor (Corntassel, 2008; Corntassel & Holder, 2008; James, 2008; Woolford, 2004). Most Indigenous communities employ Western legal mechanisms to garner power, often in anticipation and desire of regaining Treaty or pre-Colonialized autonomy and control (Alfred & Corntassel, 2005; Corntassel, 2008). One very common mechanism of modern

colonialism is to change legislation once Indigenous peoples achieve success or garner additional control through legislated process (*Mikisew Cree v Canada*, 2018 SCC, 40). In addition, weak attention to Indigenous knowledge within the context of assessment and within the frameworks of academic research reflects the continued influence of colonialism (Ellis, 2005; Regan, 2006b; Smith, 2013).

Assessment is still primarily a Western construction, embedded in Western legal norms. However, next generation assessment can be a tool to gain power and mutual understanding with the Crown, practitioners and scholars, when considered in tandem with the recognition and incorporation of Indigenous and treaty rights (Multi-Interest Advisory Committee, 2016, Chapter 2). Involving Indigenous peoples in resource development requires processes that re-orient the mindset of proponents, practitioners, Provincial and Federal authorities, and other impacted parties (Colbourne & Anderson, 2017) through transformational conflict resolution and other processes. Beyond acknowledgement, from a conflict management practitioner perspective, it requires an integration of three factors: first, the Indigenous understanding of the issues at hand; second, the symbolism of the conflict, for example, that it is a perpetuation of colonial oppression; and third, the relational, meaning that the historic relationship between Indigenous peoples and the Crown has been adversarial and marred by historic injustice. In practice, this approach requires the integration of Indigenous engagement at all layers of decision making, and a strong understanding by policy makers of Indigenous Nations, their laws, treaties, and expectations (Napoleon, 2013). In a practical sense, it also requires that respect for Aboriginal and treaty rights and relationship building be prioritized before environmental assessments begin. For greater detail on how assessment could be re-oriented, the Multi-Interest Advisory Committee delineated principles for Indigenous engagement in assessment that acknowledge the historic colonialization and deep needs for change. However, it does not provide attention to indigenous designed and run assessments (see Multi-Interest Advisory Committee, 2016).

A consequence of the colonial legacy and its continuing influence is that each assessment is underlain by latent conflict beyond the material issues at hand, in part because the assessment process is constructed from Western cultural legal norms, not Indigenous ones. Next generation assessment offers a means of sharing authority in decision-making through joint assessments, which entail redistributing some power, as well as recognizing indigenous jurisdiction and authority through indigenous assessment and criteria designed by or with Indigenous people. The

criteria should utilize and consider traditional and/or Indigenous understandings as legitimate and recognize Indigenous knowledge holders as the keepers of that knowledge. The hesitations and unwillingness of Federal and Provincial governments to integrate Indigenous perspectives into the assessment process are indicative of the systemic problems Indigenous people face when engaging with the Crown (Mulvihill & Baker, 2001; Noble & Udofia, 2015; Udofia, Noble, & Poelzer, 2017).

Mining, in particular, generates challenges because mines are fraught with latent conflict and have generated negative legacies for Indigenous communities. The following sections consider components of assessment practice that could help to address the aspects of conflict outlined above and be particularly promising for inclusion in mining assessments.

#### **4.5.1 Indigenous Knowledge**

The incorporation of Indigenous knowledge is crucial to the environmental assessment process. There are a great variety of definitions for the overlapping concepts of traditional knowledge, Indigenous knowledge and traditional ecological knowledge (Houde, 2007). Semali and Kincheloe define Indigenous knowledge in part as a reflection of “the dynamic way in which the residents of an area have come to understand themselves in relationship to their natural environment and how they organize that folk knowledge of flora and fauna, cultural beliefs and history to enhance their lives” (3). This definition recognizes that Indigenous ways of constructing understandings are central to the concept and incorporation of Indigenous knowledge is not reducible to the provision of data.

Over the past ten years, Indigenous knowledge has been recognized and attempts have been made to consider it in assessments. However, it has proven challenging. Ellis (2005) summarizes the barriers to incorporating Indigenous knowledge into assessment within the Northwest Territories as,

...communication barriers, arising from the different languages and styles of expression used by traditional knowledge holders; conceptual barriers, stemming from the organizations’ difficulties in comprehending the values, practices, and context underlying traditional knowledge; and political barriers, resulting from an unwillingness to acknowledge traditional-knowledge messages that may conflict with the agendas of government or industry. Still other barriers emanate from the co-opting of traditional knowledge by non-aboriginal researchers and their institutions. These barriers help maintain a



power imbalance between the practitioners of science and European-style environmental governance and the aboriginal people and their traditional knowledge. This imbalance fosters the rejection of traditional knowledge or its transformation and assimilation into Euro-Canadian ways of knowing and doing. (66)

Effectively integrating Indigenous knowledge requires Indigenous involvement in the assessment processes, including within the scoping, the criteria design, the assessment, and the monitoring. The most effective methods of integrating Indigenous knowledge in assessment vary contextually. However, assessments undertaken under the Mackenzie Valley Resource Management Act, where independent co-management boards made up of Indigenous, federal and territorial members, have attempted to integrate indigenous knowledge into assessment decisions. The co-management nature of these boards represents an attempt to improve power differentials and better integrate indigenous knowledge (Fitzpatrick, 2008; Mackenzie Valley Resource Management Act, SC 1998, c 25). Considering latent power imbalances, broadening the scope of assessment beyond immediate project concerns, and designing processes that affirm Indigenous knowledge are crucial to next generation assessment processes.

#### **4.5.2 Free, Prior and Informed Consent**

Free, prior and informed consent (FPIC) is a guiding international principle, enshrined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), for industrial development on traditional Indigenous territories. FPIC is defined by the Boreal Leadership Council as follows:

FPIC is commonly used as a short-hand expression to describe the right of Indigenous peoples to offer or withhold consent to developments that may have an impact on their territories or resources. To be true to its definition, FPIC must be obtained without force, coercion, intimidation, manipulation, or pressure from the government or company seeking consent (free); with sufficient time to review and consider all relevant factors, starting at the inception stage, in advance of any authorization for, and continuously throughout the planning and implementation of activities (prior); based on an understanding of adequate, complete, understandable, and relevant information relative to the full range of issues and potential impacts that may arise from the activity or decision (informed); and can be given only by the legitimate representatives of the people affected, with any caveats or conditions stipulated by the people whose consent is given (consent). It must be noted that FPIC cannot exist where a people does not have the option to meaningfully withhold consent (2005, 7-8).

Applying the FPIC principle in environmental assessment will require the building of new legal understandings and norms. The integration of FPIC into the Canadian legal process is in its infancy. Constitutional and Indigenous law experts believe FPIC sets a higher legal standard for recognizing and respecting Indigenous rights than the current legal standard of meeting the duty to consult and accommodate (Boutilier, 2017; Dorrough & Land, 2015; Sadiq, 2017; Scott, Lawrence, & Rice, 2016). As such, the ramifications of this new standard have yet to be fully understood. The test for infringement of the right of duty to consult and accommodate was built upon successive Canadian court cases but was established under Canadian law through the *Haida Nation v. British Columbia*. However, there is still considerable debate surrounding its interpretation (Morellato, 2008).<sup>6</sup> However, there is no established test for rights infringement under the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). In Canada, it is presumed that the legal tests for meeting the duty to consult would be similar and provide the tests for FPIC (Boutilier, 2017, p. 7). Next generation assessment processes will need to integrate both the tests for the duty to consult and FPIC in law and in process.

Further research and analysis on integrating FPIC into assessment is required. For more complete analysis of FPIC and its integration into Canadian assessment processes, see Sasha Boutilier's "Free, Prior, and Informed Consent and Reconciliation in Canada: Proposals to Implement Articles 19 and 32 of the UN Declaration on the Rights of Indigenous Peoples" (2017) and Somia Sadiq's "Understanding and Implementing Free, Prior, and Informed Consent (FPIC) in the Context of Indigenous Peoples in Canada" (2017).

#### **4.5.3 Indigenous-Led Assessment**

Indigenous-based assessment refers to new processes emerging in Indigenous communities across Canada. For decades there have been assessment processes associated with land claim agreements, but these typically involve some sharing of authority between the Indigenous and government signatories (Government of Canada, 2010, 2016). The more recent developments in

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<sup>6</sup> The trigger involves three major factors: "a) the existence or extent of duty is a legal question premised on an assessment of facts – deference afforded to the adjudicator's findings of fact; b) Process most often reviewed on reasonableness standard: question is 'whether the regulatory scheme or government action, viewed as a whole, accommodates the collective aboriginal right in question.' *Haida Nation*, para. 62; c) Correctness standard applies if the government errs in its assessment of the seriousness of the claim or the impact of the infringement" (Veale, n.d.).

assessment reflect Indigenous worldviews, legal traditions and priorities. For example, the Saulteau First Nation in northern British Columbia shares LNG developments with other Treaty 8 First Nations. The logistics of this Indigenous led strategic assessment are still confidential, but the intention is to assess concerns based on Indigenous understandings, including both traditional knowledge and scientific approaches (Saulteau First Nations, 2016). Indigenous-based assessment processes need to be encouraged through funding, increasing the internal capacity of Indigenous communities (including staffing, training, etc.) to engage in their own assessments, and recognition and acceptance of Indigenous authority to conduct assessments (Multi-Interest Advisory Committee, 2016; Noble & Udofia, 2015; O’Faircheallaigh & Corbett, 2005; Papillon & Rodon, 2017; Udofia et al., 2017).

#### **4.6 Effective Attention to Cumulative Effects and Response Options Including Regional/Strategic Assessments**

In chapter 3, I defined the concept of cumulative effects as both positive and negative impacts that build and interact with one another (Atlin and Gibson, 2017). It is challenging to capture cumulative effects in assessments, especially assessment at the project level. The complexities of cumulative effects entail uncertainty and imperfect predictability even with good information (which is not always available). In order to identify and evaluate cumulative effects, the assessment process must rely on expertise, including both conventional scientific expertise and traditional knowledge based on local experience (MacDonald, 2000) Ideally, undertakings subject to assessments should be examined through a predictive, transparent process that considers all elements of cumulative effects and response options. Each assessment should seek the best option, meaning the one that has the strongest prospects for positive contributions to sustainability while avoiding serious adverse effects and risks (Adger & Jordan, 2009; Gibson, 2016a; Norton, 2005; Stacey, Naude, Hermanus, & Frankel, 2010). Effective assessment of cumulative effects thus has core characteristics that it must incorporate. These characteristics (from Atlin and Gibson, 2017) are as follows:

- (i) Multi-dimensional: covers the full suite of cumulative effects of multiple undertakings, past, present and reasonably foreseeable in the relevant regional future (well beyond the individual project level), in light of the contribution to sustainability objectives;

- (ii) Long term: uses scenarios or some equivalent to explore and illuminate the nature and potential implications of plausible and desirable futures, to identify alternative pathways and plan options to examine;
- (iii) Credible in process and justification: establishes explicit open processes for elaborating and evaluating regional alternatives in light of context-specified sustainability-based criteria and trade-off rules;
- (iv) Authoritative: integrates regional assessment conclusions as decisions in legislatively authoritative regional plans or the equivalent with provisions for ensuring compliance in project level planning and assessment; and
- (v) Accountable: ensures clear and accountable assignment of cumulative effects management responsibilities and expectations, including provisions for engaged monitoring, effective responses and public reporting.

Taken together, all of these characteristics and requirements mean that cumulative effects assessment can be technically and procedurally demanding. To address the predictive uncertainties and value-laden choices (MacDonald, 2000), cumulative effects assessment processes must apply foresight in identifying and pursuing desirable futures, and also adopt precautionary approaches that favour lower risk options and adaptive design with careful monitoring, adaptive management and continuous learning (Adger & Jordan, 2009; Sinclair, Doelle, & Duinker, 2017). Given “contribution to sustainability” objectives, a priority of cumulative effects based assessment, involving mining operations is that the assessment results should focus on how limited-life undertakings can provide for lasting positive gains while mitigating negative legacies in all areas: socio-economic, cultural and ecological.

One of the largest problems in project level cumulative effects assessment, particularly in mining communities, is that the responsibility for assessing cumulative effects is placed on individual project proponents. Such proponents, almost always in the private sector, rarely have the motivation (beyond legislated obligation), authority, capacity, potential credibility, or information base (at least about other anticipated projects) to do good cumulative effects assessment in a way that addresses the core needs and rising expectations by the public, First Nations and proponents for better decision making. Project-level proponents may be able to identify the likely range and potential importance of cumulative effects, but it is unreasonable to expect them to examine their implications in light of desirable and undesirable future scenarios, consider and assess broad alternatives, and point to the best options for action (Adger & Jordan, 2009; Gibson et al., 2005; Greig & Duinker, 2007).

Project proponents would benefit from capable pre-existing cumulative effects assessments and associated regional plans or the equivalent that address these overarching issues and provide credibly developed and authoritative guidance for project planning. The immediate and long term concerns and aspirations surrounding project proposals now often extend well beyond the individual project – especially where there have been and/or will be multiple undertakings with uncertain overall future effects. Where the projects involved include mines, with their limited life expectancies, uneasy combination of opportunities and risks, and often unfortunate legacies, proponents have much to gain from good cumulative effects assessments to clarify and smooth the path for project planning and approval (Gibson, 2014; Multi-Interest Advisory Committee, 2016).

#### **4.6.1 Regional and Strategic Assessment**

Regional and strategic level assessment (R/SA) can provide broader guidance on anticipating cumulative effects and conceptualizing the timing, placement and pace of development. In so doing, R/SA can provide specific guidance to assessments on undertakings. Strategic environmental assessments “systematically assess the potential environmental effects, including cumulative effects, of alternative strategic initiatives, policies, plans, or programs for a particular region” (Canadian Council of Ministers of the Environment, 2009). Sustainability-based strategic assessments would be broader. Because of overlapping mandates under the Constitution of Canada, strategic (and project) level undertakings, particularly those involving resource extraction, often involve multiple jurisdictions – federal, provincial/territorial and Indigenous – as well as municipal and sectoral authorities. Regional scale planning and assessment are largely a responsibility of multiple governments, not responsibilities that individual mine proponents can reasonably be expected to deliver adequately in project-based assessment and approval processes.

Proper attention to the cumulative interactions among the effects of multiple undertakings and stressors – past, present and in the reasonably foreseeable future – requires a larger scale than is available at the project level and more authority than can be expected from individual project proponents or from informal planning and policy development exercises. There is a specific need for a regional level examination of cumulative effects, related future considerations, and appropriate action in anticipation of them (Atlin & Gibson, 2017; Greig &

Duinker, 2007; Sinclair et al., 2017). Where multiple past, present and reasonably foreseeable undertakings will affect a region, an anticipatory regional response is needed. R/SEAs, often involving multiple jurisdictions, need sufficient scope, authority, access to information and arrangements for meaningful public engagement to ensure credible analysis covering wide-ranging cumulative effects, examining broad implications, comparing future scenarios, and considering multiple alternatives (Multi-Interest Advisory Committee, 2016). Virtually all R/SA in provinces will have to be at least bi-jurisdictional and many will involve the federal government, the province and at least one Indigenous authority. The best option would be for all of the participating authorities to have legislated R/SA processes, and for them to establish joint processes through formal agreements that deal with context specific considerations (Atlin & Gibson, 2017; Gelinis et al., 2017; Gibson, Benevides, Doelle, & Kirchhoff, 2010; Gunn & Noble, 2009)

Effective tiering must be law-based to be authoritative and have public credibility (produced in a properly open, comprehensive, participative and accountable process, and regularly reviewed to keep up to date). Otherwise the guidance from strategic assessments and/or regional planning is unlikely to be accepted as a legitimate base for project assessment and approval. If authoritative and credible, the plan would provide reasonable clarity and certainty of expectations for proponents of individual undertakings and remove much of the burden these proponents carry under Canadian environmental assessment law to do the cumulative effects assessment themselves. Under a tiered structure, proponents participating in a project level assessment would address most cumulative effects by ensuring that the character and potential effects of their proposed undertakings would not conflict with the overall plan. Therefore, for cumulative effects considerations, a primary objective of the project assessment process would be to ensure its compliance with the larger scale plan (Arts, Tomlinson, & Voogd, 2005; Aschemann et al., 2012; Dalal-Clayton & Sadler, 2005; Multi-Interest Advisory Committee, 2016).

#### 4.6.1.1 Models of Regional Strategic Environmental Assessment

There is no one size fits all, regional strategic assessment model and limited Canadian experience to draw from. Glasson and Gosling (2001) and Jackson and Dixon (2006) present a typology of

strategic assessments that identifies how a strategic assessment might be integrated into the preparation of programs, plans and projects. The four models are as follows:

- “the incremental model, or ‘EA as plan-making’. This envisages the extension of project-based assessment techniques to policy formulation. SEA is seen as an integral part of the assessment of individual projects for their sustainability implications. At a strategic level, assessment is applied on a seamless, rolling basis both to monitor the aggregate impact of specific developments, and to update or modify the implementation of the current PPPs that set the parameters for such developments” (Jackson & Dixon, 2006).
- “the stapled model, or an ‘EA of plans’. SEA is a distinct exercise, undertaken at a specific stage of the plan-making process. It acts as a quality assurance process, normally proofing the final stage of plan preparation, in which all policy, program and plan options have already been determined. The subsequent EIA of projects is intended to dovetail with the strategic guidelines established in the assessed development plan” (Jackson & Dixon, 2006).
- “the concurrent model, or ‘EA in plan-making’. SEA is a distinct exercise undertaken at various stages of the plan-making process in an iterative fashion. The assessment process runs in parallel to the preparation of a PPP, appraising each stage: strategy, options, specific policies and proposals, and allowing revisions to be incorporated on an ongoing basis. As in the stapled version, the assessed plan sets the parameters for subsequent EIA of projects” (Jackson & Dixon, 2006).
- “the holistic model, or ‘plan-making as EA’. EA becomes the tenet of the plan-making process to the extent that its presence as a separate aspect of policy formulation disappears. Assessment techniques form an integral part of the preparation of all PPPs, which implicitly incorporate SEA. The EIA of projects is the end-product of a strategic overview of policy formulation that embraces sustainability” (Jackson & Dixon, 2006).

The figures below present two possible governance models for regional strategic level assessment, representing the holistic model and the incremental model. These models are incomplete because the design of each assessment of this nature would be context dependent and influenced by the specific demands of anticipated decisions (Pietro Caratti, Dalkmann, & Jiliberto, 2004). However, the standard assumption would be that a regional strategic assessment would act as a method of developing a regional plan, or that a proposed plan (or policy statement, etc.) would be evaluated by a regional strategic assessment, which could lead to modifying the plan significantly. In figure 4-1, I illustrate what these tiered models could look like.

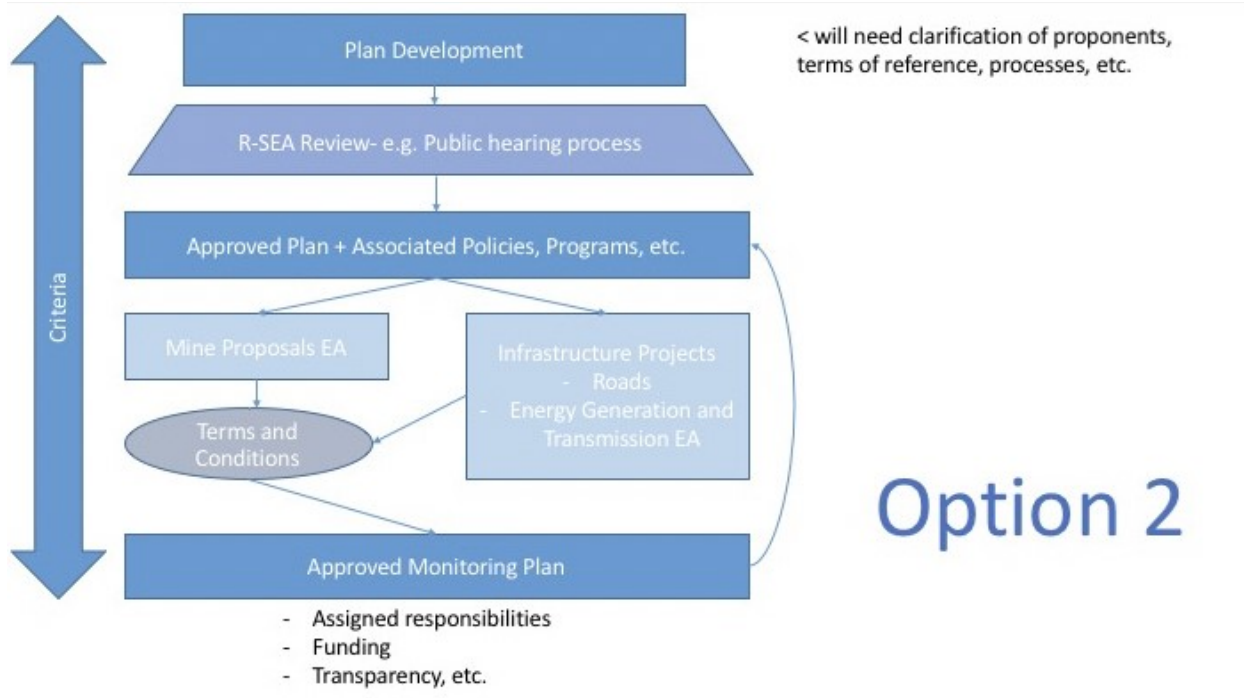
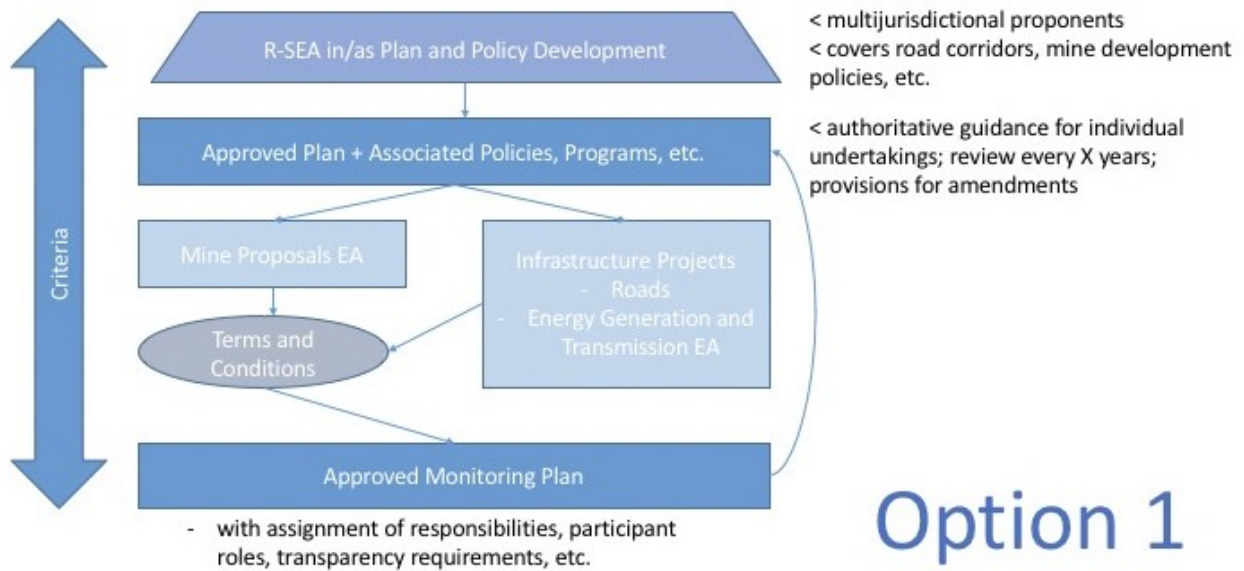


Figure 4-1: Models of Regional Assessment and Monitoring

The approved plan would direct the development of a region or a sector for a limited term. It could, for example, establish the maximum pace and scale of development (e.g., by designating the number or extent of licences or permits that could be distributed), determine the accompanying social programming required, provide guidance for management of induced development, estimate infrastructure needs, maximize potential for fair distribution of



opportunities, and determine standards for remediation. Managing the pace and scale of development is an important means of mitigating adverse effects within the biophysical capacity of the ecosystem, within the capacities of communities to capture benefits and accommodate risks, and within the capacities of authorities to manage effectively. As well, pace and scale control combined with economic diversification efforts can help to smooth boom and bust effects in order to maximize long term benefit for a community. Regional plans can also provide significant guidance to project level assessments for proponents and other participants, and reduce levels of social conflict relating to specific projects (Caratti, Dalkmann, & Jiliberto, 2004; Gibson et al., 2010; Gunn & Noble, 2009; Stinchcombe & Gibson, 2001, 2001).

Under the monitoring plan, the accompanying monitoring body would gather data, evaluate the findings based on set criteria and act as a place to discuss on-going development concerns, hear complaints from impacted parties and recommend plan modifications. Bodies like this should be linked to the independent panel or regional strategic assessment body. Monitoring is an extremely important factor for R-SA, particularly in non-renewable resource extraction cases where oil and gas or mining legacies can fundamentally alter the long term prospects for the sustainability of a community (Cronmiller, 2017; Gaudet, 2017). Bodies of this nature would need to be adequately funded, have clearly designated authority and responsibility, and be transparent. The monitoring body would ideally have the capacity to direct adaptive management.

Applied adaptive capacity is crucial to governance structures. Adaptive design refers to developing processes that can change based on uncertainties and within complex dynamics. Adaptive management is used primarily as a model of governance for renewable resource management, though it can theoretically be applied to other purposes. Adaptive management emerged as a governance approach out of systems and resilience theory (Swanson & Bhadwal, 2009). The Government of Canada defines adaptive management as, "...a planned and systematic process for continuously improving environmental management practices by learning about their outcomes.... [it] provides flexibility to identify and implement new mitigation measures or to modify existing ones during the life of a project." Developing a monitoring regime with adaptive capacity is a major challenge for regional processes, particularly in the mining sector, where industries have limited lifetimes (C. E. A. A. Government of Canada, 2009).

Another key component of monitoring and R/SA for improving prospects for positive legacies involves the earmarking of a suitable portion of mining revenues for the establishment of local and regional legacy funds. Gibson (2014), following El-Serafy, argues that these funds should be used for three purposes: 1) to diversify the economy and mitigate problems that might generate negative legacies during the life of the mine; 2) to support post-mining livelihoods; and 3) to ensure funding is available after mine closure to maintain infrastructure, services and capacities, as well as reduce negative legacy problems. Royalty rates, bonds and other financial mechanisms should reflect those aims.

It is the responsibility of public governments to develop a policy environment that supports economic transition to sustainable futures and positive mining legacies, including the development and application of R/SA. There is a need for suitable consultative and/or co-governance processes, with openings for public contribution. Arguably, sustainability-based policy making has been most successful when it is locally specified to respect the communities it affects. High level or generic concepts quickly crumble without a commitment to experiential guidance and sensitivity to case and context. Canadian environmental assessment experience over the past decade is an instructive lesson. The previous Canadian federal government narrowed the application and scope of environmental assessment law, constrained openings for public participation and increased the discretion of the responsible authorities (Collyer, 2012; Doelle, 2012) to address perceived excessive time delays and costs to industry from community conflict (Canadian Environmental Assessment Act, SC 1992, c 37, 2012; Gibson et al., 2010). Instead, the initiative undermined the credibility of federal assessment processes, moved project opponents to other means of resistance, including litigation, and increased delays and other challenges for project proponents (Gratton, 2016).

To conclude on R/SA, the best solution entails moving away from full reliance on project-by-project based assessment towards integrated regional, sustainability-based forms of planning that are authoritatively tiered to guide project level planning and assessment. Tiered governance regimes of this nature are expensive and have significant risk associated with them, particularly as the use of R-SA processes remain woefully undertested in Canada, though similar processes are widespread in urban and regional planning (Cullingworth, 1987; Francis & Hamm, 2011; Wilson, Roseland, & Day, 1996). These regional and strategic initiatives must go well

beyond the standard environmental assessment practices that are focused narrowly on mitigating significant adverse biophysical effects.

#### **4.7 Early Engagement and Planning**

Early engagement refers to both the process of assessing an undertaking and the governance structure of assessment. Large scale anticipatory strategic assessments provide guidance at early project consideration stages. In mining, early engagement at the strategic level can be particularly crucial, both due to the benefits of that emerge specifically in the assessment process, and prior to assessment, during the staking and claims processes and in the emergence of cumulative effects concerns.

Early engagement as a process tool refers to engaging with the public at the early planning stages, prior to the selection of a preferred alternative. This approach includes considering alternatives to a possible undertaking and identifying potential issues and concerns early in design. The EA Expert Panel elaborated on the “Planning Phase” in their report, stating:

Early engagement is critical to fully inclusive and informed IA (impact assessment) processes. Establishing relationships among proponents, interested publics, Indigenous Groups and potential regulators early in the design of activities can allow for concerns to be discussed and addressed in advance of critical decisions and investments. Early engagement of all interested parties will also facilitate transparent information sharing and decision-making. Starting consensus building and co-operation early in project planning can also reduce the adversarial nature of project reviews. Beginning in the planning phase, face-to-face engagement should be prioritized to maximize relationship building, constructive dialogue and opportunities for consensus. Additional benefits include offering a forum to build trusting relationships among proponents, governments and local communities, identify potential impacts to Aboriginal and treaty rights across the five pillars of sustainability, and integrate Indigenous knowledge, laws and customs into the process (Gelinas et al., 2017).

This early planning stage is already incorporated into some business practice by mining companies (Gelinas et al., 2017), prior to the initiation of a formal assessment. It can provide clarity for proponents and improve relationships. This recommendation was been integrated into the 2017 Federal government’s environmental assessment reform discussion paper and included in the proposed new *Impact Assessment Act* (Canada, 2017; Gelinas et al., 2017).

Another major concern for early engagement in mining is during the prospecting, staking and exploration stages. While these activities occur prior to projects covered by the federal

assessment process and are generally not covered by provincial assessment requirements, they frequently generate significant conflict, particularly between Indigenous communities and proponents. Ontario and much of Canada operate under the “free entry” system, meaning that the Crown’s mineral resources are available on a first come, first served basis and those individuals are permitted to explore and claim sub-surface rights. This system of land access ensures a prima facie privilege of mining rights over all others. Free entry emerged in 18<sup>th</sup> century England and was brought to North America via the gold rush in California and British Columbia (Chambers & Winfield, 2000). Free entry incentivized Western expansion, settlement and development and perpetuated settler colonialism (Hoogeveen, 2015).

Reforming or replacing the free staking process has been proposed in many jurisdictions, in part because of concerns that free entry perpetuates colonialism, impedes reconciliation and will be a source of latent conflict for future assessment (Cameron, 2013; Hoogeveen, 2015). Additionally, while staking has relatively minimal environmental impact, exploration can generate negative long term legacies. The legacies from exploration are more extensive than often recognized (Bellringer, 2016). For every 10 000 projects that are staked and claimed, 1000 are drilled for exploration and only one will become a mine (Ministry of Northern Development and Mines, 2007). Effort must be invested into building relationships during the staking and exploration phases of mining that can link into pre-assessment or “early planning stages” and further research and investigation into alternatives to the free staking process must be undertaken.

#### **4.8 Trade-Off Minimization**

Rules discouraging trade-offs are an important process tool in sustainability assessment literature. Trade-offs occur when a choice has to be made between two or more desirable outcomes, requiring acceptance of negative consequences in some areas of importance. Trade-offs are inherently undesirable and are especially problematic in sustainability-based decision making where a key objective is to build mutually reinforcing gains in all of the interconnected areas that define requirements for progress towards lasting wellbeing. Avoiding trade-offs can be difficult in assessment processes with limited scope, few or null alternatives, and limited opportunities for participation. According to Gibson et al. (2006), the key process design elements required to consider and avoid trade-offs effectively are:

- 1) “assessment scope that encompasses the full suite of sustainability considerations (and potential trade-offs)”;
- 2) “mandatory attention to purposes and requirements for comparative evaluation of potentially reasonable alternatives (including functionally different options and the null alternative)”;
- 3) “provision for effective public participation early enough in the process to permit critical review of purposes and alternatives”; and
- 4) “openings for pushing deliberation to a more strategic level where broader alternatives promising better trade-off avoidance may be examined.”

The most important component when considering trade-offs is determining how to avoid them through the design elements mentioned above. However, even with broad consideration of alternatives, trade-offs may be inevitable. In these situations, the trade-off rules, also developed by Gibson et al (2006), must be applied. The generic trade-off rules that can apply in all cases are as follows:

Table 4:Gibson’s Trade-Off Rules (2006)

<b>1. Maximum net gains</b>
“Any acceptable trade-off or set of trade-offs must deliver net progress towards meeting the requirements for sustainability; it must seek mutually reinforcing, cumulative and lasting contributions and must favour achievement of the most positive feasible overall result, while avoiding significant adverse effects”
<b>2. Burden of argument on trade-off proponent</b>
“Trade-off compromises that involve acceptance of adverse effects in sustainability-related areas are undesirable unless proven (or reasonably established) otherwise; the burden of justification falls on the proponent of the trade-off.”
<b>3. Avoidance of significant adverse effects</b>
“No trade-off that involves a significant adverse effect on any sustainability requirement area (for example, any effect that might undermine the integrity of a viable socio-ecological system) can be justified unless the alternative is acceptance of an even more significant adverse effect.”
<b>4. Protection of the future</b>
“No displacement of a significant adverse effect from the present to the future can be justified unless the alternative is displacement of an even more significant negative effect from the present to the future.”
<b>5. Open Process</b>
“Proposed compromises and trade-offs must be addressed and justified through processes that include open and effective involvement of all stakeholders.”
<b>6. Explicit justification</b>
“All trade-offs must be accompanied by an explicit justification based on openly identified, context specific priorities as well as the sustainability decision criteria and the general trade-off rules.”

The trade-off rules have the potential to aid in managing conflict that emerges during assessment because they provide the principles to evaluate decisions against (i.e., maximum net gains, avoidance of significant adverse effect, and protection of the future) and process elements that ensure the principles of access, standing, influence and mutual benefit are adhered to (i.e. burden of argument on the proponent, open process). The application of these rules is context-dependent and will require the consideration of sustainability-based priorities for the case at hand.

## 4.9 Scenarios

The use of scenarios as a tool for visioning and planning is a commonly recommended best practice (Amer, Daim, & Jetter, 2013; Duinker, 2008; Greig & Duinker, 2007; Robinson, 2004). Future scenarios provide a basis for choosing among possible futures and tracing various possible trajectories of development. They give people who might be affected a more informed basis for anticipating and responding to opportunities to push change towards desirable options and to avoid undesirable ones. This focus on positive futures is consistent with the agenda of sustainability-based assessment and the objective of enhancing prospects for lasting wellbeing (Adger & Jordan, 2009; Atlin & Gibson, 2017; Haas Lyons, Walsh, Aleman, & Robinson, 2014; Robinson, 1990).

Project level assessments typically focus on one puzzle piece, without a full conception of how it might fit in and contribute to any larger vision. Regional scale scenarios provide a more fulsome picture of possible desirable, undesirable and mixed futures and their associated opportunities and risks. Additionally, backcasting (working back from the characteristics of a preferred future scenario, in contrast to forecasting that presents the future that continuation of present trends will deliver) can aid in achieving multiple benefits. It involves determining whether desirable futures or viable pathways forward exist; considering whether ambitious new technologies, resources, institutional capacities, behavioural inclinations etc., would be required; and illuminating what would have to be done to reduce the risks and enhance the prospects, etc. For undesirable futures, backcasting has provided similar clarification of their avoidability, needs for some accommodation, backup-plans in case of failure, etc. Iterative scenario building and backcasting is also likely to be necessary (Haas Lyons et al., 2014; Robinson, 1990; Sheppard et al., 2011).

Scenarios can be defined as “conjectures about what might happen in the future” (Duinker, 2008). When building and comparing scenarios, desirable, plausible futures, as well as plausible futures that should be avoided, prevented and accommodated, should be included. Scenario building is a useful tool for strategizing to determine how to get to a scenario closest to a community’s or a region’s visions and how to avoid plausible undesirable scenarios. Beyond clearer thinking about what future we want, scenario-building can help participants to anticipate future opportunities, risks, barriers and uncertainties (Greig & Duinker, 2007). In particular, scenarios play two important roles in planning and policy making: “one is risk management,

where scenarios enable strategies and decisions to be tested against possible futures, while the other is creativity and sparking new ideas” (Duinker, 2007).

Effective scenario design includes creating forecasts of current trends and looming possibilities that represent plausible prospects that the participants may wish to avoid but may also need to be ready to address (combat, soften, accommodate, etc.). Identification of trends including projected developments and land uses can be supplemented by anticipation of changes resulting from climate change, industrial development in other sectors, and other context-dependent issues. While the specifics of such impacts cannot be predicted with confidence, they can be broadly identified for anticipatory encouragement, resistance or preparation for adaptation. The use of multiple scenarios helps to ensure that a reasonably full range of future possibilities, positive and negative, are taken into account in regional planning and policy making. In areas that face the cumulative effects of multiple individual projects and other activities, regional planning informed by scenario work is a potentially powerful tool for considering alternative response options for maximizing positive effects while minimizing risks and maintaining flexibility in an uncertain world. Supportive policy making can provide more targeted attention to big issues. Together, they can provide valuable anticipatory guidance for project level assessments, which rarely have the scope or capacity to cover the main regional cumulative effects, much less identify and compare future scenarios and response options (Duinker, 2008; Greig & Duinker, 2007; Sheppard et al., 2011).

Regional plans that have been informed by scenario analysis and that aim to enhance prospects for desirable futures can aid project-level planning and decision making through guidance for “better siting and phasing of development, demand reduction and other behavioural changes, and particularly through setting development consent rules for projects” (Therivel & Ross, 2007). This approach for identifying regional cumulative effects concerns and response options has been used in a modest way in some regionally significant project assessments in Canada, generating significant impacts on recommended conditions for project approval (Aschemann et al., 2012; Dalal-Clayton & Sadler, 2005, 2005; Gibson, 2006b, 2016a; Gibson, 2002).

There are many formal methods for scenario-building (Amer et al., 2013), but very generally, two to five scenarios are usually created. Reliance on only three scenarios generally shifts the focus to the middle or most moderate one. Using more scenarios has the benefit of



creating a larger “possibility space” in which the future is likely to unfold, with multiple options for the form and time scale. Duinker (2007) recommends a menu of at least five scenarios, with the following generic themes:

- “(a) a surprise-free or continuation scenario;
- (b) a pessimistic scenario;
- (c) a disastrous scenario;
- (d) an optimistic scenario; and
- (e) a transformation (or miracle) scenario”

(Duinker, 2007).

The scenario types are generic and can then be framed by context-dependent drivers, meaning “influential forces of change”, including society’s value for a given commodity, environmental change, adaptive resources and other capabilities (Duinker, 2007). Scenarios, as a product, can provide “mental maps of the future,” elucidating key assumptions, forcing the design of alternatives, allowing for comparison of broad alternatives and more specific options, identifying uncertainty and “provid(ing) a vehicle for communication.” Scenario planning, as a process, fosters shared learning and systems thinking, provides an arena for dialogue across silos, inspires innovation and creativity, and encourages adaptation and learning.

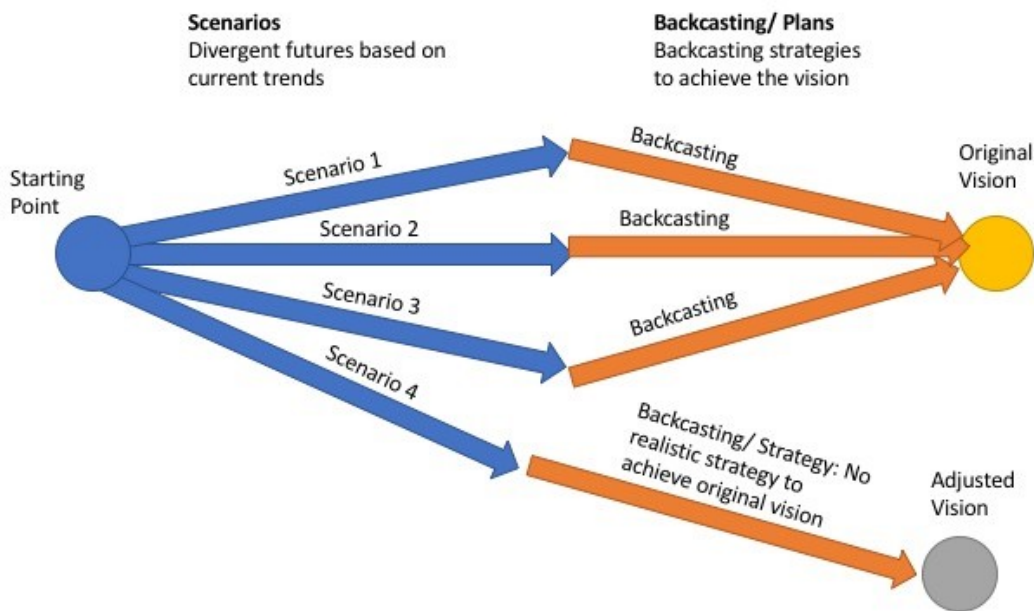


Figure 4-2: Scenario & Backcasting Relationships- Modified from Moriarty Et Al, 2005

Scenario-based approaches fit well with the core agenda of sustainability assessment. They are centred on anticipation of future effects and provide a “more robust way of assessing the potential future consequences of proposed developments” than conventional forecasting (Greig & Duinker, 2007). When scenario building is broadly participative, it also has the advantage of enabling people to escape from the entrenched positional boundaries and conflicts that typify immediate controversies and move into discussions about future options where they may find common ground (Duinker, 2008; Francis & Hamm, 2011; Greig & Duinker, 2007; Haas Lyons et al., 2014; Sheppard et al., 2011). Future scenario discussions can often begin with efforts to depict ways of accommodating all key objectives in a manner more consistent with the interdependent requirements for progress towards sustainability, unlike conventional discussions about immediate effects, which often start with clashes over potential trade-offs (e.g., between jobs and environmental stewardship) (Cornish, 2005; Duinker, 2007; Greig & Duinker, 2007). Scenarios are often utilized in interpersonal conflict resolution, but with less complexity or scientific rigour. However, they generate the same benefits when applied in interpersonal conflicts (Folger, 2008; Kaufman et al., 2003; Ruhl, 2009; Susskind et al., 1999).

Duinker and Greig (2007) argue that scenario building is a suitable tool for the assessment of large regional industrial developments where significant cumulative effects of

multiple undertakings are likely,

Scenarios and scenario learning are highly applicable to mid- and long- range futures studies where there are considerable levels of both predictability and uncertainty. Scenario planning attempts to compensate for two common errors in decision- making – under- prediction and over-prediction of change – allowing a middle ground between the two to be charted.

#### **4.10 Conflict Management**

Conflict resolution is the first concept described in this chapter that primarily considers process over substance. The other concepts, discussed here, centre on managing conflict by re-orienting the analysis towards understandings of common futures and shared solutions, attempting to redistribute power, and/or reframing positions. When those concepts are employed, there will inevitably be shifts in the conflict cycle and promotion of functional conflict. However, the major intent of those processes is to generate substantive movement towards sustainability. By contrast, conflict resolution processes are concerned with improving outcomes, which may or may not be as broadly conceived as sustainability objectives, but as discussed in chapter 2, the focus is on suitable process, not the substantive outcomes.

Formal conflict resolution can be employed to improve communication and force parties to acknowledge the existence of conflict. Conflict resolution, through process design, attempts to move parties towards functional conflict. As noted in chapter 2, conflict can be defined as “what results from the existence, real or imagined, of incompatible interests, goals, beliefs or activities” (Fisk & Schellenberg, 2009, p. 17). Positions “summarize a party’s definition of a problem and their solution” (Rotham, 1997, p. 21). Concentrating on positions makes parties lose context, “By focusing on tangible outcomes of a conflict rather than on the conflict’s evolution and underlying causes, adversaries are unable to look first and fully at what is so important to them in the conflict” (Rotham, 1997, p. 21). Therefore, positional arguments can inhibit the development of collaborative ideas. The essential component of reframing and transforming conflict is to learn from the other party about the values and interests that underlie their position.

The conflict literature distinguishes between values, which are related to each individual’s understandings of ethics, and worldviews and interests, which represent their goals and motivations (Sidaway, 2005). In practice, understanding values and interests can be challenging due to the dynamics of conflict. Conflict can escalate in a spiral pattern. First, the problem emerges when an issue is identified by parties (Felstiner, Abel, & Sarat, 1980; Sidaway,

2005), and an answer is sought and found to be unacceptable. Sides of the conflict form when the problem continues to go unmanaged. Sides form based on values and interests and competing understandings, and the conflict expands through various forms of communication including word of mouth and the media (Carpenter & Kennedy, 2001). Positions become more defined if individuals communicate less with others with alternative views and disaggregate into camps. If information exchange between parties stops, public discussion becomes public debate, meaning that collaboration is no longer present. The sides then attempt to strengthen their positions with financial support, scientific information, legal advice, etc. in order to gain power, and use intermediaries like lawyers to eliminate communication or, in a post- “truth” era, use attractive verbiage and spin to deflect attention. Capacity to collaborate becomes lost and positions become cemented, changing the character and motive of adversaries. A sense of crisis emerges, and resolving the conflict in collaborative ways becomes more challenging as parties become willing to bear emotional and financial costs that were previously seen as unreasonable. The conflict can spiral into litigation, arbitration, civil disobedience, etc. (Carpenter & Kennedy, 2001).

Environmental conflicts are most often framed within a “win-lose” context and resist resolution as “Disputes based on fundamental values and beliefs, rights, conflicting world views, and other significant issues such as power are more likely to resist resolution than disputes in which the parties can ultimately find common interests and goals” (Clarke & Peterson, 2015, Chapter 5). Based on the need for accountability in environmental decision-making, there has been a demand to generate dispute resolution processes that are perceived to be ‘legitimate’ to stakeholder groups and many activists have called for consensus-building processes (Doelle & Sinclair, 2006; Hemmati, 2002; Mascarenhas & Scarce, 2004; Sidaway, 2005). Environmental conflict has more limited viewpoint than sustainability-based conflict. However, the experiences in environmental conflict can be applicable in broader application to sustainability concerns. Consensus-building means, “a collaborative approach to making a decision in which interested [or disputing] parties identify common ground and work voluntarily towards finding a mutually acceptable solution towards a contentious problem” (Sidaway, 2005, p. 67). Building consensus is challenging, particularly in scenarios where values are dissimilar. Additionally, building practical consensus can be challenging because “...in any real situation practical constraints and tensions between different goals lead almost inevitably to compromising the ideals of inclusivity and non-coercion. These inevitable steps away from ideal consensus towards a more practical

consensus involve a series of critical decisions which necessarily lead to the exclusion of some of the potential participants, interests, issues, actions and/or substantive outcomes” (Connelly & Richardson, 2004). However, the act of working towards consensus leads to more democratic, inclusive and reflective resolutions, even when exclusion becomes necessary (Connelly & Richardson, 2004).

Despite the challenges of consensus-building, the process holds advantages because it attempts to recognize each participant, and minority views have the ability to block the decision. This process reduces the likelihood of coercion by stronger parties, and gives less powerful parties more leverage. However, it often can encourage stalemates as weaker parties attempt to forward their positions without allowing for any concessions due to value-based perceptions (Korobkin, 2006). Therefore, attempted consensus-building could further entrench positions as opposed to encouraging collaboration. In addition, with consensus-building, all interested parties must be present and representable in the process (Sidaway, 2013, p. 67). This aspect of consensus-building can prove challenging as environmental problems are multi-scalar, and can occur in global, regional and local realms simultaneously. Moreover, future generations are not yet present, but their interests need to be recognized and respected through frameworks or advocates. As a result, determining whose jurisdiction an environmental problem falls under, and thus who can participate within a process, can be challenging. However, Sidaway suggests that consensus building, while not perfect, yields the greatest opportunities, “Yet while conflicting ideologies are a common feature of such disputes, ideological differences are often suppressed in the bid for consensus, allowing interest groups with differing ideologies to reach settlements” (Sidaway, 2013, p. 38). Thus, the key to generating environmental resolutions, like any other problem, is focusing on working together and avoiding positional agendas.

The complications of consensus-building processes have made it challenging for policy makers to implement. As a result, assessment legislation has focused on the principle of informed consent, “where interested parties may be aware of an impending decision and its consequences, but sufficiently unaffected or indifferent to raise objections” (Sidaway, 2013, p. 67). The principle of informed consent has manifested into primarily public notice, environmental registries and limited periods for public comment. However, simply providing the information does not constitute participation (Hanna, 2009). This debate is particularly evident in the recent legal and political movements recognizing FPIC, a concept mentioned earlier in this

chapter. Indigenous people have grappled with FPIC's meaning and application. Communities have different understandings of the concept and its practice (Sadiq, 2017).

Susskind and Cruikshank suggest two other means of dividing environmental conflict: distributional and constitutional. Distributional conflict considers the allocation of resources, gains and losses, with particular emphasis on individuals' interests. Constitutional conflicts are about rights, values and entitlements. Constitutional elements are the most challenging form to resolve (Cruikshank & Susskind, 1989) because, as Sidaway suggests, the positions and values involved are non-negotiable. However, interests can be met in a variety of ways, and concerns can be increased or reduced through negotiation (Sidaway, 2005, p. 39). Forester also supports Sidaway's assumption, acknowledging that public skepticism about the efficacy of conflict management processes like mediation or consensus building are likely justified in moral or values disagreements. Resolution resistant disputes are common in environmental decision-making because, "although an individual dispute episode can be resolved, the longstanding underlying conflict persists over time" (Clarke & Peterson, 2015, p. 5). However, solutions can be achieved without altering worldviews by working towards practical solutions at different scales that parties can agree upon (Forester, 1999a). In order for resolution in cases of long term systemic conflict, Gray posits that the conflict must be fundamentally transformed. A transformational approach is defined by Lederach as follows:

A transformational approach begins with two pro-active foundations: 1) a positive orientation toward conflict, and 2) a willingness to engage in the conflict in an effort to produce constructive change or growth. While conflict often produces long-standing cycles of hurt and destruction, the key to transformation is the capacity to envision conflict as having the potential for constructive change (Lederach, 2015)

Therefore, it is important to foster iterative learning and re-envisionment of the potential impact of a conflict as positive and beneficial for long-term wellbeing, as seen in table 4-3.

*Resolution and Transformation: A Brief Comparison of Perspective*

	<b>Conflict Resolution Perspective</b>	<b>Conflict Transformation Perspective</b>
The key question	How do we end something not desired?	How to end something destructive and build something desired?
The focus	It is content-centered.	It is relationship-centered.
The purpose	To achieve an agreement and solution to the presenting problem creating the crisis.	To promote constructive change processes, inclusive of -- but not limited to -- immediate solutions.
The development of the process	It is embedded and built around the immediacy of the relationship where the presenting problems appear.	It is concerned with responding to symptoms <b>and</b> engaging the systems within which relationships are embedded.
Time frame	The horizon is short-term.	The horizon is mid- to long-range.
View of conflict	It envisions the need to de-escalate conflict processes.	It envisions conflict as a dynamic of ebb (conflict de-escalation to pursue constructive change) and flow (conflict escalation to pursue constructive change).

Figure 4-3: Resolution and Transformation Comparison (Lederach, 2015)

Transformational conflict approaches allow for a better consideration of constitutional conflict concerns. For Indigenous communities such as Eabametoong, there are both distributional and constitutional elements to the conflict. However, for expediency, governments and industry have focused on distributional conflicts. In order to achieve sustainability, solutions must be developed that enable integration of attention to constitutional conflict. For example, a constitutional conflict for Eabametoong, which has been subject to litigation, is the allocation of mining exploration permits on traditional territory. EFN believes that, at minimum, the duty to consult and accommodate must be adhered to. The courts have agreed (Galloway, 2018; *Eabametoong First Nation v. Minister of Northern Development and Mines, 2018*, ONSC 4316). However, eventually EFN wants the right to allocate and monitor those permits themselves.

Mediation is one process that can be used to generate consensus building. Environmental mediation is “a voluntary process during which the parties to a dispute meet separately and together in confidence with an independent third party, who designs and conducts a process which enables them to explore and decide how the conflict between them is to be resolved” (Acland, 1995). The selection of a mediator can be challenging due to deep value, interest and understanding differences and the power differentials between Indigenous and non-Indigenous governments, corporate interests and public participants. Mediators will only be accepted by multiple sides if they are perceived to be impartial and neutral. Those with two eyes seeing could assist in generating an ethical space which would have additional value in mediation. Ideally, the cost of a mediation is split among all parties, but due to financial power imbalances,

disproportionate costs may be assigned to the different parties. If the cost of the process is incurred by only one party, mediators must consciously demonstrate their neutrality to all parties (Sidaway, 2005, p. 75). However, if parties trust their mediator, the mediator can tailor the process to acknowledge values and focus on interests. Mediators can help search for a mutually acceptable agreement and can aid in developing consensus.

Sidaway points to key factors to determine whether an environmental mediation with deep value differences will be effective. Mediation will likely be more effective when:

“There is a history of cooperation or willingness to act in good faith; there are limited numbers of parties and issues and little anger; the working relationship is important; the parties will accept help from a neutral third party; there is external pressure to settle; impasse has been reached by other means; each party has some influence or leverage on the other parties and agreement is within the parties’ power; the representatives are trusted and have some flexibility; and the relevant information is available (Sidaway, 2005, p. 84).

Conversely, mediation is less likely to be effective when:

The fundamental interests of the disputing parties are mutually exclusive; there are many disputants and key stakeholders are not identifiable; a larger policy is at stake, e.g. local resolution could have wider implications; clearly identified representatives with the ability to negotiate are lacking; and long-term consequences are unpredictable so that there is no commitment to the resolution of the dispute (Sidaway, 2005, p. 84).

Based on these factors, one step that a mediator can take is to ensure that there is equal access to information and insist that research be undertaken to fill holes in information. Sidaway also recommends training participants in negotiation skills, and making sure that weaker parties understand the powers that they hold in the process (Sidaway, 2005, p. 85).

The process of resolution must meet the needs of the participants, and the interests of parties must be considered. The process should actively seek out the involvement of potentially affected participants. This approach differs from the current strategy in assessment and law processes, which relies on those with a grievance to air it. The application of mediation within the assessment process has significant opportunity to transform conflicts, using the guidance of sustainability principles. However, more work needs to be done. In the US, a 20 year old empirical study of environmental mediation cases demonstrated that mediation has a higher rate of settlement than litigation, but does not have a corresponding rate of compliance (Sipe, 1998).



However, these cases primarily consider environmental enforcement concerns as opposed to assessment and do not consider fulsome sustainability application.

#### **4.11 Summary**

Sustainability-based, strategic level assessments with public engagement at the strategic level might be more capable of facilitating open and credible coverage of the full suite of issues.

However, complex social interactions concerning options at a strategic level may often generate significant conflict. In this context, a particularly promising and duly challenging area for application of conflict management ideas, processes and practices is in multi-jurisdictional sustainability-based assessments with public engagement at the strategic level, involving resource extraction undertakings (Bond & Morrison-Saunders, 2011; Dalal-Clayton & Sadler, n.d.; Morrison-Saunders & Pope, 2013). The findings suggest that the primary foci of future assessment policy building in Canada should emphasize:

- designing and delivering tiered regional assessment regimes, where credible and authoritative public processes for assessing cumulative environmental effects and broad alternatives are used to address regional concerns and opportunities and to guide the planning and assessment of individual projects;
- requiring the adoption and use of explicit sustainability-based criteria for assessment evaluations and decision-making, duly specified for particular applications, in which the criteria are applied to and incorporated into regional strategic and project assessments with particular attention to legacy concerns and the use of all projects as bridges to more sustainable futures; and
- exploration of further use of conflict management and conflict resolution approaches in next generation assessment.

In Canada, there are advanced multi-scale, tiered urban plans that illustrate how growth can be moderated and happy urban communities can be fostered. The theory and practice in urban, regional planning has evolved significantly through community dialogue, academic inquiry and trial and error (Blowers, 2013; Depoe, Delicath, & Elsenbeer, 2004; Haas, Lyons et al., 2014; Krueger, n.d.; Wilson et al., 1996). Remote, regional planning for industrial development has fewer examples to draw from, is complicated by few residents and those that do live in the region are primarily in politically marginalized communities without sufficient capacity to demand such initiatives, and the impacts of such endeavours are less predictable. As such, it has been more politically expedient, particularly for provincial interests without lead constitutional

responsibility in First Nations policy, to settle for consultation in the form of project level EAs that are poorly equipped to consider strategic level, cumulative concerns and response options.

At present, cumulative effects are poorly considered in Canadian resource development, as is the inclusion of indigenous knowledge and world views. The limited scope and motives of project proponents and the narrow focus on “significant adverse effects” leave project level assessments with little potential for integrating serious attention to cumulative effects, associated broad alternatives, sustainability or social cohesion. These approaches further impede a Triangle of Better Decision from forming

Regional level assessment should combine attention to cumulative effects, broad alternatives and big policy issues with efforts to identify gaps in local and regional administrative capacity, and work to build technical and managerial knowledge that can have post-mine applications, including how to diversify economies and livelihoods based on continuing and renewable resources. Protecting valued cultural and natural resources, and using non-renewable resource revenues and other opportunities to build livelihood opportunities based on renewable resources can also contribute to positive mining legacies by mitigating adverse social and ecological effects that may leave otherwise lasting damage and adverse residual risks (Gibson, 2014; Gibson and Klinck, 2005; Kemp et al., 2007; Loorbach 2010). Regional level assessment with next generation considerations assists in building a better package for determining how challenging developments should proceed. The suite of next generation approaches described considerably assists in the formation of the Triangle and bolsters its sides, which can be seen in Table 5. The table can demonstrate that if a likely pressure exists in an undertaking, a corresponding next generation tool could assist in ensuring that required elements for better decisions can form.

Table 5: Framework Integrating Chapters 2, 3 and 4

Chapter 2			Chapter 3											Chapter 4								
Requirements	Elements of Requirements		Pressures that Erode or Impact Effectiveness											Approaches that Bolster Improved Resolutions								
			<i>Remoteness</i>	<i>Inequitable Gender Impacts</i>	<i>Indigenous Rights</i>	<i>Poor Assessment and Planning</i>	<i>High Mobility</i>	<i>Cyclical</i>	<i>Legacy</i>	<i>Royalties and Taxation</i>	<i>Mechanization and Technological Advancements</i>	<i>Globalized Markets</i>	<i>Risks of Injury and Exposure</i>	<i>High Wages</i>	<i>Regional/Strategic Assessment</i>	<i>Tradeoffs</i>	<i>Scenarios</i>	<i>Sustainability Base</i>	<i>Indigenous Rights and Knowledge</i>	<i>Early Planning</i>	<i>Conflict Management</i>	
Process	Capacity		x			x	x	x	x						X		X	X	X	X	X	
	Empowerment			x					x					x	X		X	X	X	X	X	
	Opportunity		x					x									X	X	X	X	X	
	Mutual Benefit				x			x	x						X	X	X	X	X	X	X	
Substance	Defined Objective/ Purpose					x									X		X	X	X	X	X	
	Linked to Upper and Lower Tier Objective/ Purpose					x				x					X		X	X	X	X		
	Sustainability	Socio-ecological system integrity														X	X	x	X	X		
		Livelihood sufficiency and opportunity														X	X	X	X	X		
		Intra- generational equity		x	x	x	x	x	x	x		x	x			X	X	x	X	X		
Inter- generational Equity			x	x	x	x	x	x	x				x		X	X	x	X	X			
			x	x	x	x			x	x	x											

		Resource maintenance and efficiency				x				x	x	x					X	X	X	X	X		
		Socio-ecological commitment/civility & democratic governance															X	X	X	X	X		
		Precaution and adaptation		x	x	x	x										X	X	X	X	X		
		Immediate and long term integration															X	X	X	X	X		
			x	x	x	x																	
	Indigenous Knowledge	Acknowledge of importance of IK & agreement in how it will be applied															X		x	X	X	X	X
		Acknowledge of differing worldviews & time for mutual learning																X	X	X	X		X
		Application of indigenous conflict management and legal approaches																				X	X
Relationships	Ethical Space	Acknowledge of differing worldviews & time for mutual learning	x			x	x										X	X	x	X	X	X	X
		Application of indigenous conflict management and legal approaches															X				X	X	X
			x			x	x																

	Transformational Conflict Processes	Acknowledge of conflict & desire to use conflict to innovate towards resolution													x		x	X	X		X	
		Application of indigenous conflict management and legal approaches		x	x													X		X		X
	Two-Eyed Seeing	Existence of individuals/ organizations that can provide training, support & mediation services														x				X	X	X
		Application of indigenous conflict management and legal approaches		x												X				X		X

The research agenda being developed here begins with recognition that new undertakings should be chosen, designed and implemented in ways that contribute to sustainability-enhancing outcomes (Hodge, 2002). This chapter explores how next generation assessment does and can incorporate conflict management insights and approaches. Conflict in assessment is inevitable due to the vast diversity of perspectives. However, without trust, transparency and improved process, conflict is much more likely to become dysfunctional. Next generation assessment methods can address the inadequacies of current assessment processes, and create solutions that better consider the true problems at hand, including the generic concerns identified in chapter 3. The next generation assessment processes identified in this chapter have the capacity to fortify the Triangle of Better Decisions set out in chapter 2, meaning that they can improve trust, process and substance in decision-making.

The relevant processes should consider broader strategic level concerns, future scenarios, alternative options resulting from broader development agendas, and consider holistic positive and negative sustainability effects as opposed to focusing only on adverse effects (Gibson et al., 2005). These overall aims can be manifested in questions of fair process design, the development of multiple options, and facilitating effective stakeholder inclusion through capacity building. However, best practices must all be filtered through the lens of case context.

## **Chapter 5: Eabametoong and the Crown: A History**

### **5.1 Introduction**

The Ring of Fire is often discussed as a massive opportunity for Ontario wealth generation. When commercially significant quantities of chromite and other minerals were found in the Ring of Fire region in Northern Ontario, former Treasury Board President Tony Clement called the region “Ontario’s oil sands” (Porter, 2014). However, resource development decisions cannot be made or framed without their contextual basis. For the purposes of the Ring of Fire, the complexity of the development is best illuminated by considering its potential impacts. Development decisions must also be framed within the context of the relationship that the parties have, the latent conflict conditions, the cultural differences between parties, and the patterns of interactions that have coloured the perspectives of the parties. In short, the history of a relationship will always be influential. This chapter briefly attempts to tell that history and provide the context to shape the application of the Triangle of Better Decisions.

### **5.2 Methodology**

This chapter seeks to overview briefly the history of Eabametoong, in particular as it relates to colonialism and economic development. To inform this history prior to 2000, I have utilized primarily written history provided to me from Andy Yesno, a locally respected historian and elder, the 1983 book, *Freedom is Lost* by Dribeau and Trudeau that outlines in detail the economic history of the region, and the 1984 report “The Ogoki Road: An Avenue of Worry” by Joyce Kleinfelder and Andy Yesno. “The 2014 Eabametoong First Nation Community Well-Being Survey Report” by Ben Bradshaw and Peter Siebenmorgen also informed this research. Additional research materials related the Ring of Fire and the modern history of Eabametoong have emerged from analysis of the public record, Eabametoong First Nation reports and documentation from the community. Meetings with the Eabametoong Resource Stewardship Department, community meetings, and conversations with community members informed my perspective on this chapter but privileged and sensitive information from those meetings was not included. Written materials provided to me in the forms of reports and document summaries have been utilized. The story that I am telling here is of government to government relations, and the aftermaths of those decisions so far. This chapter meets with the ethical obligations laid out in the Memorandum of Understanding between myself and the community.

### **5.3 Pre-Colonialization**

The locations of Northern Ojibwa communities were seasonal in nature. People were nomadic and riverine, and clans were small in order to maintain food supplies. In summer, large camps with multiple families would be built (Yesno, n.d.). Summer foods were plentiful, including fish like whitefish, pike, pickerel, lake trout and sturgeon, small game, berries, and wild rice. However, as winter emerged, families would break camp and move off onto their own to search out large game like moose or caribou (Driben, 1983, Chapter 2).

Traditionally, six families lived in Eabametoong, where the mouths of rivers emptied into Eabamet Lake. In Anishinaabe, Eabametoong means “the reversing of the water place.” Eabamet Lake drains into the Albany River but each spring, the Eabamet Narrows reverses the flow, due to high water (Yesno, n.d.). The Lake’s north side was where families wintered and, in the summer, families moved onto islands, points, or south shores. These summer locations had the advantage of shade from the sun and breeze to deter mosquitoes and other insects.

More permanent settlements emerged as a result of early colonialization, due to fur trading posts and the impact of post-treaty settlement agreements.

### **5.4 Post-Colonialization to Treaty (1750s-1905)**

Much of the interaction of the Ojibwa with the Western fur traders was accidental and was the major impetus for Northern migration. The majority of the Fort Hope Band ancestors came from the shores of Lake Superior where the Ojibwa were only involved incidentally in trade. The trapping of beaver and rabbit was less frequent pre-contact, though their hides and furs were used for clothing. However, the French engaged with the Ojibwa and encouraged them to move northward to trap fur to trade to them. The area of Eabametoong was primarily unclaimed by either the Cree or the Ojibwa. France was in competition with the Hudson’s Bay Company. The Hudson’s Bay Company and their main trading partner, the Cree, were expanding their territorial holdings and moving from their traditional territories in southern and western directions into unclaimed territory. The French offered the Ojibwa guns, powder, hatchets, knives, and kettles. Ojibwa society utilized materials from their White trading partners that aided their survival in the Boreal Forest, because these Western goods had a longer lifespan (i.e. metal knives didn’t break if dropped in the Shield as obsidian did). However, they did not materially change the Ojibwa way of life because the Ojibwa only utilized tools and materials that made their traditional way



of life easier. Therefore, according to Kleinfelder and Yesno, the types of goods that were in demand were limited by:

“the market- that is, what the Indians wanted or could use in the context of their lifetime;

the terrain- transportation was by water, rivers, and streams flowing over rapids and falls which necessitated the use of canoes for the interior trade and that limited the quantity of goods that could be transported; and

the climate- which placed severe time restrictions on the distance to which goods could be transported and from which furs could be returned in a year.”  
(3-33)

As the trade relations with the West increased, the Ojibwa re-organized their social structures to increase their profitability from trapping and trading. The relationship with the French lasted from 1713 to 1759, when the French relinquished their claim on Canada (Driben, 1983). Kleinfelder and Yesno argue that generating a trapping economy did little to change Ojibwa life, but religion and alcohol drastically shifted white-indigenous relationships and the fabric of indigenous society:

“The difference between traders and all those who came after is that the trader-Indian relationship was basically one of equality in the sense that the Indian had something of value to the trader and the trader has things of value to the Indians. They agreed upon an exchange of what each valued, made the trade, and went their own ways. Missionaries, with the attitude that there was nothing to learn from the Indian but everything to teach him, established a one-way relationship. Later, missionaries of the bureaucratic and social variety were to carry on in this same pattern” (3-36).

White men were perceived as powerful because of their ships, tools and guns. The priests were considered the French version of the medicine man, and do to their perceived power in other elements of life, priests were assumed to be powerful as well. The church was integrated into indigenous communities as a result, particularly in relation to European diseases spread by trade routes. Traditional medicine men were rendered useless by European disease (Kleinfelder and Yesno, 1984, pg.3-34).

The church also contributed to the shifts in public policies as they were powerful lobbyists, responsible for education, as we will discuss later in a later section, decimated the Cree language through the invention of Cree syllabics in 1840, and destroyed the clan system through

the bestowing and recording of baptismal names along with written records<sup>7</sup> (Kleinfelder and Yesno, 1984, pg.3-36).

The consumption of alcohol also deeply changed the fabric of Ojibwa society. Kleinfelder and Yesno argue that the significant disruption in the lives of indigenous communities following white contact and colonialism meant that alcohol was sought as a coping mechanism and aided in survival in this complicated new era. Overconsumption and violence became prevalent. To acquire alcohol, there was frequently theft of furs and an increase in violence between trappers. The forest became much more dangerous and drifters roamed in search of alcohol and furs. These dangerous wanderers were often referred to a “Whiskians” (Kleinfelder and Yesno, pg. 3-38-39).

Concurrently, in the 1820s, large game virtually disappeared from Northwestern Ontario and Ojibwa families stayed closer to trading posts, in large part due to the significant amount of raiding and killing on-going in the Boreal Forest. Kleinfelder and Yesno believe that this decline in the animal population was that “many furs leaked out of the area to the south and west in the direction of the whiskey trade” (3-40)). Driben and Trudeau argue that the decline in fur at trading posts reflects a wide spread shortage of game and that families moving closer to trading posts was due to fear of starvation (1984). By the 1830s, Ojibwa families were surviving on small game and fish. Driben and Trudeau also argue that, as they were economically compromised, they were unable to travel to more remote hunting and trapping regions for fur. These conditions persisted until the turn of the century. By this time, the demand for the fur trade had greatly diminished. As such, they were never able to recapture their position in the fur trading business. However, they continued to live near trading posts where they could trade their furs (Driben, 1983).

Due to the rise of the combustion engine, the emergence of the transcontinental railway replaced the Albany and other water routes for trade and brought more newcomers into the Boreal Forest, increasing competition (Kleinfelder and Yesno, 1984). In 1890, the Hudson’s Bay Company established a trading post on Eabamet Lake called the Fort Hope Post, which was a post refurbished from the now defunct Northwest Company Post (Driben, 1983), in an attempt to

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<sup>7</sup> Prior to baptisms, children received their name from an elder at a special naming ceremony. Names were kept as private and not used for everyday purposes. Nicknames were utilized for other groups and outsiders.

remain competitive given the changing market. Referred to locally as Old Fort Hope, the original British settlement was located six kilometers across the lake from the current community. All that remains of the original trading post are two churches (the Catholic Church built in 1896 and the Anglican Church built in 1899) and a cemetery (Yesno, n.d.).

By this point, the structure of Ojibwa society was radically different from what it had been pre-contact and lacked the strong clan structure that previously existed. Patrilineal family structures of clans were less formal and had lost much of their traditional importance. As Driben and Trudeau summarize, “In short, at the turn of the century the Fort Hope Indians were a loosely knit confederacy of small family groups, and it was with these people that the Dominion of Canada opened up treaty negotiations in order to gain access to valuable resources such as mineral and timber” (1983, p. 18).

### **5.5 Treaty to Village Life (1905-1960)**

Eabametoong First Nations ancestors signed Treaty No. 9 with the Crown on July 19, 1905. Hundreds of indigenous people came to the treaty signing. The impetus for the treaty came partially from indigenous communities as they petitioned the Crown because it had already signed treaties with Southern indigenous communities. Many Indigenous communities thought that they would derive benefit from a treaty and be able to establish greater control over their lands. The concerns that manifested the petition for the treaty were, “...related to the increasing number of white people exploring, prospecting and developing without Indian consent and that a treaty should first be entered into” (Yesno, 2005). However, there is no historical record that the indigenous people of Eabamet Lake petitioned for a treaty (Kleinfelder & Yesno, 1984). The government’s desire was to open up the land around James Bay for settlement and immigration, as well as trade, mining and timber (Yesno, 2005). Additional factors contributed to the treaty signing for the Ojibwa, including an acknowledgement and acceptance that white settlers would take over the territory with or without treaty; that the local food had been unstable for nearly 60s years, a fact that treaty commissioners acknowledged and emphasized in negotiation; and that the fur trade was significantly declining (Driben, 1983, p. 19).

The purpose of Treaty no. 9 from a Crown perspective was to encourage land surrender and extinguish aboriginal rights. Between 1905-1906, 90 000 square miles of traditional territory were surrendered to Ontario, with an additional 120 000 square miles surrendered in 1929-1930.

Seven Indian Reserves were established with a combined area of 524 square miles (Yesno, 2005). Within the text of the treaty, the Indigenous communities relinquished rights, title and privileges to their land, but were able to continue traditional activities upon it, subject to government regulation. A cash payment (or “signing bonus”) of \$8 each was paid to 390 people in 1905; however, all indigenous peoples within the Fort Hope region were obliged to accept the treaty’s terms. Why so few people received the initial signing bonus of \$8 is unknown. Annually, a cash payment of \$4 was made to indigenous peoples on “money day” (Yesno, 2005). With inflation, \$8 in 1905 would be worth \$211 in 2017. The Crown also agreed to pay for teachers, school buildings and educational equipment.

Treaty no. 9 was signed into effect by the province of Ontario and not Canada. Ontario was the only Crown party to the treaty, despite lacking the legal authority to do so. The indigenous communities of the region had little English, so Father Farford from Fort Albany, whom had extensive knowledge of Ojibwa, was used as a translator (Yesno, 2005). However, the treaty was not understood to be negotiated:

“The terms of the treaty were fixed by the government; as stated in the treaty document that the commissioners were not allowed to alter, add or change the terms. This means there were no negotiations. It is also clear there was only general discussion and explanation of the treaty to a select group of people and no consultation or consent to all the people who were at the time numbering 500. It is clear that most of the people did not know or fully understand what was happening” (Yesno, n.d.).

Twelve “Chiefs or Headmen” signed the Treaty, including local historian and knowledge holder Andy Yesno’s ancestor, referred to as Yesno, and another man named Moonias. They were present during the interpretation:

Moonias asked a number of questions. He had always had to pay for everything, no matter how small, “But now you gentlemen come to us from the King offering to give us benefits which we can make no return. How is this?” The interpreter explained the nature of the treaty was the Indians were giving their faith and allegiance to the King and for giving up title to a large area of the land which they could make no use of, they received benefits that served to balance everything. Yesno had an imperfect knowledge of the English language which consisted of two words, ‘yes’ and ‘no’ made an excited speech about all the benefits they were to receive (cattle, implements, seed grain and tools). He was told he had an erroneous and exaggerated ideas as none of these things would be given since the band could not hope to depend on farming to survive, but that hunting and fishing occupations would not be interfered with, and should for many years prove lucrative sources of revenue. Indians were

informed that by signing the treaty, they pledged themselves not to interfere with the Whiteman coming into the country surveying, prospecting, hunting or other occupations (Yesno, 2005).

“It is generally believed by the native side that the treaty was intended to establish peace and goodwill between the white and native people. This meant each side would not interfere or harm each other and they would share the use and benefit from the land. The treaty money was seen as a gift from the King and not payment as in the sale of land and goods. It is not clear what the people understood the Reserve land to mean, but it is clear they went home after the treaty to their traditional homelands, and did so for the next fifty years (Yesno, n.d.)”

After signing the treaty, local elections were implemented, and the Fort Hope Indian Band was established. Band means “a body of Indians, under the Indian Act” (Yesno, n.d.). The Fort Hope Indian Band included the traditional people living around Eabametoong on both sides of the Albany as well as more distant clans living on the Attawapiskat and Winisk Rivers, which included the present communities of Neskantaga (pronounced Nesh-gan-ta-gah), Nibinamik, and Webequie (pronounced Web-ie-quay) (Yesno, n.d.). The clans contained within the band were arbitrarily included and were spread across 100 miles. The Chief and Council had limited power, as the community leadership structure was “artificial and foreign” to the members of the band. The true power behind decision-making came from the Indian Agent and “community leadership was a puppet local government” (Yesno, n.d.).

The only guaranteed rights for indigenous peoples within the treaty are for hunting, fishing and trapping, under government regulation. Education was a treaty provision (Yesno, 2005). For the next 50 years, the Ojibwa’s respective traditional life remained the same as it was prior to the treaty, with seasonal living in their respective traditional territories. The largest shift during this time was the advent of residential school. The population of the band increased, from 500 in 1906 to 1000 in 1960 (Driben, 1983, p. 20). However, the signing of the treaty provides context for Eabametoong today.

## **5.6 Post-Treaty Change and Residential School (1905- 1960s)**

Technological change and residential schools represented the most significant post Treaty change for the community. Indigenous peoples used new technologies, like outdoor motors, rifles and wooden canoes, to improve access and gain an advantage in their traditional practices (similarly to how metal tools were incorporated into indigenous life previously). However, one

major technological change that fundamentally shifted life around Eabamet Lake was the advent of the airplane. Kleinfelder and Yesno state, “The airplane overcame the environmental limits of routes, distances and seasons that the fur trade had always had to cope with although freeze-up and break-up still presented a barrier” (1984, p.3-53). The arrival of the airplane in the 1930s brought about new foodstuffs, the widespread use of money, and easier access for white people. Money, white people and new foodstuffs were interrelated, for as more white people arrived in the region, they required supplies and a method to pay for them. Additionally, planes allowed for seriously ill people to be taken to hospital, including taking those afflicted with tuberculosis to sanatoriums. Planes also made travel possible to residential schools (Kleinfelder & Yesno, 1984).

The Treaty listed education as a provision. However, the government did not fulfill this obligation for 50 years. Formal education for band children was provided by Anglican and Catholic missionaries in Southern communities. From the perspective of the government, this approach fulfilled both of their obligations – allowing band members to live on the land in the wilderness, while fulfilling their obligation to provide education (Driben, 1983). However, residential schools created a magnitude of problems still felt within the community.

From the mid-1800s until as late as 1996 an estimated 100,000 Aboriginal children aged 4 to 18 were removed from their families and placed in residential schools as part of the Canadian government’s assimilation plan to “deal with the Indian problem” (Indian and Northern Affairs Canada, [INAC], 1998; RCAP, 1996). Kleinfelder and Yesno reiterate that, “The schools were modelled along the exact same lines as reformatories and concentration camps” (1984:3-54). These schools were highly regimented environments, with gender segregation and students were confined to the school premises until summer breaks. Punishments occurred for speaking one’s native tongue or practicing traditional beliefs. The students were indoctrinated by Missionaries and engaged in enforced labour. Many attempted to escape, and either suffered severe punishment when caught or died in their attempt to return home (Kleinfelder & Yesno, 1984). The odds of children that attended residential school dying was 1 in 25, just slightly worse than the odds of a Canadian infantry dying in surviving World War II, at 1 in 26 (“TRC,” n.d.). The horrors of the residential school system have been discussed extensively by survivors, particularly within the context of the Truth and Reconciliation Commission (“TRC,” n.d.), but include: the enforced separation of children from their families and communities; poor living

conditions; suboptimal education; and physical, sexual, emotional, and spiritual abuse. Another major problem from residential schools was, “By keeping parents separated from children, and grandparents separated from grandchildren, the residential system destroyed the integrity of band families” (Driben, 1983, p. 24). One resident explained to me that they stole indigenous knowledge because it wasn’t able to be passed on to children from their grandparents, they weren’t able to speak their language and they didn’t know their land. They were robbed of their own culture. Kleinfelder and Yesno state:

“It is difficult to arrive at any other conclusion about the residential schools than that they were a conscious and deliberate attempt to undermine and eradicate the Indian culture and way of life and therefore stamp out once and for all what was labelled “paganism” by removing from their social, cultural and natural environment and forcing their growth in a different direction.” (1984, 3-55)

School attendance was optional until 1945. Until that point, the basic Boreal Forest way of life remained substantially unchanged. At that time, the Family Allowance Payment became tied to children attending school until the age of 16. This mandate created irreversible changes to indigenous ways of life, “For over three centuries, Indian people, their culture and their economy had managed to survive despite disease, booze and attempts to stamp out “paganism” ... But government policy dictated that no one escaped the net of education” (Kleinfelder & Yesno, 1984, p. 3–55). Protests by parents and families to the Indian Agents resulted in the building of a local school in 1955, but the trauma of residential schooling still impacts community life in Eabametoong.

## **5.7 Village Life (1960s-2000)**

Three important changes occurred in the 1960s for Fort Hope. To combat the barrage of complaints over residential schools, the government built local schools within communities. As a result of the schools, village life became the primary structure for people to live within. Band members wished to spend time with their families, reunited after the challenges of residential school. Their children could either join them on traplines or the families would have to alter their social structure. People were also threatened with having their family allowance cheques stopped if children did not attend the local schools (Driben, 1983, p. 26). As a result, band members were reticent to return to their old way of life. However, without trapping, there was no economy to support these communities.

In 1962, the new community of Eabametoong was established, while the settlements at Lansdowne House, Nibinamik, and Webequie were formally declared by the Federal government as satellite communities of the Fort Hope band. The town was planned by Indian Affairs and is developed in a grid pattern with wide dirt streets (Driben, 1983, p. 4). The layout was not representative of traditional interrelationships, where families generally maintained significant distances between each other. Additionally, indigenous families now had to be in closer proximity to white establishments. Kleinfelder and Yesno state, “Historically it is frequently found that native people kept water between themselves and white establishments. Consequently, the relocation and imprisonment in the tightly-packed “planned community”, surrounded by white institutions, inevitably created social stresses, strains and problems” (1984: 4-1). The rationale to build the community in this structure was to reduce the cost of servicing lots and to equip households with running water. The homes were federally funded but not made to last. In 1981, it was found that 2/3 of residents were cold in their homes during winter, 2/3 of the residences heaved, and 2/3 of the residences need repairs. The house design poorly distributed heat, had limited storage, no space to accommodate workshops or tools, and no utility space for freezers, etc. The small size of the lots prohibits the development of gardens, garages and increases the magnitude of effect in a fire, a risk that bore consequence in the later fire that destroyed the community (Kleinfelder & Yesno, 1984). The community was ill-designed for the present and the future. As Kleinfelder and Yesno iterate, “An urban area in the middle of the wilderness is a contradiction in terms. It is simply not viable. There is no trade and commerce, therefore no wage employment, no tax base, therefore no infrastructure necessary to an urban area way of existing” (1984, 4-8).

In 1965, welfare and social assistance programs were made available to the band. By 1969, 52% of the band’s income came from social assistance. As a result, people were more dependent than ever on the Crown (Driben, 1983, Chapter 3). Welfare assistance naturally increased according to Kleinfelder and Yesno for five reasons:

- (i) the traditional means of livelihood could no longer be pursued
- (ii) an increasing portion of the population had missed the key period when traditional ways of earning a livelihood were learned
- (iii) the “re-formed” young adult Indians didn’t acquire enough education to obtain jobs in the “outside” world even if they had so wanted; and very few did, white society was a prejudiced and hostile environment



- (iv) there was little or no “reformed” livelihood in the shape of wage labour in Fort Hope; and
- (v) the “re-formed” young adults, equipped in neither the Indian or white worlds, became a burden on the already strained economy of their families (1984, p. 4-9).

This reliance on social assistance in Fort Hope, and across the country for indigenous populations, led to the White Paper on Indian Policy in 1969. The results of the policy were new “make work” programs, job training and community development projects. However, they were not developed within the context of the community’s economy and, as opposed to strengthening the economy, they increased the band’s reliance on the government and made them more vulnerable to budget cuts. The political structure of the community also changed with the implementation of village life- chief and council had to play a much more active role in managing band affairs.

Throughout the 1960s, government policy, starting with the White Paper on Indian Policy, purported to promote cultural and economic independence. Money flooded into economic development initiatives, including the development of saw-mills, fisheries, and tourist camps. Money was provided to expand the Band’s administrative positions, from 2 full time positions in 1968 to eight positions in 1975 (Driben, 1983, p. 34). Basic Skill training was deployed between 1969 and 1975, which was an extremely popular initiative- offering 22 literacy and basic skills courses for a cost of over \$1 million dollars. An additional 14 skill related courses were offered for an additional \$500 000 (Driben, 1983, p. 34). Almost 600 people completed these courses, including 150 in 1975 alone. Kleinfelder and Yesno contend that,

“All the programs were designed to re-form and upgrade the Indians, to re-make and remodel him in the image of the white man. It is true that Fort Hopians weren’t coping too well with the second-rate version of the 20th century that had been foisted upon them- but it was not due to any defect in the people or their traditional culture. It was due to defects in policies and programs- the main one being their lack of coordination and any well-defined explicit overall purpose. Thus, the new policies and programs of the 60s and 70s just made matters worse” (1984:4-13).

The educating and training allowance provided by the government, and then the hiring of the program graduates in both a full and part time capacity in government supported initiatives was unsustainable and the band became dependent on the government to support their economy and vulnerable to cutbacks. In 1969, with welfare and social assistance, the government

accounted for 64% of the band's disposable income. By 1975, the Federal government provided almost 90% of \$1.4 million in disposable income (Driben, 1983).

Despite the influx of government money, poverty was still pervasive. The band's disposable income doubled from 1969 to 1975, but there were also 200 more people living in the villages over that period in time, increasing the population from 1000 to 1200. The average per capita annual income increased only from \$713 to \$1229. Comparatively, Canadian average per capita income in the same period increased from \$2913 to \$5930 (Driben, 1983).

These short term White Paper programs became extremely popular and by 1975, they were poised to overtake social assistance and welfare as the most important source of income. Driben and Trudeau suggest this demonstrates an incorruptible truth about the members of the Fort Hope Band – its members would rather work than not, even if the jobs are only short term (Driben, 1983, p. 45).

During the 70s, the government attempted to start numerous businesses, including two sawmills, three fishing co-operatives, two tourist camps and a co-op store. The government invested heavily into these businesses. For the fishing co-op, they spent \$250 000 on docks, fishing nets, ice sheds, ice making equipment, two way radios and nets. In addition, they invested \$170 000 in sawmills. They also invested \$20 000 in the fishing camps, and \$160 000 in the co-op store. By the late 70s, each business was in serious financial difficulty and the community was dependent on government assistance.

A report on the challenges of the White Paper policy was produced in January 1976, suggesting significant changes to government policy – in particular that the band's economy should be “regarded as an evolving cultural system regulated by three main forces: community and family solidarity, income and work... as long as the people had a stable social life, income and work seemed to be the two main factors that stimulated the band's economy to change” (Driben, 1983, p. 73). However, the report was not heeded, and the government continued its on-going approach to development with renewed vigour.

In 1976, the department created a new \$850 000 funding source to spend over a four-year period for the band through the LEAP program (Local Employment Assistance Program). This approach to economic development diverged from previous attempts, because it did not require daily oversight, and allowed for preliminary discussion and consultation with community members. Community members could submit projects for funding to a board made up of both

government officials and community members. The consequences of this approach, even with better process, were similar, with unclear objectives and poor monitoring, improperly trained staff and limited flexibility. In 1980, it was reported that despite \$200 million invested into LEAP by the Federal government, only 3% of its businesses were viable once the funding ended. One of the primary challenges again was the program focus on job creation and limited money was available for capital expenditure (Driben, 1983).

In Fort Hope, large challenges emerged under LEAP. The government continued only to finance non-profits or band owned business. Individual band member business ownership was not funded, despite being the vastly preferred approach of the band. However, with no alternatives and high unemployment, the band agreed to participate in LEAP and submitted a proposal for tourist camps, including bolstering the previous government supported businesses, as well as, opening a restaurant/ inn. The band, however, did receive a guarantee from government that once LEAP funding had ended, the businesses could be transferred as they saw fit, including selling them to individual band members. Band members that were interested in eventually purchasing the businesses became board members for the non-profit corporation. However, it was illegal for board members to be employed by the corporation simultaneously. Attempting to find replacements for this board bogged the businesses development in red tape and business managers felt that the government was managing their businesses for them. Additionally, business managers were unable to share in the profit and were still required to hire more people than was reasonable. These businesses floundered and were in considerable debt to the government (Driben, 1983).

In the late 70s, Kimberly-Clark proposed the expansion of their operations, including the development of a public access/ logging road North from Nakina towards Fort Hope. The development proposal also included a new operating unit based out of Fort Hope. The road could also bring in tourists and encourage development like cottages for white people. This road, known as the Ogoki Road, was commissioned to be studied in 1980 using financing from the Royal Commission on the Northern Environment. The study was begun in 1980 by Dr. Paul Driben, author of "When Freedom is Lost", a frequently cited source in this chapter. In 1980, a forest fire necessitated the evacuation of the entirety of the community and destroyed much of the infrastructure. This fire also destroyed all of the records pertaining to Fort Hope.

“The Ogoki Road: Avenue of Worry” study was undertaken by Joyce Kleinfelder and Andy Yesno. The aim of the study was, “a) to determine potential social, economic and environmental impacts of the Ogoki Road upon the people of the Fort Hope Reserve; and b) to make recommendations to the Chief and Council concerning ways in which to minimize or eliminate adverse impacts foreseen and to maximize or capitalize upon beneficial impacts foreseen.” In the report, from which much of the history within this chapter is found, the authors suggest that history has a tendency to repeat itself. Particularly, that the fears that Fort Hopians identified (e.g. social disintegration, environmental impacts, further drug and alcohol addiction, etc.) are likely to manifest, and that other nearby communities can be used as indicators. Additionally, the expansion of Kimberly-Clark is understood to overlap with trap lines and impact their ecological integrity. The benefit of 30 jobs was deemed insufficient, given that it would only impact a small segment of the community and generate significant economic stratification. However, the report indicated that delaying the development of a road was postponing the inevitable. The overall conclusion for the study was, “Road or no road, Fort Hope is not ready for the future” (1984, p.6-2). The authors recommended going ahead with the road and anticipating the potential challenges through implementing a series of holistic recommendations to strengthen the community, ranging from Band Office practice, to recreation, housing, and education. The results were based on community consensus.

The details and recommendations of the Ogoki Road study were complex and far-reaching. In terms of assessment, the Ogoki Road Study is a ground-breaking contribution to indigenous based, sustainability assessment, as it was undertaken by indigenous peoples, incorporated consensus and considered the needs of the community well into the future. This study, along with the Well-being Study and other on-going work, provide much of the grounding for initial sustainability based criteria.

Despite the recommendations, the road and Kimberly-Clark expansion were deemed financial unviable and were not pursued.

In 1985, Nibinamik, Neskantaga, and Webequie were legally recognized as separate bands and the Fort Hope community officially became recognized under their Ojibwa name, Eabametoong First Nation. Despite the fact that these communities became officially recognized as separate bands, no additional reserve land was granted. The Government insisted that the designated reserve for the Fort Hope Indian Band should be divided by four, “By this time, the

Fort Hope Band members were beginning to read and write and simply refused to consent to the idea as the Reserve land was too small to begin with and they were being asked to break treaty. The government has been agonizing and reluctant to give one square inch of crownland as Reserve land for these three new Indian Bands” (Yesno, n.d.). In 2001, Webequie finally received reserve status (“Webequie First Nation - The Founding of Webequie,” n.d.), as did Nibinamik (Summer Beaver) (Government of Canada of Canada, Indian and Northern Affairs, 2013b) and Neskantaga (Lansdowne House) (Government of Canada of Canada, Indian and Northern Affairs, 2013a).

Additionally, over the 1960s, 1970s and 1980s, Indigenous culture changed drastically in response to the aforementioned changes, along with the rise of television and white enculturation. In particular, TV, the loss of language, the enforced community structure, and the disintegration of the family structure resulted in new dynamics for the community (Kleinfelder & Yesno, 1984).

## **5.8 Addiction Crisis**

Indigenous communities have been plagued with addiction problems throughout Canada, and Eabametoong is no exception. Throughout the 1960s and 1970s, Neskantaga suffered through substance abuse concerns so significant that it forced the Anglican members of the community to move away and build a new settlement called Nibinamik (Driben, 1983). In 2010, addiction had reached critical levels in Eabametoong, particularly related to OxyContin. The community, then comprised of 1200 people, suffered from two murders, one attempted murder and 47 arsons, including fire-bombing homes. Thefts were commonplace to feed people’s habits, as was huffing gas and utilizing alcohol based sanitizer, boiled down, to drink. Then Chief Lewis Nate declared a state of emergency on October 21, 2010. The community earned the moniker ‘Fort Hopeless’ in the press (Blizzard, 2010; Pressly, 2012). Dealers targeted communities like Eabametoong due to the massive profit margin – illicit drugs being sold in Toronto for \$40 could command \$400-500 in Fort Hope.

Efforts from within the community and through federal government support aided in stabilizing the community. Sub Oxone, a withdrawal medication that reduces cravings for opioids is now provided to 170 people in the community daily. Counselling and support have also been crucial, with fly out therapy in Thunder Bay monthly for addicts, as well as therapy

provided by health care professionals within the community. The major problem with counselling within the community by local community members is that those requiring the service lack anonymity.

However, many of the homes burnt down in 2010 are still not replaced and large extended families continue to live in over-crowded one or two bedroom homes (Barrera, 2018).

## 5.9 Ore Discovery and Exploration Boom- 2002-2011

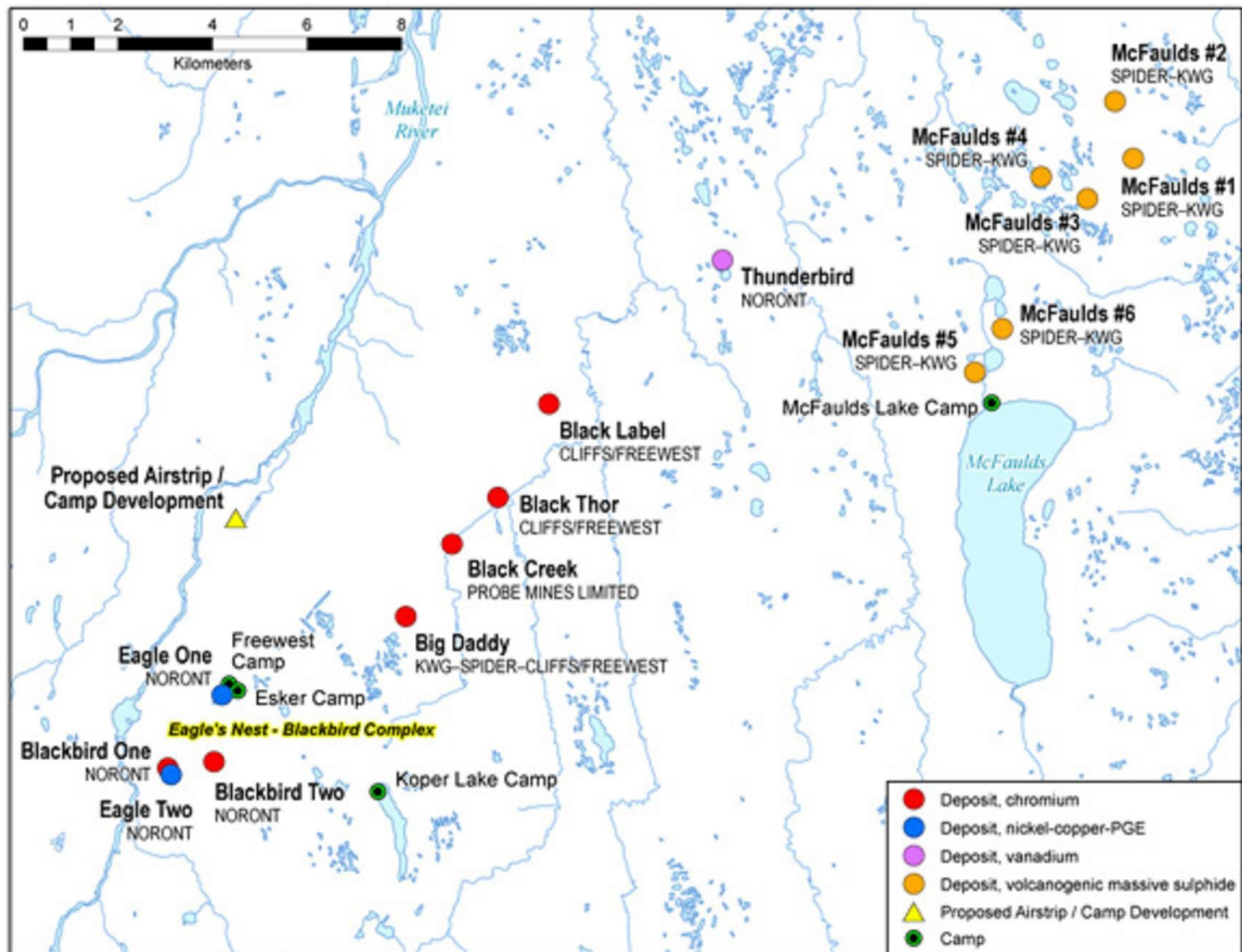


Figure 5-1: Map of Mining Claims From 2002-2011 (Giorno, 2015)

In 2002, DeBeers Canada discovered the first volcanogenic massive sulphide (VMS) ore deposit in the area, with six more found a year later. Richard Nemis, then president of Noront, discovered the region's first major VMS deposit in 2007. This discovery became what is now known as the Eagle's Nest deposit (Scales, 2017).

High grade chromite mineralization was identified in sites referred to now as Blackbird, Black Thor, Big Daddy and Black Label and by the end of 2011, "the Ring of Fire was touted as

one of the largest potential mineral resources in Ontario, rivalling the Sudbury Basin and Kidd deposits in Timmins” (Scales, 2017). There were thirty-five junior companies active in the area, including the American company Cliffs Natural Resources (Scales, 2017). Chromium (derived from chromite) is used extensively in alloy steel production, the plating of metals, pigments, catalysts, and refractories. Chromium cannot be substituted for other metals and is resistant to high temperatures and corrosion. The current world production for chromium is 19 million tons, 36% of that being produced in South Africa. The world’s estimated reserves are sufficient for 579 years at current demands. The chromite ore in the Ring of Fire is of high value as it is purer than other reserves (Scales, 2017). Despite the quality of the reserves, investor confidence started to decline: “By themselves, as stand-alone projects, they are notionally on the other side of the moon; with no infrastructure, no roads, no power, no synergies. Tellingly, litigation has now become the defining feature driving a host of corporate moves and press releases all designed to shore-up investor confidence” (Gallagher, 2013).

Mining companies soon became embroiled in litigation as they tried to push projects through. In July 2012, Neskantaga First Nation filed a legal claim against Cliffs, citing an aggressive timetable and lack of consultation. In 2016, KWG sought an easement to build a railway to their claims. The Ontario Court of Appeal found that the decision was of Ministerial discretion (KWG Resources, 2016).

In 2015, an overextended Cliffs stopped exploration on its Ring of Fire properties, despite the fact that it had already spent \$550 million. Noront took the opportunity to expand its holdings in the region and borrowed \$20 million to purchase all of Cliffs’ holdings in the region. Within this purchase, Noront obtained the Black Thor and Black Label chromite deposits, a 70% interest in the Big Daddy deposit with KWG Resources, and an 85% stake in McFaulds Lake copper-zinc deposit. In 2016, Noront acquired 75% of MacDonald Mines Exploration’s interest in the Ring of Fire for \$750 000. This acquisition included the Butler WMS and Sanderson claims. Noront now owns 357 claims and one lease that total 810 square kilometers (Giorno, 2015; Scales, 2017).

The Eagle’s Nest project as proposed is an underground mine with a 3000 t/d mill and an 11-year life span. Capital investment required would be \$609 million dollars and it would take three years to construct. Tailings would be stored underground (Scales, 2017).

On the Blackbird site, a 200 000 ton per year of ferrochrome site would be proposed, with about 500,000 tonnes of ore annually. The Blackbird site is 1km from Eagle's Nest and the mines could share infrastructure, both above and underground. There is domestic demand for ferrochrome (the smelted alloy of iron and chromite) and there are no domestic producers and about 400 000 t/y consumed in North America. Noront claims that it could sell their materials for 25-30% less than imported ferrochrome (Scales, 2017).

In addition, there are a nickel-copper deposit, AT-12, two copper-zinc deposits- Butler and McFaulds, two properties with diamond potential- Kyle and MacFayden, gold at the Triple J deposit, and the Thunderbird titanium-vanadium deposit.

Despite the high potential value of these minerals, there are innumerable challenges to access these resources. In addition, there are major socio-ecological concerns surrounding the cost of, responsibility for, and socio-economic, ecological and cultural effects accessing this region. Consequently, infrastructure development has been a major factor in this development conversation.

#### **5.10 Planning, Infrastructure and Project Proposals: 2010-Present**

Conflict over development futures has been and continues to be a major theme in the region, pre- and post- mining discovery. Indigenous peoples were not consulted on the on-going exploration in their traditional territories. As a result, litigation and protest emerged. Webequie and Marten Falls built blockades on their airstrips for two months in early 2010 (Talaga, 2010).

Also, during 2010, there was extensive discussion on monitoring needs and environmental protections. The Far North Advisory Panel generated a report relating to development in the region. Within it, the Commissioner concluded that, "*The public is now increasingly insistent that decisions to allow any major proposed project to be implemented be withheld until the likely beneficial and adverse consequences of the project and alternatives to it have been evaluated from social, economic and natural environmental viewpoints*" (Far North Science Advisory Panel, 2010). The Environmental Commissioner of Ontario echoed the panel's concern and emphasized the importance of monitoring in the region: "Responsibility for environmental monitoring, at a regional scale and over the long term, should ultimately lie with the provincial government. It is the government's job to act in the public interest to properly administer public lands and protect the environment – a unique role that cannot be assumed by



industry proponents or off-loaded to academic institutions” (Environmental Commissioner of Ontario (ECO), 2013a).

In 2010, The Far North Act was passed. The intention of the legislation is to develop a joint land use planning system between First Nations and Ontario. The “Far North” is defined as east of the Manitoba border, south of Hudson’s Bay, west of Quebec and south to a series of provincial parks and management units designated under Ontario’s Crown Forest Sustainability Act, 1994. The Far North constitutes 42 per cent of Ontario’s land mass, 32 First Nations, and has a total population of 24 000 people. As Gardner et al. (2012) state,

The development of community-based land use plans in Ontario’s Far North is a response to two related issues: (a) the current desire of local First Nation communities to preserve their traditional territories in a way that ensures that the land and resources will support future generations; and (b) a government initiative to address a number of planning and management issues, including orderly resource development, natural heritage protection, climate policy, and improved relations with First Nations. In addition, one issue that is never specifically mentioned in the Far North Act (2010), but must be taken into account in the present context is that Ontario is no longer one of the economic engines of Canada. In 2009, for the first time Ontario received a federal government equalization payment as a “have not” province (Holden, 2008) and will continue to receive equalization payments (Department of Finance, 2011). In other words, Ontario’s economic growth and prosperity is intimately tied to developing the Far North region of northern Ontario, and there appears to be a sense of urgency tied to this development.

The development of the legislation at Queen’s Park was a rapid product based on limited consultation, and placed ultimate authority and responsibility with the government (Gardner, Tsuji, McCarthy, Whitelaw, & Tsuji, 2012). In practice, similar concerns have emerged, including that the focus on community based plans failed to provide a sufficiently broad scope for considering regional future issues and options and that the arbitrary divisions for the land use planning was ineffective.

The process developed in the Far North Act generates a method of land use planning where indigenous consultation must be conducted, without explicitly defining what kind or level of consultation that is. The initial step is a “community-based” land use plan that allows communities and developers to create a common vision of the future. In Eabametoong, this process began in 2013, with updated and approved terms of reference. However, “The maps in the Terms of Reference do not reflect the entire EFN traditional and customary lands, but one section that has been agreed-to for Land Use Planning work at this time” (“Eabametoong First

Nation Community Based Land Use Planning –Taashikaywin,” n.d.). During our community and staff workshops, challenges and frustrations with the Land Use Planning process were discussed openly.

In particular, the communities have been challenged to discuss land use planning in given parameters due to their nomadic history. They use traditional areas outside of the Eabametoong designated region, while other families with strong historic ties to Eabamet Lake or other regions may not live within the Eabametoong designated region. The patchwork quilt of the planning process still focuses on land tenure as understood by in Western legal systems. As of November 2018, Eabametoong had yet to approve their Land Use Plan.

In addition, the Far North Act requires that prior to the opening of a mine, the community land use plan must be developed and approved by First Nation and the government, unless the Cabinet creates an exemption to override this requirement. The Act also allows for the development of a Joint Body to advise the Minister on “the development, implementation and co-ordination of land use planning in the Far North” (Environmental Commissioner of Ontario (ECO), 2013a). The Joint Body has not been developed to date and infrastructure development plans have been generated prior to the development of that body.

In addition, the approach still focused on 1) piecemeal regional planning and allowed for assessment, permitting and other development measures to begin prior to the completion of the plan and 2) limited monitoring considerations. The lack of integrated regional assessment was called out by the Environmental Commissioner of Ontario (ECO), stating:

Undertakings in the Ring of Fire will change the Far North forever. Evaluating environmental approvals strictly on a project-by-project basis is grossly inadequate in this sensitive, undeveloped and globally significant region. MOE does not address how it, or other governments, are assessing the cumulative effects of development or how it co-ordinates decisions under all government approvals. The ministry’s assertion that environmental assessment processes “provide guidance for identifying mitigation measures” does not address the underlying issue – that regional, cumulative effects are not being examined and taken into account in government decision making in the Ring of Fire. Without such a robust and interconnected approvals process, the government has unnecessarily created uncertainty about its role with respect to both conservation and development; that is both bad for the environment and bad for business.

And:

The ministry essentially argued that the current regulatory system is sufficient, concluding that “the local environment is well protected at the project level under the existing regulatory framework” (emphasis added). However, this response only reinforces the argument that MOE is currently taking a project-by-project view of development in the Ring of Fire. The ECO believes that MOE should have taken this opportunity to explore the methods available to examine cumulative effects across the region. Since recent changes to the federal CEAA will mean that fewer projects will undergo federal environmental assessments, MOE can no longer rely on that process to consider cumulative effects. MOE must develop its own framework to assess cumulative impacts in environmental assessment processes (2013)

This comment summarizes the numerous criticisms of the province’s approach to assessment that the Far North Act did not adequately address.

Monitoring and lack of baseline data is another serious shortcoming identified of the provincial process. In ECO’s report, it states:

Ontario is squandering the opportunity to base future decisions on the best attainable knowledge by not immediately undertaking a comprehensive program of environmental monitoring. The government is also thwarting any possibility for the public and future generations to understand whether development decisions in the Ring of Fire and the Far North succeed in minimizing environmental effects. The ECO encourages the government to commit to using information gathered through environmental monitoring to ensure defensible, informed environmental decision making in the Ring of Fire (2013)

In response to requests for improved assessment and monitoring, a regional framework agreement between the Matawa First Nations and Ontario was drafted in 2013 and signed in 2014. According to EFN, “This agreement sets out objectives and support for all the Matawa First Nations to engage in negotiations with Ontario on the processes and arrangements surrounding the Ring of Fire, but not for a specific project. For example, a major area of focus is on improving the practice of environmental assessment, and allowing for much more community involvement and informed decision-making” (RSD, 2014). The objective of the regional framework was to address significant concerns, like regional level monitoring and advanced environmental assessment. However, it never facilitated or laid out methods for monitoring; it did not require a strategic level environmental assessment, nor did it utilize sustainability as its basic test as opposed to significance of adverse environmental effects (Matawa First Nation and

the Crown, 2014). While the agreement's terms of reference can be broadly interpreted to include sustainability assessment, these criteria are not included in the base upon which the theoretical project assessments are operating under.

Much of the impetus for these agreements was the provincial need to move forward on infrastructure development. The greatest impediment to mining development is the lack of transportation infrastructure in the region (Benzie, 2017; Gallagher, 2013; Giorno, 2015; Northern Policy Institute, 2015; Scales, 2017; Sudol, 2016). The development of a 300km all-weather road and its alignment have generated extensive policy promises, conflicts and challenges for government, indigenous communities, and proponents. Many economists and industrialists have widely criticized the lack of progress, "The mining companies in the Ring of Fire need infrastructure, and so do the isolated aboriginal communities. If the Trudeau government worked in conjunction with Ontario and adopted something akin to a "Marshall Plan" — the name of the American initiative to rebuild war-torn Europe after the Second World War — to develop and modernize infrastructure in the isolated northwest, it would kill two birds with one stone" (Sudol, 2016). Sudol's comment is indicative of the perspective of many proponents in the Ring of Fire.

However, there are numerous challenges in implementation, beyond the strategic uncertainty of opening the region up and, if so, where to place the road. The Ring of Fire is in the middle of undisturbed Boreal forest and muskeg, making the region an internationally significant ecosystem and carbon sink (Chetkiewicz, McDermid, & Ray, 2011). Engineering a road in this region is also extremely challenging.

Choosing among the various options for alignment of the road – its orientation east-west or north-south, and the road's ability to access other infrastructure opportunities, such as for run of river hydro-electric power facilities – is another major concern. In July 2015, a road study was co-commissioned by the Federal and Provincial government. The objective of the study was, "... focused on an all-season community service road rather than an industrial road to connect to the Ring of Fire mineralized zone. Its intention was always to (1) link the four communities together; and (2) link the communities to the existing highway system (Porter, 2016)." The study cost \$785,000, provided an inconclusive result and was not received favourably by First Nations communities, including Eabametoong. The findings of the report were not made public, but a primary criticism of the proposed road corridors was that the report did not consider induced

development or other socio-cultural concerns, including the maintenance of treaty rights, or who would own the road. Further study was required.

In November 2015, the Matawa First Nations presented three proposals to the government – one on environmental assessment; one on infrastructure planning; and one on a community benefits fund. Ontario was uncomfortable with the proposals and correspondingly narrowed the focus of the proposals, an approach that EFN did not support. At this same time, Eabametoong clearly set out a commitment to sustainability based assessment, cumulative effects assessment, and scenario based approaches for assessment as established within their presentation to the Matawa Chiefs Council in September 2016 (Siebenmorgen, 2016).

In Fall 2016, the Chiefs Council of Matawa First Nations “began a jurisdiction table to initiate focused discussion on some of the difficult governance and control issues that Ontario was not prepared to engage on back in 2014. This table with the Premier itself is a major improvement” (Siebenmorgen, 2017). The jurisdiction table partially emerged due to the strength of voice from EFN community members regarding the need for greater control over road development and land management, prior to making a decision on road placement. At this time, then Premier Wynne agreed in principle to “consent based joint decision-making on roads, permits and other land management issues and the potential change of legislation like the Far North Act” (Siebenmorgen, 2017). EFN initiated negotiation on development topics, including regional environmental planning and monitoring, sustainability based approaches to assessment, Free, Prior and Informed Consent (FPIC) in infrastructure development, community benefit fund development, and revenue sharing.

In May 2017, Premier Wynne and the provincial government warned the Matawa First Nations that the negotiations were taking too long, and action needed to take place. This government frustration resulted in an August 2017 announcement that an East-West road that linked Webequie, Marten Falls and Nibinimak was to be built, bypassing the other communities. It would also lead directly to Noront’s claims (Giovannetti, 2017). The other Matawa communities were blindsided by this announcement, as the province had been negotiating separately and confidentially with the three linked communities. In July 2017, I visited the community and met with those council members intimately involved in the negotiations and realized that none were aware of the on-going deal making. In a joint press release from Eabametoong and Neskantaga First Nations, the communities committed to fighting the approval

of the road, as the road crossed into the traditional territory of both communities. The two nations called the approach ‘divisive’, not simply in reference to their relationship with Ontario, but across the Matawa First Nations communities (Eabametoong First Nations & Neskantaga First Nation, 2017b). In 2018, north-south access roads are beginning to be developed, with contracts for the engineering and environmental assessment processes being awarded for two stretches of road: 1) between the Ring of Fire deposits and Webequie First Nation; and 2) between Nakina and Marten Falls First Nation. Webequie also has plans to expand their regional network capacity (Barrera, 2018; Eabametoong First Nations & Neskantaga First Nation, 2017b).

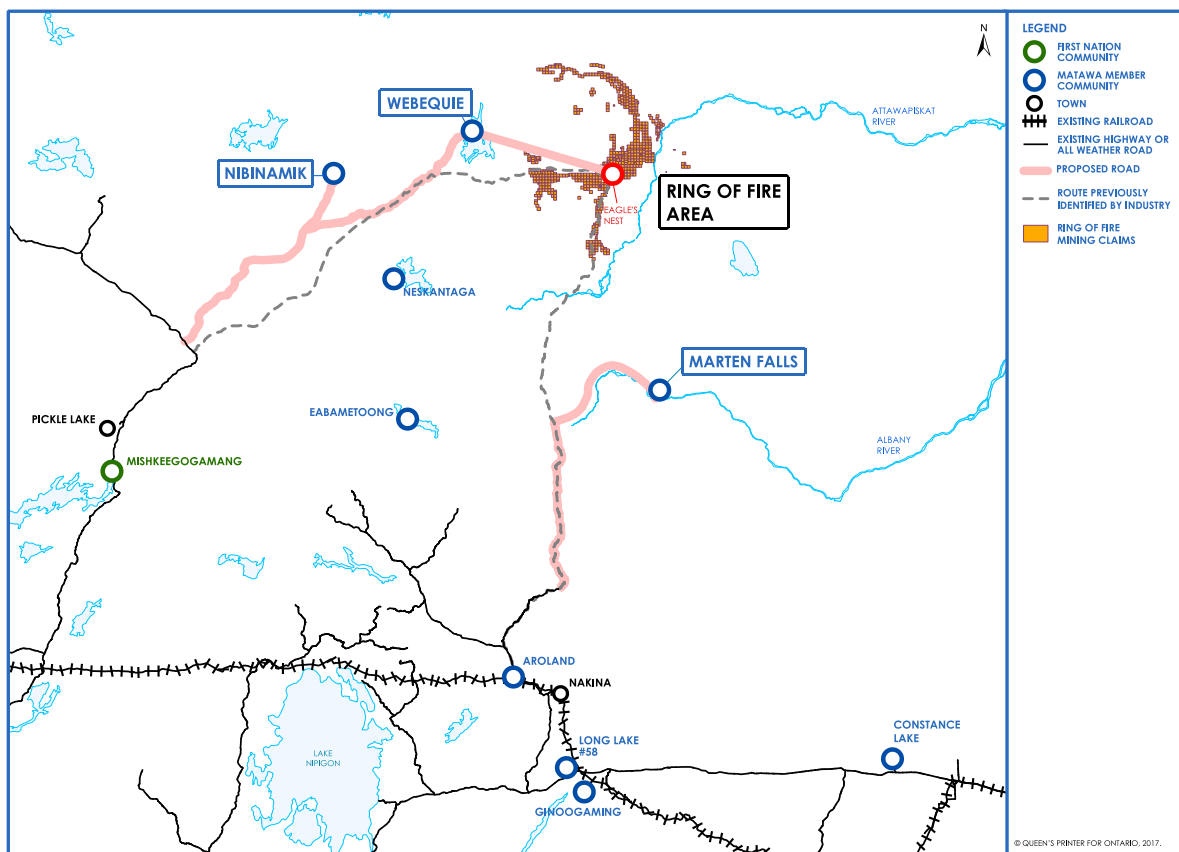


Figure 5-2: Proposed Road Alignment (Ring of Fire Secretariat, 2016)

### 5.11 Future Challenges

Throughout the abbreviated history of Eabametoong and the Ring of Fire mining ambitions, significant challenges have emerged and been repeated. In chapter 2, I note how latent conflict conditions manifest in emerging conflicts. Eabametoong has been challenged throughout history by external factors influencing, shaping, and determining its path forward. Conflict between the

band and the government, the church and with other indigenous communities continues to manifest and build on latent or pre-existing conflict conditions. Additionally, conflict between Eabametoong and the Federal and Provincial governments over these latent issues has often been marginalized, by acknowledging problems but fundamentally structuring decision making so that it is a Western culturally dominant process and that power is maintained within the government. This approach is the manifestation of colonialism in a modern sense (Alfred & Corntassel, 2005; Hoogeveen, 2015; Snelgrove et al., 2014). These concerns are the underlying conflicts that colour each decision made (Clarke & Peterson, 2015) and underscore the importance of utilizing sustainability-based methods to generate solutions. Development in the region will inevitably generate the impacts, positive and negative, outlined in chapter 3. However, those impacts on prospects for sustainability need to be considered within the specific context of Eabametoong. In the following section, I outline significant case specific on-going and latent conflicts for Eabametoong emerging from their history and development pressure. These challenges were compiled through workshop dialogues and supplemented with additional research. These problems are points of common discussion in the community, both in workshops and in conversation.

#### 5.11.1.1 Government Priorities

Dribeau and Trudeau note in 1983 that the government has been more interested in the implementation of policies than the planning of them, and thirty-five years later, the same problem seems to exist. The objectives of developing the Ring of Fire remain unclear in practice, except for the overarching goal of developing it and accessing those minerals, by any means necessary. This method mimics historic government approaches to the region: action over long-term planning. Gardener et al describe this problem as it relates to the Far North Act:

According to the Government of Ontario, the creation of the Far North Act (2010) was to mark the beginning of a new and improved relationship with First Nations of Northern Ontario. The passing of this piece of legislation, however, was not a new beginning, but rather the continuation of an unacceptable relationship. Even though more than 100 years have passed since Treaty No. 9 was signed, there has been little improvement in the relationship between the Government of Ontario and the First Nations of Northern Ontario. The similarities between consultative and negotiation process for the Treaty No. 9 (James Bay Treaty, 1964) and the Far North Act (2010) are striking: there was inadequate community consultation and accommodation; the terms of both agreements were essentially fixed (although some amendments were

made to the Far North Act (2010)); and clauses were built into both agreements whereby First Nations' rights to a traditional lifestyle (e.g., hunting and fishing) could be compromised for the greater good of Canadians, as a whole. (Gardner et al., 2012)

Eabametoong is at a constant disadvantage in this relationship and has limited ability to improve it. Frequently, the intentions of the legislation or government processes are good – such as poverty reduction and improved wellbeing, as outlined in the White Paper in 1967, the LEAP program, and the Far North Act. However, these initiatives were conceived and implemented without planning, significant consultation or clear objectives. Additionally, recent policies seem to oppose the major objective set by the Trudeau government – that of reconciliation and free, prior and informed consent.

The lack of clear objectives suggests that there exists a fundamental division in what development means for Fort Hope and other indigenous communities, and what it means to the government. Additionally, it begs the question whether those objectives matched. If jobs were created, even if the businesses were not self-sufficient, quality of life was improved. Is that a sufficient measure of economic development? The initial thrust of the White Paper programs was to create jobs. Subsequently, it was to develop viable, self-sufficient businesses. Without consistent, clear objective for the program, it was challenging to determine success (Driben, 1983).

The policies have also been ineffective in generating larger scale economic benefit. Given that government attempts to improve community wellbeing have been generally ineffective and have often resulted in increased dependence on government funds, the question emerges as to how the province's Ring of Fire proposals will avoid those pitfalls. Eabametoong leadership is extremely reticent to engage given their history of disappointment with government approaches.

For the Ring of Fire, the government priorities have been iterated within their online materials: “The Ministry of Northern Development and Mines, through the Ring of Fire Secretariat, works with all levels of government, industry and Aboriginal peoples to encourage responsible and sustainable economic development in the region” (Ministry of Northern Development and Mines, 2013). As an objective, “Responsible and sustainable economic development in the region” conveys a regional approach, where sustainability based decision-



making is paramount. However, it contrasts with the disjointed approach to development, adopted in practice so far including pursuing project approvals prior to the completion of a regional plan.

In addition, sustainability is pragmatic in nature and its definition, while containing some universal substantive understandings, is heavily context based. The communities and the province need to determine what sustainability is within this region. Eabametoong has engaged in initial steps internally with their “Community Well-being Study”.

In 2011, in the face of significant economic development, the community engaged Dr. Ben Bradshaw and Peter Siebenmorgen to aid in the development of a well-being monitoring program. This information can provide a baseline for impact from development. The results from those studies are confidential and for the purposes of planning for the community. However, broad considerations include maintaining traditional culture, improving physical and spiritual well-being and maintaining a supportive and active community. These factors generate a vision of a positive future for EFN. They also support the concepts presented by Driben and Trudeau in 1983, stating that government needs to consider “community and family solidarity, income and work”. The concepts expressed in the Wellbeing Study are more nuanced and expansive, considering other elements like inter-generational equity, ecological health and traditional livelihoods. However, it does suggest that there are continuing values and fears that the community has that have been poorly addressed by historic and current approaches to development in the region.

In order for any policy to be effective in the region, development in the region must have clear and agreed upon objectives. Objectives must represent both the province and indigenous communities needs and understandings of sustainability. Clear objectives also aid in conflict management, because conflict often manifests when action is undertaken but measured against opaque standards. If developing the region sustainably is the objective, then sustainability based, regional assessment would facilitate this objective.

### **5.11.2 Differing Worldviews**

Another element discussed in the Ogoki Road study is the concept of worldviews and their inherent and potentially irreconcilable conflict. Kleinfelder and Yesno argue that Indigenous people and settlers see the inherent purpose and use for the land fundamentally differently.

Within the study, the authors attempt to elucidate for the settler reader the Ojibwa view of land, development and time. Additionally, they examine how imposed changes by white people, in particular education and television, have changed generations of indigenous peoples. However, at its core, indigenous peoples and white people see the world and problems entirely differently.

Kleinfelder and Yesno also point to the Indigenous perspective, which is often to take things at “face value”. For many indigenous people, items of white material culture were understood to improve quality of life. When white material culture is only taken at face value, the “possible adverse effects that might accompany something new” are unanticipated and erodes the fabric of their society. For example, freezers allow people to keep their own hunting and fishing and not share the game with others (1984, p.6-31). In addition to “taking things at face value”, another characteristic of Eabametoong Indigenous society as highlighted by Kleinfelder and Yesno is “the passive acceptance of things beyond one’s control- mainly the environment” because “traditional culture was an adaptation to change- fitting oneself into or submitting to outward circumstances” (1984, p.6-32). They argue that for the Band, today’s problems are more complex and these characteristics only further the goals of white people. As such, the characteristics of “taking things at face value” and “passively accepting things beyond one’s control” must be recognized when dealing with current problems (Kleinfelder and Yesno, 1984).

Eabametoong is threatened by the pervasive forces attempting to whitewash indigenous people, and strip them of their inherent culture. In particular, the fear exists that the Ojibwa will be wiped out entirely, because “There are no Druids today – history tells us what happened to resources, people, languages, religions, cultures and lifeways when the Roman empire expanded along its roads” (Kleinfelder & Yesno, 1984, p. 5–6).

### **5.11.3 Critical Need and Desire for Education Programs**

The lack of a high school has been a challenge since the opening of the elementary school in 1962. High school education is critically important – individuals, regardless of whether they are indigenous, non-indigenous or Metis, are 25% more likely to get employment with a high school diploma than without (Alphonso, 2017).

Driben and Trudeau discuss this problem with the 1983 context, when students were primarily sent to Geraldton for high school. They say, “Regrettably, the dropout rate is exceptionally high, hovering around 50 per cent each year. But according to a Department of

Indian Affairs and Northern Development officer who counsels these students, the reason they drop out has nothing to do with ‘aptitude’ or ‘intelligence’. He says, ‘homesickness’ is the cause, and most students we spoke to agreed” (47). The assessment made in 1983 meets with the community’s assessment today, only worse. In Dryden, of the 46 Indigenous students who started Grade 9 in 2012, only 18 received diplomas last spring – a 39 per cent graduation rate, as seen in figure 5-3.

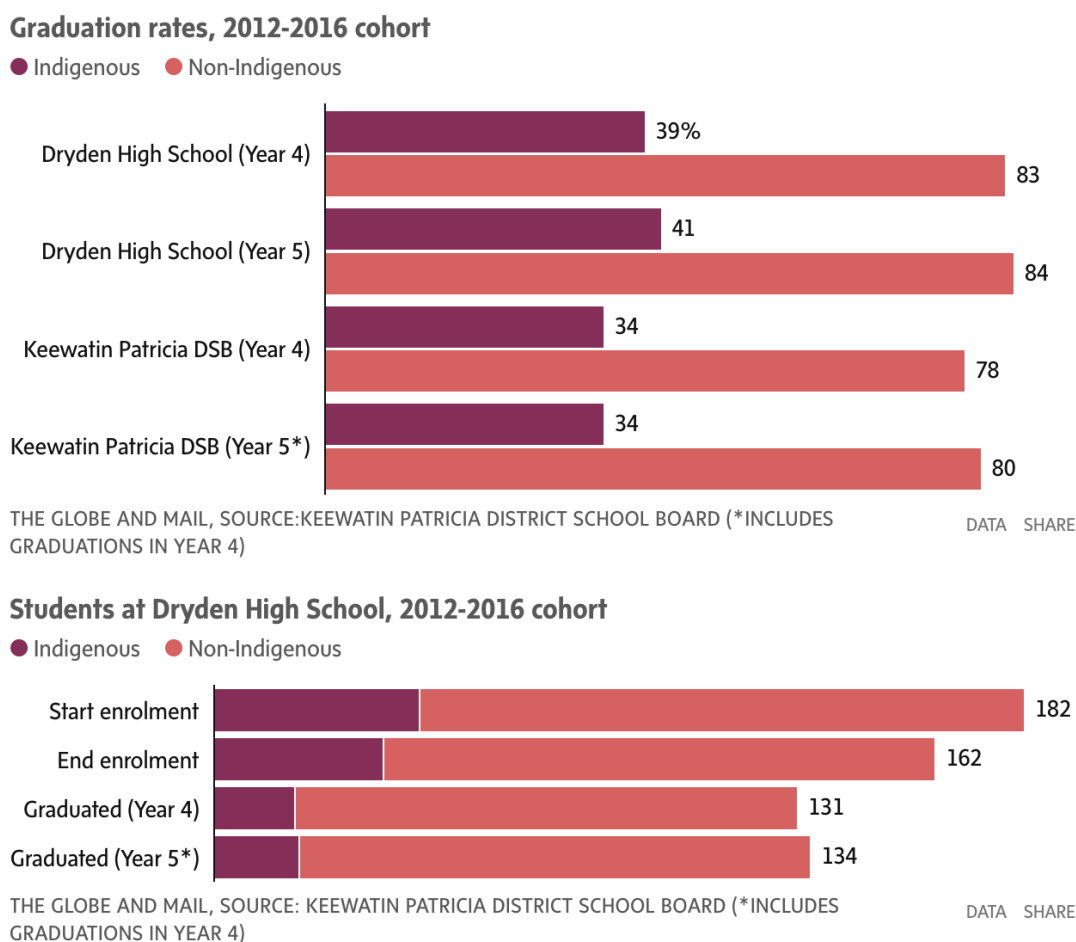


Figure 5-3: 2012- 2016 Comparative High School Graduation Rates

The trauma of the survivors of residential school has been passed down generationally to affect every day well-being of current generations and affects their success today (Bombay, Matheson, & Anisman, 2014). Many community members shared with me their experiences at residential schools or discussed the residual impacts on health and wellbeing. Community members feel that the inability for their children to receive education in the community beyond grade 8 generates similar problems to the ones that they experienced. One woman I spoke with

told me that she is sick sending her grandchildren to Thunder Bay for high school, telling me, “It is residential school all over again.” They are separated from their family and community, but also their language, their cultural teachings and their land.

The high school education of Eabametoong youth requires drastic improvements. Teens attending these schools often board with families that they don’t know (Alphonso, 2017) and are subject to significant racism (Denis, 2015). While there are emerging initiatives to support indigenous high school students, as those being employed in Dryden to support the emotional success of indigenous students through one on one counselling, the need for remote high schools is only increasing. In 2013, the Indigenous population under the age of 19 represented 38.5 per cent of the total youth population in the Kenora-Dryden area. That number is expected to climb to 43 per cent by 2041, according to the Northern Policy Institute. The Keewatin-Patricia District School Board has seen the percentage of students identifying as Indigenous grow from 40 per cent in 2007-08 to 53 per cent this year (Alphonso, 2017).

Developing an on-reserve high school is a major objective for many community members. Teacher retention, lack of infrastructure, lack of Ojibwa grounded education curriculum and inability to offer many programs have created roadblocks for their development. Keeping students engaged in school presents another challenge. However, these roadblocks are not insurmountable. One highlight of the White Paper initiative was the historic commitment that the Fort Hope band made to educational programming. If enrolment and completion were objective, then the program was a success (Driben and Trudeau, 1983). In order to achieve similar success, two factors play a crucial role according to community meetings: the funding of a local high school and consistent internet access. Consistent internet access would allow people on reserve to pursue online degrees, including Graduate Equivalency Diplomas, high school diplomas, and also university and college degrees. Many community members that I spoke with have a keen interest in online learning.

#### **5.11.4 History of Failed Government Business Strategy**

Driben and Trudeau analyzed the failure of the White Paper approach to Fort Hope. They concluded that there were crucial problems: a lack of clear objectives, a lack of trust and communications between the Government and people whose lives they were impacting, a lack of

incentives for these businesses to keep operating, and a lack of interest in cultivating indigenous initiative.

The co-op store was proposed by the community as an alternative to the Hudson Bay Company Store. The government did a viability study, impressed by the concept, and agreed to support its development. It was to be built by local labour, under the supervision of a southern man. However, after the southern supervisor quit due to personal reasons mid-way through the build, the government felt the work was moving too slowly and provided the contract to Southerners. Numerous challenges emerged with this contract, including delays, cost overages, and public drunkenness from the white contractors. Similarly, once the store was built, the government insisted that an inexperienced white manager be hired to manage the store. Under his mismanagement, the business incurred a \$60 000 debt within one year. Under new, local management, the store began to prosper but the accumulated debt to the government caused significant challenges, despite the fact that the government made the decisions that led to incurring the debt (Driben and Trudeau, 1983).

Another example of government mismanagement is the presumption that capital investment will yield economic growth, despite market short falls. A major challenge for the fishing co-operative was the decline in pickerel prices and the increase in aviation costs. The government poured more money into docks, ice making equipment and nets, as opposed to making equalization payments to fishermen. For example, the price of pickerel dropped from 87.5 cents per kilo in 1970 to 54.0 cents per kilo in 1976. With other jobs emerging as a result of the White Paper development initiatives, fishing became a less desirable industry (Driben and Trudeau, 1983).

There were few incentives for band members within the government run businesses. This business development strategy didn't encourage business development by individual band members, only band run businesses. In 1975, over \$1 million dollars in grants were obtained to run the saw mills, fishing cooperatives, and tourist camps. Cumulatively, those that worked in those businesses made only \$66, 222, or, for the 173 employed in those businesses, \$383 per person per year. Pay that low meant it was challenging to attract labour long term. Additionally, the businesses were overstaffed, based on the job creation focus of the initial White Paper policies. The jobs were unsatisfying, because there was little actual work to do (Driben and Trudeau, 1983). In addition to all of these systemic issues, the "existing legislation made it

impossible for bands to pledge land or resources as collateral” because reserve land is held in trust for First Nations in perpetuity. They had little ability to draw outside investors, even if that strategy was allowed. All of this work engaged in by the government reflected negligible consultation with the community. The projects reflect government ideas, applied to a community.

In order for businesses to be successful in Fort Hope, Driben and Trudeau say that the forms of employment would need to offer earning incentives, meaning more than they could acquire from welfare, and provide meaningful work, not make work programs. Additionally, if the businesses were owned and operated by a band member, rather than the government, they would have a better chance of success (1983).

In Eabametoong today, community members are wary of business development. In a July 2017 planning workshop, a council member stood up and discussed how challenging it was for band members to get involved in business development, even with band office support. Community members’ comments attribute this lack of interest or lack of confidence in business development to their prior experience with federal business models. However, more study would be of great value, particularly in light of nearby development and the need for alternatives to boom and bust economic futures (Loney, 2016).

Future approaches to development in the region need to take into account the community’s history. Focusing on access to well paid, meaningful employment and band member owned businesses that can benefit from the mines, such as construction companies, janitorial and supply services, monitoring and technical services, etc. are of primary consideration. Supporting business that is not dependent on mining is also important to provide a diversified commercial base.

#### **5.11.5 Threats to Ecosystem, Way of Life and Traditional Economy**

Currently, industrial development in Ontario’s Far North Waterways does not threaten ecosystems or endangered species. Industrial development of the scale proposed within the Ring of Fire will fundamentally alter the ecosystem and its function. Monitoring and generating a comparative baseline prior to the building and operation of these developments is crucial. It is important to develop the means of identifying and managing the potential cumulative effects of multiple mines. Additionally, the water systems within the region are sensitive and unique, and

indigenous communities are dependent upon them. Changing their flow regime, their quality or access to them are also crucial for consideration. These risks also generate major threats to the community's traditional economy as individuals still rely on country foods. For more consideration on the need for regional strategic assessment from an ecological perspective, see Chetkiewicz 2013. The Environmental Commissioner of Ontario also provided an effective summary of the ecological impacts, as shown in figure 5-4.

Some Potential Environmental Effects of Mining and Mining-Related Infrastructure in the Ring of Fire.

Development	Potential Environmental Effects that should be Evaluated
<b>Mine construction and operation</b>	<ul style="list-style-type: none"> <li>• Loss and fragmentation of terrestrial and aquatic habitat, including that of species at risk like caribou, wolverine and lake sturgeon;</li> <li>• Groundwater flow impacts and subsequent impacts to wetlands, peat and water movement;</li> <li>• Pumping of mine water affecting surface water quality;</li> <li>• Fuel or chemical spills at the site;</li> <li>• Mobilization of naturally occurring metals, such as arsenic, lead, mercury and cadmium; and</li> <li>• Metal/contaminant seepage to soils and groundwater from aggregate piles and settling ponds during mine construction and operation.</li> </ul>
<b>Transportation corridors</b> (all-season roads or railways)	<ul style="list-style-type: none"> <li>• Fragmentation of both terrestrial and aquatic habitat (e.g., impacts on migration and daily movements);</li> <li>• Ongoing disturbance to wildlife due to noise, traffic and dust;</li> <li>• Impacts on stream morphology and flow;</li> <li>• Increased sedimentation of water bodies from road runoff;</li> <li>• Increased access and traffic to wilderness areas, increasing fishing and hunting pressure;</li> <li>• Fragmentation and disturbance of major rivers, wetland areas and protected areas; and</li> <li>• Increased greenhouse gas emissions from transportation fuels.</li> </ul>
<b>Smelters or other processing facilities</b>	<ul style="list-style-type: none"> <li>• Soil, sediment, water and air contamination with chromium(VI) (a toxic form of the element chromium);</li> <li>• Emission of air pollutants, such as nitrogen oxides, carbon oxides, sulphur oxides and particulate dusts that contain heavy metals; and</li> <li>• Water pollution from waste rock and tailings management.</li> </ul>
<b>Energy use and transmission</b>	<ul style="list-style-type: none"> <li>• Aquatic habitat fragmentation or loss due to hydro-electric dam construction and operation; and</li> <li>• Fragmentation of both terrestrial and aquatic habitat due to transmission lines.</li> </ul>

Figure 5-4: Environmental Effects of Ring of Fire (Eco 2013)

### 5.11.6 Transportation Risk

In recent years, the lack of roads in Northern Ontario has been a primary focus of the government and business. Economists and political opposition have heavily criticized the

Wynne' government's lack of initiative, with comments such as the following: "Developing this road shouldn't be difficult. In the early 1880s, it took Canada less than five years to build the Canadian Pacific Railway from Ontario to Vancouver – a distance of roughly 4,200 kilometers. The distance between the Ring of Fire and the provincial highway system is about 280 kilometres" (Sudol, 2016). These comments like these demonstrate the strong ignorance plaguing the Ring of Fire that is pushing the government to take action without clear objective and planning.

The road brings with it fears. The disproportionate number of missing and murdered indigenous women is a stark and disturbing Canadian reality: "between 2000 and 2008, Aboriginal women and girls represented approximately 10% of all female homicides in Canada. However, Aboriginal women make up only 3% of the female population." Also, "Aboriginal women are almost three times more likely to be killed by a stranger than non-Aboriginal women are" (Collins, 2017) The majority of these crimes occur in the West, along roads such as Highway 16 between Prince Rupert and Prince George. This stretch of road is referred to as "the Highway of Tears" due to the high incidence of murder and abduction of women, mainly Aboriginal, from the area. The remoteness of the region, poverty and a lack of decent and affordable public transportation, encourages hitchhiking as a common form of transit. Air, ice roads and rivers are the forms of transit in the Matabwa region, so the communities in the Ring of Fire have been insulated from some of the external factors that could impact community safety. However, many of the problems from the Highway of Tears could migrate to the Ring of Fire's highways once built. Strategies, including effective and affordable transit, controlled access to roads including tolls, and other community based innovative solutions could be included as part of the planning for any new roads to improve the safety of Canadian women.

Another major concern for Eabametoong band members, particularly as it relates to the development of a road, is the increased access for drugs and alcohol. Fentanyl, an opioid wreaking havoc across Canada, has particularly chilling potential in these communities. In BC, 900 people died in 2016 from illicit overdoses, an 80% increase from the year before (Johnson, 2017). Indigenous peoples in BC are 5 times more likely to overdose on fentanyl than other communities (CBC News, 2017). Eabametoong is a dry community and has had a challenging history with drugs and alcohol. Road access and the rise of powerful and addictive street drugs like fentanyl generates further worries for the community. Transportation planning needs to take



into consideration these significant community concerns and develop mechanisms for the co-management of the road.

## **5.12 Opportunities**

There are significant risks within this development trajectory. However, significant opportunities exist as well. The overall objective of any sustainability based assessment framework is to eliminate trade-offs and maximize benefits.

### **5.12.1 Decreased Food and Commodity Prices**

A road is expected to affect various aspects of the cost of living, including food prices. Families now spend hundreds of dollars a week on groceries (for example, a pound of bacon costs \$21), despite many either supplementing or relying primarily on hunting, fishing and trapping for components of their diet. Many people that I spoke with hope that a road would decrease that cost of importing food to communities and expand access to healthy foods. Fresh foods are challenging to import via plane or ice road, so residents rely on processed foods which are cheaper and more readily available. Gas for vehicles and boats would also become cheaper with road access.

However, roads also mean development and will increase pressure on country food staples, like sturgeon, white fish, moose, blueberries, partridge, etc. Additionally, non-band members may take advantage of the new roads to access the land for hunting and fishing, putting additional pressures on the traditional economy. The ecosystem will be irreparably damaged by fragmentation, and as a result, so will their food supply. Roads, connection to the power grid and other infrastructure could also change community members' "remote" status. Remote indigenous people receive a financial subsidy due to the increased cost of living in these areas. Non-indigenous Canadians also receive a tax subsidy when they live in remote areas. One question that emerges, for families and individuals, is whether the savings generated by increased access would be sufficient to make up for the lost subsidies? Acquiring and preparing food is still a task that primarily falls on women and improving access for food import is a major consideration.

### **5.12.2 EFN has Clear Baseline, Objectives and Policy Aspirations**

The studies that EFN has engaged and policy papers that they have produced since the mineral boom of the 2010s give a clear picture of the overall aspirations of the community. The

Community Well-Being Study establishes a base line in key areas; policy papers establish their desired approaches to cumulative effects based and sustainability based planning, and extensive dialogue on development has been on-going with the community to determine priorities in the development process (EFN Resource Stewardship Department, 2017). Eabametoong has the data, the knowledge holders and the leadership to effectively engage in dialogues with the province on development.

### **5.12.3 Increased access to family and other communities**

One major benefit of a roadway network is increased access for band members living in other communities to EFN as well as ease of access to some individuals' traditional territories. Despite the nomadic history of the community, as well as the arbitrary division of the bands, family ties across communities are strong. One major road development benefit identified by leadership would be increased access to other communities.

### **5.12.4 Economic Development Opportunities**

The development of industry and infrastructure in the region should bring additional opportunities for business development within the community – in particular, new industry in the form of construction work, trucking and services for industry including food provision and cleaning of mining camps. Economic diversification is also a crucial exercise, maximizing opportunities to launch tourism, e-services and other sectors that are guided by community perspectives and desires (Berger et al., 2010; Markey, Halseth, & Manson, 2012). Increasing access to financing, fostering entrepreneurial approaches to economic development, and improving local technological capabilities are important considerations within any plan, and have been advocated extensively for application in other provinces (Markey et al., 2012).

## **5.13 Summary**

Eabametoong presents a challenging test for sustainability based assessment because of its complexity. Additionally, the community's history with the provincial and federal government has generated a strong basis for distrust. In Chapter 2, I discuss the concept of latent conflict and how unresolved conflict informs new conflicts. There exists strong history of government decision-making leading to negative and often unintended consequences for Eabametoong.

In order to move forward and generate sustainable futures, this history must not only be acknowledged but also considered in how decision-making occurs moving forward. The mistakes made by the government could easily be repeated, as decision-making seeks to focus on forward momentum, as opposed to the generation of strong foundations for policy making, such as relationship building and completing anticipatory land use planning. Conflict in this region is both divisional and constitutional. In order for sustainability to be achievable, the realities of mining developed in chapter 3, meaning what can easily be anticipated to happen within the region, must be overlaid with the history, opportunities and challenges present for EFN. Those trends and experience form the basis for conflict now and into the future.

In the following chapter, a new approach for assessment policy will be structured to consider how best practices identified in chapter 4 can be applied within the context of the Ring of Fire, particularly in connection to Eabametoong.

## **Chapter 6: Implementing the Triangle through Sustainability Assessment Criteria and Regional Assessment Considerations for EFN**

### **6.1 Introduction**

In Chapter 5, the data presented reveal that the approach undertaken by the province of Ontario for decision-making in the Ring of Fire has so far generated limited positive results and has worsened relationships between and among the communities, the province and mining companies. The current decision path also does not include consideration of the generic sustainability concerns considered in chapters 2 and 4. Nor does it integrate the primary concerns of EFN, or other remote resource communities, that were brought forward in chapter 3. Due to this fundamental disconnect, pre-existing conditions for conflict are likely to persist and manifest in various ways, some of them regrettable. An “ethical space” to discuss how to develop the region sustainably is not yet in place and a triangle of better decisions is unlikely to form.

The province’s strategy for managing conflict within the region has focused on generating agreement for negotiation, as discussed in chapter 5. However, the data presented in Chapter 5 also reveal that the province has not effectively re-distributed power, acknowledged or engaged with historic and on-going colonialism, or considered the importance of co-determining an objective for the development of the region. The literature and evidence collected suggests that a new strategy is required that acknowledges conflict, integrates likely concerns about mining in the region and deploys sustainability based, strategic environmental assessment, using the approaches recommended in chapter 4. The needed approach would need to acknowledge historic wrongdoing both in the methods of initiating new deliberations and in seeking reconciliation and FPIC in decisions, as discussed in chapter 2 and in the framework. It should also establish sustainability, specified for application to the region, to be the cornerstone of dialogue. Chapter 5 elucidated the history and current position of the Ring of Fire and Eabametoong, but it is also important for deliberations and decision making to identify the options for what the Ring of Fire might look like in the future, keeping in mind the chapter 3 patterns for mining in remote Northern regions that would likely appear in the Ring of Fire. By applying the triangle framework of better decisions, from chapter 2, any approach taken must centre on context-driven pragmatic sustainability, provide a deliberative process that considers

the Right and Opportunity to Engage and Participate, the Capacity to Participate, Empowerment and Influence and Mutual Benefit, and generate an “ethical space” for decision-making.

This chapter considers the character of a positive approach forward, utilizing the knowledge generated in previous chapters and the initial “triangle of better decisions”. In particular, this chapter seeks to arm EFN with a conceptual package of best practice environmental assessment techniques for their application and for negotiations with other Matawa communities and the province. There are two primary objectives: 1) to develop generic sustainability-based criteria for development within the Ring of Fire, based on the perspective of Eabametoong; and 2) to consider what mechanisms could exist to integrate strategic level, sustainability-based criteria into decision-making. The perspectives of other relevant communities will also need to be incorporated into any criteria; the Eabametoong version is, therefore, illustrative. Approaches that strengthen relationships, have a clear, substantive sustainability-based agenda and provide fair and equitable processes are necessary to achieve better decisions, under the initial framework. Approaches like these also assist in avoiding and anticipating challenges that mining in the North can generate, as outlined in chapter 3.

The development of case-specified sustainability-based criteria for the region follows Gibson’s (2018) criteria specification methodology, and utilizes approaches from conflict management and scenarios to supplement the approach taken in this chapter. The specified sustainability criteria are developed for future application and are not applied to any scenarios or proposals within this dissertation.

The pre-existing policy mechanisms that would be useful in implementing the framework are considered within the second part of this analysis and are considered as possible openings for implementing some of the next generation assessment concepts. Needs for monitoring and long term financial planning are also discussed.

## **6.2 Methods**

This chapter primarily utilizes the information gathered from working with the EFN community and RSD staff, particularly in the formulation of the categories of criteria for sustainability assessment. This chapter primarily reflects a synthesis of indigenous-led data gathering, as well as strong community-led direction for future visions and criteria. My role as a researcher was to gather these data appropriately and respectfully, and use the associated understanding to

complement and adjust Western assessment concepts without compromising the overall integrity of the data and their underlying understandings. This chapter was informed by workshops, literature review and document analysis, sustainability criteria generation, and conflict analysis.

### **6.2.1 Workshops**

Four workshops were undertaken to guide the specification of sustainability criteria, consider regional assessment options and evaluate project level assessment possibilities. These workshops were organized by RSD, and led by myself and Peter Siebenmorgen. The data were collected on flip charts and maps. The number of participants ranged from 5 to 45, and these people, other than the members of RSD, chose to attend the workshops due to interest in the ongoing environmental assessment process. Participants in these workshops included interested community members and those employed within RSD. Workshops as a research method means that, "...the workshop is, on one hand, authentic, as it aims to fulfil participants' expectations to achieve something related to their own interests. On the other hand, the workshop is specifically designed to fulfil a research purpose: to produce reliable and valid data about the domain in question" (Ørngreen & Levinsen, 2017).

In these workshops (from December 2015 to November 2017), the focus slowly transitioned from educational to co-generative to affirming of practice. The initial workshops (December 9-15, 2015 in Eabametoong & August 15-17, 2016 in Guelph) were mutually educational, focusing on knowledge translation from Western assessment practice to the community, as well as educating the researcher on indigenous worldviews, perspectives on assessment and mining, and colonialism. EFN RSD was involved in both workshops, and interested community or council members were included as well within the Eabametoong workshops. A goal of "two eyed seeing" could be construed from this process for all participants.

In between workshops, the RSD department met with community members and held additional meetings to further gather community perspectives. RSD and their advisor provided me with summary reports and notes on the process, as well as verbal summaries over the phone. These community-based workshops, including the July 2017 workshop that I participated in and presented in, were often explicitly geared towards providing an outlet for developing positions and responding to provincial proposals to the Regional Framework Negotiations that were ongoing with the government and other communities. With the change in provincial government in

June 2018, the Regional Framework Agreement was never finalized or signed. Specific information about the contents of the agreement and negotiations surrounding it is privileged and not included within this dissertation. However, the focus of the agreement was to establish the role and responsibility of indigenous governments and the Crown in the development of the Ring of Fire, as well as the inclusion of monitoring frameworks. The questions related to the Regional Framework Agreement were broadly inclusive of concerns linked to strategic level concerns, FPIC, monitoring and holistic, sustainable assessments of development options. By the time of the July 2017 workshop, sufficient materials had been collected to determine an approach forward.

The November workshop operated as a means of confirming the information collected, emphasizing the need to combine best practice methods, as advocated in Chapter 4, with EFN's own understandings of well-being and desirable futures. These workshops included community wide presentation, activities, and presentations from myself, RSD and other parties. The results of that workshop as summarized by RSD and Peter Siebenmorgen in Table 7 and are considered in greater depth in Appendix 1.

## **6.2.2 Literature and Document Analysis**

The basis of the sustainability criteria and the materials that informed the regional assessment option analysis provided in this chapter are based on several sources of information. The data from these documents are integrated into the presentation of my results. These documents include government documents, technical reports, submissions to environmental assessment hearings, news articles, and documents produced by Eabametoong, the Matawa Tribal council, governments and environmental organizations informed this analysis. Privileged reports and information that were provided to me for the development of this dissertation include:

- Well-Being Study
- Ogoki Road Study
- Internal Documentation
- Workshops and Field Notes

In particular, the materials integrated within this chapter emphasize the need to respect Indigenous rights, legal traditions, ways of knowing, knowledge and concerns/aspirations.

### 6.2.3 Sustainability Assessment and Criteria Development

Criteria development is a critical element of the development process for effective assessment and, in sustainability-based assessment, it represents the elucidation of desired futures. The impact of any development trajectory on sustainability criteria needs to be carefully considered. Therefore, crafting the criteria is exceptionally important.

Gibson (2017) outlines the basic steps of criteria specification:

- 1) “Take initial information about the purpose and alternatives for the potential undertaking in question
- 2) Identify the key case/ context considerations (issues, aspirations, vulnerabilities, openings, conflicts, potential for resolving or accommodating conflict, etc.) covering all purposes, alternatives and interests and anticipating possible trade-off concerns
- 3) Ensure the considerations cover all of the generic sustainability assessment criteria
- 4) Organize the considerations in a manageable number of understandable categories (with associated questions and indicators) that ensure attention to often neglected matters and recognize interactive effects, to form a criteria framework to guide all key judgements, including those about effects, comparison of options, and recommendations including enhancements and mitigation.
- 5) Review and reconsider the purposes and alternatives.
- 6) Adjust the criteria framework as new understandings, considerations and priorities emerge through the process.
- 7) Develop initial trade-off rules.
- 8) Apply criteria in critical review of revised purpose definition and comparative evaluation of alternatives.
- 9) Identify mitigation needs and enhancement openings.
- 10) Identify trade-offs and seek avoidance/ mitigation.
- 11) Select preferred alternative.
- 12) Determine conditions of approval, rules of implementation.
- 13) Monitor, review, and adjust implementation in light of the criteria, conditions of approval and actual effects.
- 14) Continue sustainability-based evaluations and responses until the undertaking disappears into the mists of time”

Steps 1-4 will be undertaken in this chapter, informed by workshop insights, literature, and experiential learning. Key case and context considerations, which were examined in greater depth in chapter 5, are brought forward into criteria formulation.

Many of the criteria utilize understandings from the Community Well-being Study, but not the data reported in it. The initial well-being assessment information was gathered in late summer of 2011. For an actual assessment, data from the Wellbeing Study could be utilized to



provide a baseline, contingent on EFN's role in the assessment and their consent to share that information. Designing a sustainability framework for application will be based on EFN's perspectives and can then be utilized as a point for future negotiation.

#### **6.2.4 Identifying Purposes/Objectives through Party/ Stakeholder Conflict Analysis**

The purpose of a sustainability assessment (step 1 in the sustainability assessment and criteria methodology) guides the rest of the assessment. One method of determining that purpose or objective is mapping and analyzing conflict through the use of the party conflict analysis tool. This tool is used to identify divergence and points of agreement. Identifying the points in common can assist in identifying what is the common purpose. The analysis of the divergent positions of parties in conflict, is utilized in mediation practice. In typical application, the mediator interviews all parties to:

- 1. Separate the parties' substantive and procedural priorities. Frequently, this interpretation will delineate history, specific issues of concern, and the needs or interests that each party wishes to address.*
- 2. Identifying underlying needs, interests, or concerns. These are often latent conflict elements.*
- 3. Reframe those concerns identified by the mediator to each party to ensure that the mediator's interpretation encapsulates the party's central concerns*
- 4. Modify the reframing based on the feedback from each party (Moore, 2014, p. 260).*

When this process is completed for all parties, the mediator will develop a Party/ Stakeholder Conflict Analysis chart to summarize the parties' issues, needs, sources of power and initial orientation. Moore (2014) provides a typical chart for multi-party mediation in table 6.

Table 6: Stakeholder Conflict Analysis Comparators (Moore, 2014)

Primary Parties/ Stakeholders	Issues- Presenting and Underlying Problems	Needs and Interests- Desires, Wants, or Goals to Be Achieved	Actual/ Potential Sources of Power and Influence, Degree of Symmetry, and Parties' Willingness to Exercise Power	Initial Orientations towards Procedures for Resolution
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For the purposes of this dissertation, I derived an understanding of the parties' priorities from written materials, positions as presented during meetings, and from official statements and press releases as opposed to interviews. Given that those materials provide limited information, some of the spaces in the table were left blank or with limited information. Additionally, steps 3 and 4 were not undertaken, except for from Eabametoong, because I was not in direct or continual contact with other parties. These positions are estimations.

However, even as estimations, there is value comparing the underlying concerns as they can assist in determining relationship concerns and substantive differences, particularly when applied in developing sustainability criteria, which is how table 6 applied in this dissertation. Identifying these underlying concerns can assist in achieving sustainability over the long term. Gibson (2017) states that,

“The key considerations for criteria specification should be identified through an approach that recognizes three major groups of influences:

- 1) The starting conditions and existing dynamics (existing problems, possibilities, fears, needs and desires, capacities and deficiencies)
- 2) The potential effects of what is being assessed (including efforts of associated options); and
- 3) The future results that are desired or feared.”

Issues refers to “topics, matters of concern, questions or problems that people in dispute want to have considered, understood, and as appropriate, resolved” (Moore, 2014, p. 122). Presenting issues specifically mean the “topics initially put forth by parties for discussion and resolution,

which may or may not be the real problems they want or need to address and settle... (they can be understood as) a place holder until disputants can explore, identify, articulate, or reveal what they really want to talk about; or genuine issues that may provide a partial bit not necessarily complete picture of all contested topics” (Moore, 2014, p. 123). Chapter 2 identified the root of most perpetuating conflicts as “latent conflict”, such as underlying colonialism, historic unfairness, or known power imbalances. These underlying issues, including those identified in chapter 3 – colonial oppression, mining legacies, boom and bust economies, and lack of indigenous decision making authority – need to be explored within decision making processes to facilitate achieving lasting sustainable resolutions.

Needs refers to “basic necessities for human survival and psychological well-being” including “food, shelter, health, and physical and psychological safety” but can also include relationships, cultural security, rights, capacity to exercise choice, etc. Interests are “desires, concerns or wishes that people that people in dispute want to have addressed or satisfied” (Moore, 2014, p. 128). Needs and interests overlap, and for the purposes of this research, the specific placement of the division between the concepts is not crucial.

More importantly, Moore distinguishes between procedural needs/ interests and substantive needs/ interests, similarly to our consideration in chapter 2, as well as psychological/ relational needs. Substantive needs are “tangible outcomes or benefits that a third party wants to have satisfied, receive or be exchanged as a result of negotiations” (Moore, 2014, p. 128). These needs include food, shelter, property, a job, equipment, tools or a means to earn a livelihood. Procedural needs/interests refer to “parties’ preferences regarding the process by which problem solving, negotiations, or dispute resolution occurs, and ways agreements are reached or implemented” and include “the efficient, fair and timely process; clearly understandable steps; and an opportunity to present their views” (Moore, 2014, p. 128). Psychological/relational needs/ interests “concern how individuals or groups are treated, both in the negotiation process and outside of it” and include “how participants feel or want to feel about themselves, their counterpart, and how relationships are valued or shaped through negotiations” including feeling trusted, respected, heard and having feelings of acknowledgement (Moore, 2014, p. 129).

An argument that I am making in this dissertation is that some procedural needs/ interests have been highly prioritized by the government and EFN is dissatisfied with the provincial approach. The lack of consideration for substantive needs/interests, as well as relational

needs/interests, that are important to EFN combined with latent understandings of colonialism and the negative impacts of development that underpin indigenous understandings of the decision-making process, have prevented resolution and caused unproductive forms of conflict to fester. This case demonstrates that procedural needs, substantive needs and relational needs are intertwined and affect one another. Procedural, relational and substantive strengths and deficiencies affect each other.

Degree of symmetry refers to the differences between power and influence between the parties. When parties have more symmetrical power relationships, there is a greater likelihood of cooperation, they function more effectively, and behave less exploitively or manipulatively (Rubin & Brown, 1975). The asymmetries between the Province, the Federal government and the proponents on the one hand, and the Matawa communities on the other, are stark and provide a major challenge for resolution. This asymmetry lends itself to continuing patterns of dysfunctional conflict, colonialism and unsustainability. Developing an ethical space requires that parties acknowledge power differentials and develops processes that assist in equalizing power.

### **6.3 Applications and Outcomes for EFN**

The following sections provide the initial sustainability assessment criteria based on EFN's well-being indicators, workshop results and party conflict analysis. The results also demonstrate how existing approaches to development in the Ring of Fire are likely unsustainable and how EFN could utilize existing policy to employ a sustainability based, regional scale assessment to encourage better outcomes.

It should be noted that EFN has actively pursued the adoption and application of a sustainability based and regional approach to assessment. A sustainability test was included in the November 2015 Matawa draft environmental EA agreement (p.15, item 8(d)). A sustainability-based approach (requiring evidence of reasons to expect lasting benefits as well as avoidance of significant adverse effects) was integral to the Matawa Proposal. Additionally, EFN noted that a sustainability-based approach fits with Noront's Ontario terms of reference and Noront's EIS Guidelines under the federal process (especially p.7-8). A process centred on maximum fairly distributed and lasting benefit remains clearly desirable and appropriate in this case. Evidence of the pursuit of regional assessment is present in EFN's presentations and

reports (Siebenmorgen, 2016). The province has not responded to the request for sustainability-based assessment, nor has the province included regional processes in any of their agreements or policies. The focus has been on pre-existing legislative frameworks and the traditional project assessment process, which do not take a regional approach. Next generation assessment, as Eabametoong advocates for it, is needed, but so far there is no movement towards next generation approaches. This chapter seeks address those stated interests for EFN’s internal benefit and for the benefit of expanding our understanding of next generation assessment potential.

### 6.3.1 Workshops Outcomes

The results from these workshops were summarized by the RSD into the following table. The workshop results were also supplemented by individual interviews that RSD undertook. Additionally, I was provided a more detailed summary table of the workshops from RSD as part of a document from July 26, 2017, entitled “What We’ve Heard” (EFN Resource Stewardship Department, 2017). This summary table of these results is presented in Appendix 1.

*Table 7: Summary of Sustainability and Best Practice Workshop Results (Siebenmorgen & RSD, 2018)*

<b>Combination of EFN Values and Best Practices</b>	<b>Typical ‘Western’ Government &amp; Assessment Practices</b>
<ul style="list-style-type: none"> <li>• Look ahead to the future, ensure positive change and lasting improvements while avoiding further damage or risks</li> <li>• Give integrated attention to all visions for progress towards more desirable and secure future, and to the relationships among the factors/requirements for those futures</li> <li>• Combine respect for local with recognition of regional and global challenges and opportunities</li> <li>• Work to identify the best pathways and options to follow</li> <li>• Aim for multiple, and mutually reinforcing gains</li> <li>• Minimize any trade-offs</li> <li>• Foster and enable participatory governance</li> <li>• Anticipate surprises and emphasize learning</li> </ul>	<ul style="list-style-type: none"> <li>• Presume that economically viable undertakings will bring overall benefits</li> <li>• Focus on maximizing economic gains, seldom looking far ahead into the future</li> <li>• Avoid the most significant adverse environmental effects</li> <li>• Avoid offence to powerful interests</li> <li>• Presume that we can deal with future surprises or consequences when the time comes (technology or other response to crisis)</li> </ul>

One of the outcomes of the Guelph workshop was figure 6-1, meant to visualize community priorities in development futures, with concepts of sustainability and the four

directions integrated. This diagram represents maintaining traditional priorities but also considering means of integrating opportunity and exercising power. One member of the RSD community referred to the premise as to “Take the best from both worlds”.

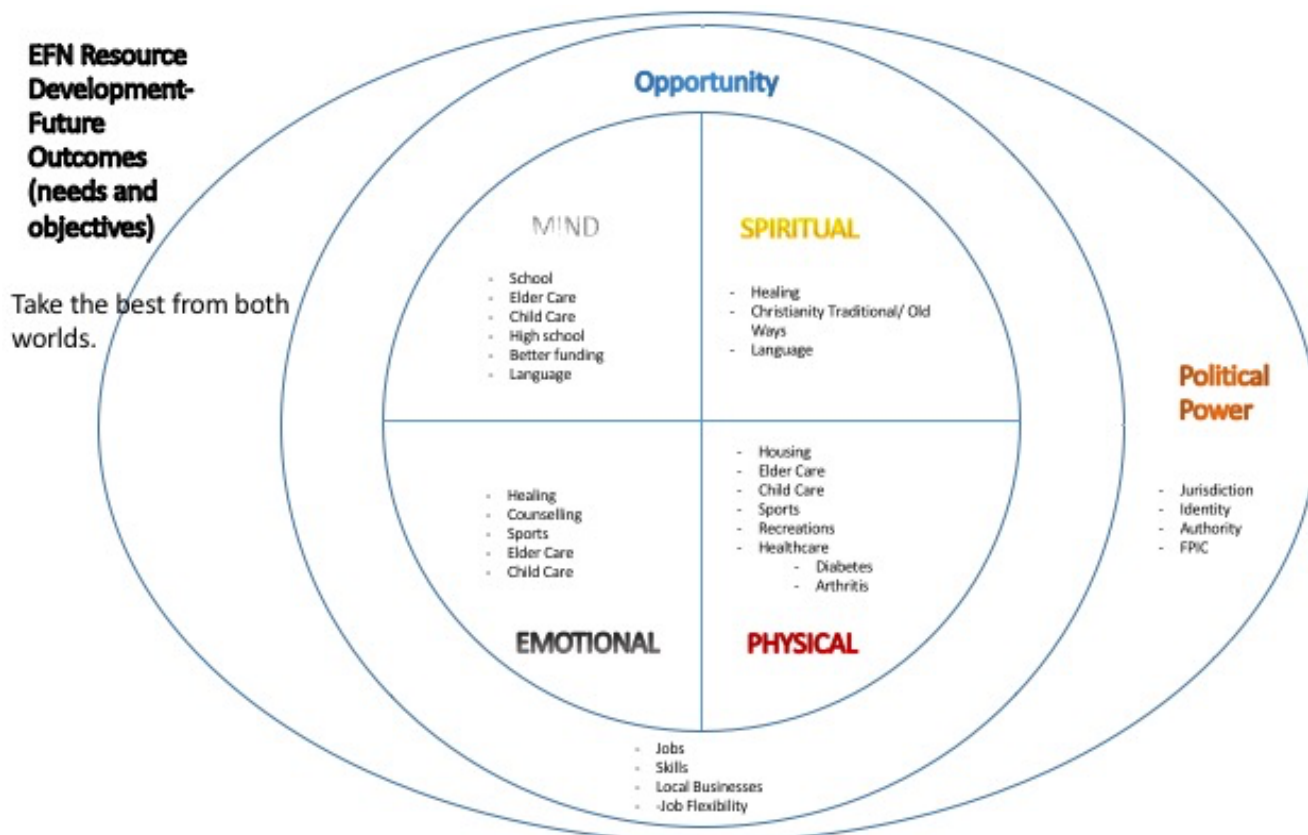


Figure 6-1: EFN Resource Development Future Outcomes Diagram (Needs and Objectives) (RSD, Siebenmorgen, Gibson And Atlin, 2016)

The results from these workshops were distilled into the objectives, categories and criteria in this chapter. They also focused the types of solutions that the community felt were desirable and viable. This chapter focuses on operationalizing those concepts.

#### 6.4 Sustainability Criteria

The first deliverable of this chapter is the specification of sustainability criteria, using Gibson’s methodology to assist in ensuring that the substantive aim of this undertaking, sustainability, meets not only generic needs but also meets the contextual demands of the EFN. Generating sustainability criteria also provides a predictive, fair process for decision-making and an ethical space, where both traditional and Western knowledge can co-habitat in the assessment. In the

following section, steps 1-4 of the sustainability criteria generation methodology will be applied to generate initial criteria, without testing or application.

#### **6.4.1 Step 1a): Developing an Objective**

Thinking of overall objectives is essential to sustainability-based assessment, strategic level assessment and Eabametoong's internal processes. Generating a mutual objective also assists in focusing conflict. There is extensive focus in the community on the opportunities and challenges that future generations will face, as they face serious risks on two fronts. First, they risk loss of their traditional lifestyle through lack of transferred knowledge on hunting, fishing, and trapping, along with language and other practices. Second, they are disadvantaged in operating in the Western economy due to remoteness and systemic colonialism (Kleinfelder & Yesno, 1984). Determining an objective that suits Eabametoong's needs and desires must acknowledge their healthy skepticism about development, and their desire to have their children experience the best possible future.

The need to have an objective prior to engaging in assessment, planning or monitoring is well understood in conflict management literature and is underpinned by the priorities of sustainability and Indigenous rights activism and scholarship. Jointly held objectives, when followed, prevent intractable conflicts from forming over the pursuit of incompatible goals (Schneckener, 2004). Frequently, activists question the established objectives of the more powerful party and may promote an alternative set of objectives (Castro & Nielsen, 2003; Korobkin, 2006; Sidaway, 2005).

For the Ring of Fire, the ultimate and immediate objectives vary among the parties engaging in the process – First Nations, the Matawa Tribal Council, the federal government, the Provincial government. The differing understandings of a problem across parties generate significant conflicts when developing a resource management strategy (Adams, Brockington, Dyson, & Vira, 2004). The province as the most powerful player has determined the objectives that characterize core decision making and frame the main deliberations in the case of the Ring of Fire. Those objectives focus on the development of mining resources in the region utilizing traditional tools, like project level assessment, procedures to meet the duty to consult, and impact and benefit agreements. In so doing, the province wishes to improve the regional economy and develop a new source of wealth for itself. Improved socio-economic conditions for indigenous

communities, resulting from both impact and benefit agreements and through increased regional development, are also understood as a consequential benefit. The Ring of Fire Secretariat is a division of the Ontario Ministry of Northern Development and Mines that is charged with coordinating activity to meet the approximate objective of developing the region within current legislative frames: “The Ring of Fire Secretariat works and consults with Aboriginal peoples, northern Ontarians and the mining industry to encourage responsible and sustainable economic development in the region” (Ministry of Northern Development and Mines, 2013).

The simple fact that the interests, needs and objectives of the parties are different does not mean that common ground cannot be found. Transcending their differences requires re-framing that focuses upon common ground and determining means to achieve that. Re-framing’s objective is to “clarify and uncover the essence of the meaning, needs, interests, or concerns from an unproductive framing, and present it in a new way so that it can be more readily accepted or addressed by the parties” (Moore, 2014, p. 344). The type of re-framing required within the Ring of Fire is definitional reframing, meaning “changing the conceptualization of a conflict or situation to make it easier to communicate more effectively in a less polarized way and conduct collaborative problem solving” (Moore, 2014, p. 344).

The definitional reframing problem of how, whether and when to develop the Ring of Fire is markedly different between parties, meaning that,

“If each stakeholder is only able to define problems and test the set of possible response options in the context of his or her particular knowledge and understanding, then agreement is less likely, both in terms of perceptions and problem definition as well as over the desired response to the problem... Thus, policy conflict arises because differences in knowledge and understanding between stakeholders frame their perceptions of resource use problems as well as possible solutions to these problems” (Adams et al., 2004).

In the early 2010s, the Government of Ontario and Matawa understood that divergent understandings and intentions were contributing to conflict between the parties. In various agreements, there have been initial attempts to determine objectives and re-frame the conflict, but the scale has focused primarily on the negotiation rules and process elements for deliberations, as discussed in chapter 2, without discussion of the substantive sustainability implications for the region and the communities within it, nor has the process fundamentally integrated the interests, concerns or objectives for other parties. Within the Enhanced



Environmental Assessment Agreement of 2014, the province and communities committed to project level assessment processes that consider:

Environmental effects<sup>8</sup> of the Undertaking, and significance thereof, including but not limited to:

- a. effects on air, land or water, plant and animal life, including biological diversity and human life, the social, economic and cultural conditions that influence the life of humans or a community, any building, structure, machine or other device or thing made by humans, any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or any part or combination of the foregoing and the interrelationships between any two or more of them;
- b. effects, as identified by disturbance thresholds arrived at using First Nations' perspectives, on the First Nations' practice of Aboriginal and Treaty rights and traditional land use activities including trapping, fishing, hunting and gathering;
- c. effects on physical and cultural heritage, including the effects of any changes to the environment caused by the Undertaking on any structure, site or thing that is of historical, archaeological or architectural significance;
- d. effects on sustainability, including whether the Undertaking will bring lasting net gains to the First Nations and whether the trade-offs made to ensure these gains are acceptable in the circumstances;
- e. potential environmental effects arising from malfunctions, accidents or unplanned events that may occur in connection with the Undertaking;
- f. measures to enhance any beneficial environmental effects;
- g. potential cumulative environmental effects of the Undertaking, including cumulative impacts on the biophysical environment and the human environment, equity impacts (i.e. fair distribution of benefits and risks), legacy and bridging impacts, and cumulative impacts management and preparedness (i.e. capacities for managing the risks and opportunities);
- h. residual effects associated with the Undertaking and their significance;
- i. effects upon biological diversity;
- j. extent of application of the precautionary principle to the Undertaking;

Within the broad swath of considerations, cumulative effects, sustainability-based concerns and the need to consider benefits can be included somewhat effectively within project assessment practice. However, commitment to regionally-based assessment is ignored. All of the

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<sup>8</sup>Ontario EA law defines "environment" to include social, economic and cultural as well as biophysical considerations and their interactions (Ontario Environmental Assessment Act, R.S.O. 1990, Chapter E.18)

considerations listed above are expected to be addressed through project level assessments only. They do not consider the pace of development, explicit commitments to sustainability in the form of socio-economic and ecological well-being, how legacies will be addressed or any of the concerns that EFN (as identified in the workshop notes) or other communities identified.

Similar problems with objectives have occurred throughout history when considering provincial and federal objectives versus Eabametoong's objectives. Due to power differentials, the government's objectives generally are forced upon Eabametoong, often with unintended negative consequences, as demonstrated in chapter 5. Dodgson et al. suggest there are both ultimate objectives and immediate objectives. Ultimate objectives are of a strategic or high-level concern, such as economic growth or sustainable development. Sometimes these goals reflect stated governmental objectives. But they can as easily represent long-standing concerns of Indigenous people. Many immediate objectives "are those which can be directly linked with the outputs of the policy, programme, or project." (Dodgson et al., 2009, p. 10). In mediation, this concept is also called a "joint problem solving statement" and they are "developed and presented to help build joint ownership of a problem to be addressed, and to focus parties on how they might satisfy both individual and joint needs and interests" (Moore, 2014, p. 260).

The objectives must also be understood within the current socio-economic and ecological context of the region, as well as the concerns of the parties involved, the power dynamics between them, and their interests and aspirations going forward. Sustainability criteria should be based upon EFN's objectives, interests and desired futures. In a real version of this process, Noront, the province, other Matawa communities and non-Matawa communities impacted by the development, and the federal government could jointly determine the objectives, sustainability criteria and trade-off rules. Developing a jointly agreed objective focused upon sustainability is possible within the province's current mandates and legislative objectives. The "betterment of Ontarians" (Environmental Assessment Act, 1975 s.2) purpose and associated requirements of Ontario's legislated process for comparing alternatives are broadly consistent with the "contribution to sustainability" approach. However, the province's continued focus on a project-based approach means that its broader strategic efforts are not integrated into a coherent regional assessment and planning initiative. Also, the province has not agreed to a contribution to a sustainability-based process, nor put forward any discussion on a jointly developed objective related to the Ring of Fire.

In order to achieve a mutually agreed upon agenda, parties must transcend their particular differences by generating a broader agenda. Determining if common ground could be found, what factors should be emphasized and what can be accommodated into the institutional structure is crucial to developing an agenda. This broader agenda can then be incorporated in a set of sustainability criteria through specification.

Table 8 below attempts to delineate the issues, interests, objectives and tools of each party involved in the Ring of Fire. The completion of the following chart is reflective of the interests and concerns of Eabametoong but is not completely reflective of other parties because I did not interview or formally engage with those parties. Instead I used extensive literature review and observation during meetings and events (Bradshaw et al., 2012; Canadian Environmental Assessment Agency, 2011; Chong, 2014; Eabametoong First Nations & Neskantaga First Nation, 2017b; ECO, 2015; Gallagher, 2013; Kleinfelder & Yesno, 1984; KWG Resources, 2016; Matawa First Nations and the Crown, 2014; Ministry of Northern Development and Mines, 2013; Yesno, 2012). While in Eabametoong, I performed no formal interviews, but did have informal conversations with dozens of community members, worked extensively with the RSD team, participated in community hall meetings and workshops, shared meals, went fishing and listened actively throughout. I kept notes of our meetings and workshops throughout the process. The themes captured in this chart reflect what was learned in workshops, meetings and the extensive review of materials, as summarized in chapter 5. However, this material is filtered through the lens of a white, Southern woman with abbreviated exposure to the community. I utilize the term “reflective” intentionally, as it refers to my perception of what has been told to me, as traditionally undertaken in this methodology.

Ideally, each party would have undergone an effective and extensive review of this nature, to ensure that the results properly capture their interests, needs, sources of power and ideal futures. Since this work could not be undertaken for this paper, the chart must be taken as an approximation based on meetings that I’ve attended, materials reviewed, and history. The degree of symmetry between parties will not be examined because the positions captured in the document are not necessarily fulsome or accurate. Comparing potentially inaccurate positions for symmetries would not benefit the analysis.

Table 8: Party/ Stakeholder Conflict Analysis

Party	Issues - Presenting and Underlying Problems	Needs and Interests- Desires, Wants or Goals to be Achieved	Actual/ Potential Sources of Power and Influence, Degree of Symmetry, and Parties' Willingness to Exercise It	Objective
<b>Eabametoong First Nations</b>	<ul style="list-style-type: none"> <li>- FPIC</li> <li>- Poverty</li> <li>- Traditional Use of Land</li> <li>- Colonialism</li> </ul>	<ul style="list-style-type: none"> <li>- Improving the well-being of the community</li> <li>- Maintaining a pristine natural environment</li> <li>- Preventing irreversible change</li> <li>- Protecting treaty rights</li> <li>- Developing a framework that shares authority and power in decision-making with the province</li> </ul>	<ul style="list-style-type: none"> <li>- Constitutionally entrenched rights, supported by court rulings</li> <li>- International Agreements</li> <li>- presence on the land</li> <li>- inherent jurisdiction</li> </ul>	<ul style="list-style-type: none"> <li>- Maintenance and improvement of traditional ways of life</li> <li>- Improved lasting well-being</li> <li>- Economic development that diversification and fosters indigenous small business</li> <li>- Improved relationships with Provincial authorities with shared decision-making</li> <li>- Maintenance of pristine natural environment</li> </ul>
<b>Province of Ontario</b>	<ul style="list-style-type: none"> <li>- Lack of buy-in from indigenous communities</li> <li>- Lack of experience in large scale mining development</li> <li>- Historic colonialism and obligations towards rectifying historic wrong-doings</li> <li>- Debt</li> </ul>	<ul style="list-style-type: none"> <li>- Accessing mining royalties</li> <li>- Improving socio-economic conditions (i.e. per capita income, decreasing unemployment, etc.) for communities</li> <li>- Fulfilling election promises</li> </ul>	<ul style="list-style-type: none"> <li>- Constitutional authority</li> <li>- Associated law, policy, budgets, institutional structures, etc.</li> <li>- Money</li> <li>- Historic precedence in resource development</li> <li>- Courts</li> </ul>	<ul style="list-style-type: none"> <li>- Improved socio-economic conditions for First Nations communities</li> <li>- Development of roads, infrastructure and mines</li> <li>- Utilize pre-existing policy and legislative structures</li> </ul>
<b>Proponents (for the mining projects now chiefly Noront)</b>	<ul style="list-style-type: none"> <li>- Lack of buy-in from indigenous communities</li> <li>- Future of company rides on approvals</li> </ul>	<ul style="list-style-type: none"> <li>- Developing mines</li> <li>- Generating profit for shareholders</li> </ul>	<ul style="list-style-type: none"> <li>- Historic precedence for resource development in Canada</li> <li>- \$</li> <li>- Repeat players</li> </ul>	<ul style="list-style-type: none"> <li>- Developing the Ring of Fire as profitably as possible</li> <li>- Substantial infrastructure investment by the Province</li> <li>- Development of mines that optimize profit</li> </ul>
<b>Other Matawa Nations</b>		<ul style="list-style-type: none"> <li>- Mixed interests, based on nation. Interests include:</li> <li>- Achieving road access</li> <li>- Decreasing unemployment</li> <li>- Maintaining the natural environment</li> </ul>		

Party	Issues - Presenting and Underlying Problems	Needs and Interests- Desires, Wants or Goals to be Achieved	Actual/ Potential Sources of Power and Influence, Degree of Symmetry, and Parties' Willingness to Exercise It	Objective
<b>Government of Canada</b>	-	<ul style="list-style-type: none"> <li>- Duty to consult and accommodate in Federal jurisdiction/ reconciliation</li> <li>- Impacts provision of services under Ministry of Indian Affairs</li> </ul>	<ul style="list-style-type: none"> <li>- Indigenous affairs are within Federal jurisdiction under the Constitutional division of powers</li> </ul>	<ul style="list-style-type: none"> <li>- Meeting its Constitutional responsibilities</li> </ul>
<b>Environmental NGOs</b>	-	<ul style="list-style-type: none"> <li>- Preserve complete ecosystem</li> <li>- Seen to be working towards reconciliation</li> <li>- Protection of endangered &amp; at-risk species</li> </ul>	-	-

The following sustainability-based objective for the Ring of Fire is based primarily on Eabametoong’s context and experience. Sustainability considers the long term public interest and thus, benefits all parties. However, this objective will be framed by the needs and history of Eabametoong. Therefore, the proposed objective is:

Pursue sustainable development within the region, if and only if sustainable development is understood to mean maximizing both short and long-term benefits, maintaining traditional livelihoods, and improving community well-being.

### 6.4.2 Step 1b): Considering Alternatives

When the concept of “examining alternatives” in the context of decision making is brought forward, it is almost always as an “alternative to what”. Envisioning the sheer change in landscape can be challenging given that approximately 32 000 claims exist within a 4000 km<sup>2</sup> region. However, the dominant version of “what” in the Ring of Fire has already been well defined through provincial studies. The primary future proposed by the province is one of significant development. KPMG’s Ring of Fire Infrastructure Development Corporation (ROFIDC) study #3 provided one view of the most likely scenario of development moving forward once road access becomes available to fulfill the key components of Ring of Fire development. The following chart summarizes possible development in the region over 50 years.



Scenario / Forecast	General East-West Access Alignment	North-South Access Alignment	Combination of Access Corridors
10 years	(1 MINE) Eagles Nest operating Black Thor in Advanced Ex. Phase 3-4 other advanced projects	(2 MINES) Eagles Nest & Black Thor Open 3-4 other advanced projects	
20 years	(3 MINES) Eagles Nest operating 2 other mines operating 4 other advanced projects	(5 MINES) Eagles Nest & Black Thor Open 3 other mines operating 4 other advanced projects	(5 MINES) operating 5-6 other advanced projects
50 years			(6 MINES) operating 1-3 mines in rehab/closure 5-6 other advanced projects

Figure 6-2: KPMG Forecast for Ring of Fire (Siebenmorgen, 2016)

In a 2012 presentation, the key components of the Ring of Fire development were summarized in a presentation by Harvey Yesno as:

- Mines and concentrators on site
- Transportation corridor, rail and all-weather road options currently being assessed
- Ferrochrome refinery at a location in the near north, electricity requirements estimated at 300 MW per year
- Communities of Matawa Tribal Council are most directly impacted
- Include 5 remote communities located in the Far North and 4 road access communities
- Infrastructure corridor and location of processing facilities would transect a broader group of First Nations communities as well as intersect with Metis and municipal interests

## Key Project Components

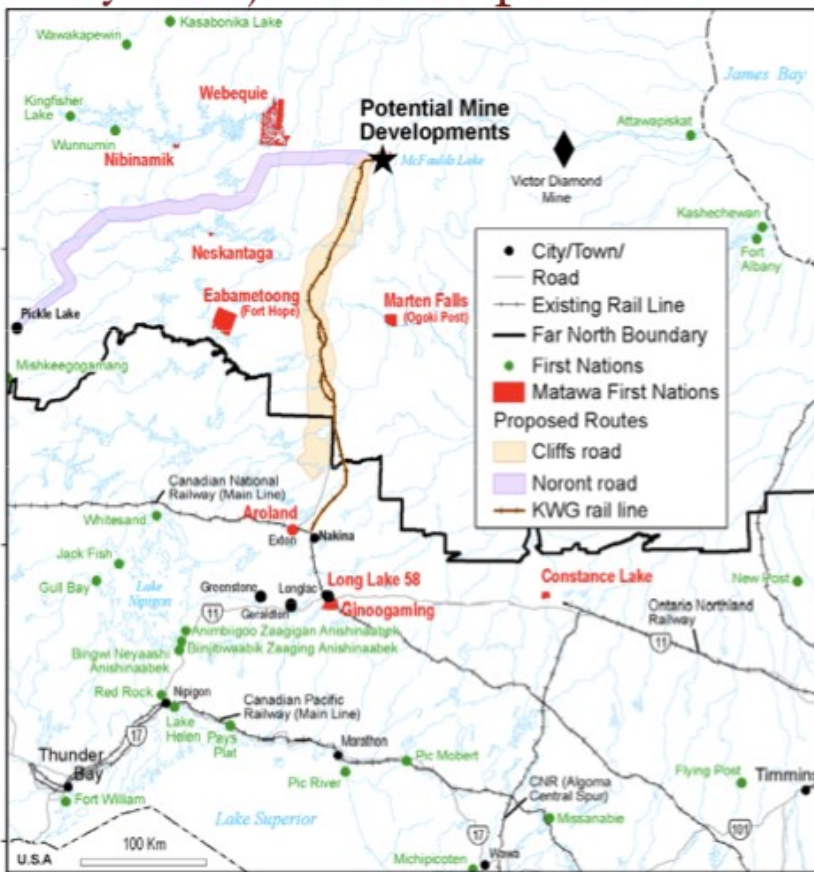


Figure 6-3: Map Overview of The Key Components of Ring of Fire Infrastructure (Yesno, 2012)

This overview indicates the extent of the required infrastructure and the scale of the project. The significance of the impact should be understood when combining the necessary infrastructure with the mining operations.

KPMG’s 10-50 year forecasts summarize the large scale change but do not provide any overview of the extent of the landscape alteration that would occur. Eabametoong’s RSD department developed rough maps to consider the infrastructure development, mining and industrial corridor that KPMG’s forecast would generate. They attempted to show the influence of linear corridor development in the region considering the development of roads and mines, excluding electric generation, transmission corridors and the development of housing and services for mine workers. These rough, community developed maps, have the capacity to show the broad influence of the development envisioned by Ontario and KPMG. The yellow Hs and the yellow lines represent potential hydro-electric generation sites and transmission lines. The green lines represent potential community roads.

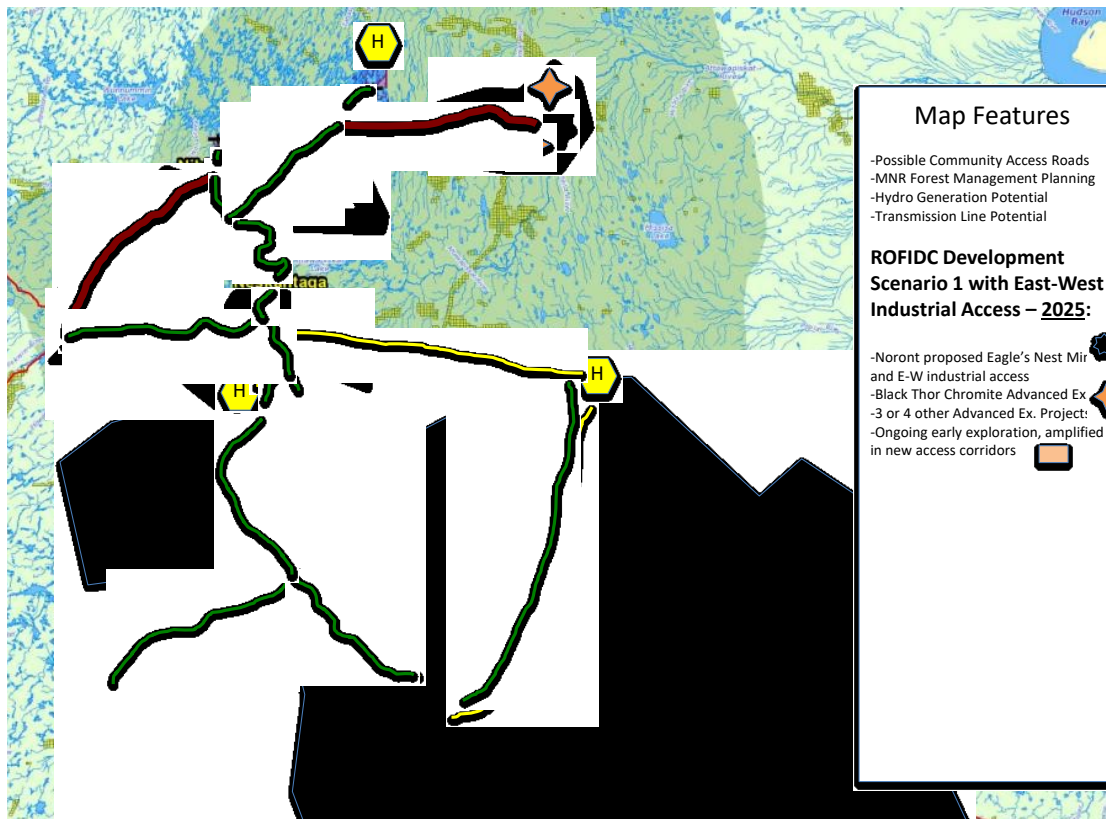


Figure 6-4: 10 Year Development Scenario Based on KPMG Projections (Siebenmorgen, 2016)

Scenario 1 considers the 10 year forecast for the development, with the Eagles Nest and Black Thor mines in operation and access corridors developed. The most recent provincial proposal for an east west corridor by-passes Neskantaga and Eabametoong, and approximately follows the dark red line proposed on the map.



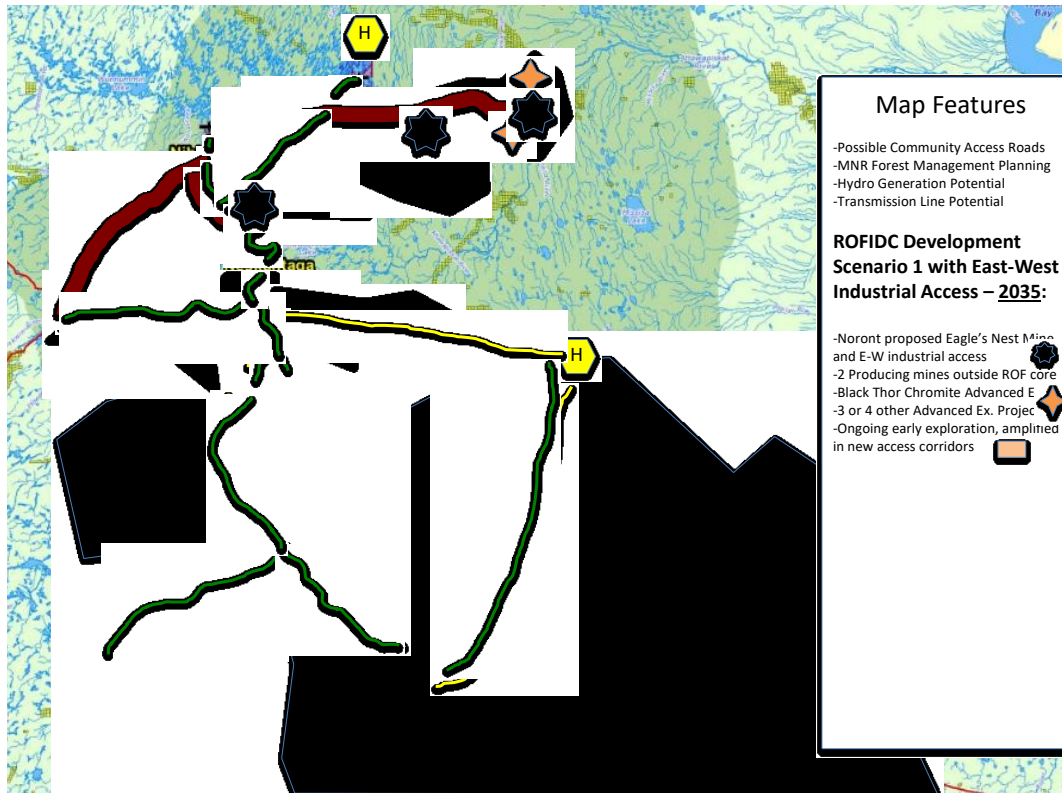


Figure 6-5: 20 Year Development Scenario Based on KPMG Projections (Siebenmorgen, 2016)

In the second forecast looking ahead 20 years, based on KPMG’s study, the east west access corridor has expanded the access to other claims within the Ring of Fire. As a result, the number of mines operating simultaneously is greatly expanded, as are pressures on the environment and communities through ecological fragmentation, increased development and economic stratification. Education and employment opportunities, impact and benefit revenue, decreased costs of goods and better connectivity between communities are likely expanded through this scenario.

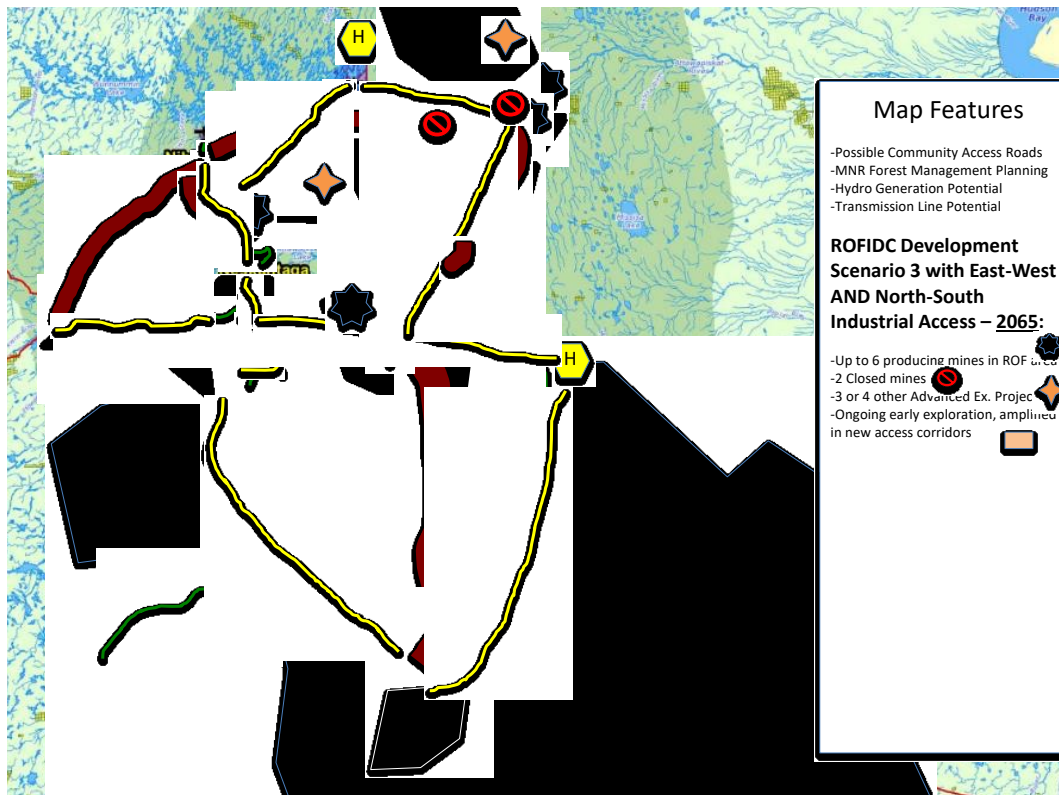


Figure 6-6: 50 Year Development Scenario Based on KPMG Projections (Siebenmorgen, 2016)

In the third forecast, access corridors connect the region and considerable ecological fragmentation is present. The region also contains closed mines where mining legacies must be managed. Socio-economic and ecological change will be significant. However, continued economic opportunities remain present as new mines open and exploration expands. Additionally, new road corridors expand connectivity between the communities.

These scenarios indicate that the potential for both positive and negative regional change is vast. Easily, the “Ontario’s Oil Sands” becomes a ready analogy for a development of this nature. However, as noted in chapter 3, anticipation of the major concerns that emerge in these scenarios is necessary to identify key issues to be addressed within an assessment of development options. The KPMG assessment does not consider how to make development in the region sustainable or beneficial for the impacted communities, but it does provide a basis to identifying the questions that need to be considered.

The development of a linear corridor will generate impacts on migratory wildlife, as well as water systems. The influx of white mining staff will place stress on indigenous culture and open the area up to many of the socio-cultural challenges that boom areas face. The instability of

the mineral market may mean that unexpected closures and inability to properly fund decommissioning of mines should be anticipated.

Lowering the cost of living through ease of access to goods and services, increasing opportunities for jobs in both the resource sector and in spin off employment, and improving infrastructure and services, like access to potable water, consistent and affordable electricity through potential hydro-electric projects, and internet access can all be understood as benefits emerging from a potential 100 years of mining in the region.

There are numerous likely impacts from this scenario when analyzed through the basic sustainability categories. Generally, there are likely negative impacts to the socio-ecological system integrity (e.g., through cumulative ecological fragmentation and water contamination), intergenerational equity (as these resources will be unavailable to better the lives of future generations), resource maintenance and sufficiency (by utilizing the major deposit within a short period of time), precaution and adaptation (as limited monitoring and planning mechanisms have been proposed in the region), and immediate and long term integration (as there has been limited consideration of legacies and impacts). There are likely positive impacts to livelihood sufficiency and opportunity (through employment). The impacts to intragenerational equity, and socio-ecological commitment and democratic governance are unknown, as there are limited governance, legal and policy tools present to ensure fair distribution, transparency and FPIC at this stage. Quite broadly, based on the limited information available in this analysis, this approach to development is likely unsustainable, and leaves communities open to the problems identified in chapter 3, particularly in the volatile resource market.

During the workshops, numerous discussions about the lack of alternatives presented by the province emerged. Alternative scenarios forward must be explored based on the community's desire to improve their well-being and maintain their traditional practices. In particular, I propose that alternative approaches to development need to be determined, including a scenario where no mining is undertaken, as well as multiple scenarios that consider the pace and scale of mining in the region, as well as road and infrastructure development. The community also understand, through both workshops and in discussions with leaderships, that a No Go option may also present an unsustainable future, and given the challenging conditions, such as boil water advisories, over-crowding in homes, addiction, and lack of employment, this continued future is likely undesirable for the community. In a 2018 speech, Chief Atlookan noted that the

community is not “anti-development” but they want to be partners in how development proceeds (Atlookan, 2018). Focusing on alternatives presents a means of considering what futures EFN might want to participate in.

I propose that other alternative futures could include managing the pace and scale of development. These possible futures include capping the number of mines that could be in operation at a time, developing a larger scale infrastructure plan that is integrated with mining proposals, and considering approaches where mines decreased their annual yield to extend their operational life ((R. Gibson, 2006a; Government of Canada, 1999). Additionally, members of EFN in workshops have suggested developing strategies where minerals with less market volatility or less serious environmental risks are prioritized for extraction. Mineral extraction projects that cause greater ecological impacts could be approved once the communities felt confident in the government and proponents’ capacities to operate at the highest standards, monitor carefully and respond effectively to emerging problems and opportunities. Scenarios that consider pace, scale and desirability could be built and evaluated to compare and determine which approach would be most likely to be sustainable. These alternatives require significant investment into scenario sciences and careful application of traditional knowledge to anticipate change.

In order to apply the sustainability criteria, much more work needs to be done to consider alternatives. Further questions emerge for the community about what futures are possible, likely, desirable and undesirable for the Ring of Fire region, based on ecological modelling, attention to socio-economic and cultural objectives, consideration of the likely implications of development in the mid-North as developed in chapter 3, and the potential effects of climate change. These additional questions emerged as a result of observed deficiencies from experts, consultants and involved community members as part of the privileged negotiation process. However, this section can provide a general conceptualization of how scenarios can inform assessment and decision-making.

### **6.4.3 Step 2: Consider Key Case/ Context Concerns**

The second step within developing a sustainability assessment process is determining the key case and context considerations. The majority of key concerns raised by the community, including lack of trust and integrative decision making by the Province, were identified at length

in the previous chapter. However, additional broad concerns about the integration of FPIC, the lack of sustainability considerations and the inclusion of gender merit additional attention. These concepts were identified by the community during workshops, as well as by leadership and consultants during negotiations. Integrating sustainability and establishing free, prior and informed consent have been established by both official documents from the community and in consultation with leadership as community priorities (Bradshaw et al., 2012; Eabametoong First Nations, Mishkeegogamang First Nations, & Ministry of Natural Resources, 2013; Eabametoong First Nations & Neskantaga First Nation, 2017b; EFN Resource Stewardship Department, 2017; Siebenmorgen, 2017). Considering gendered issues is a priority for many community members, particularly female elders that I met, but also is established in academic research as a major short-coming of assessment processes, particularly in indigenous communities (Manning et al., 2018).

#### 6.4.3.1 Lack of Integration of FPIC

Establishing free, prior and informed consent as a pre-requisite for undertakings is a priority of the Matawa First Nations that was expressed in a number of ways during my research. The workshops held in EFN supported the importance of establishing FPIC. Each individual First Nation has its own understanding of FPIC, as does the Ontario government.

Important within the FPIC package in the Ring of Fire case is the “Prior” piece. What is required, about what and when as a basis for considering willingness to grant consent? For Eabametoong, that stance has been clear. They are seeking a regional level assessment of potential development pathways prior to providing consent. They want certainty in their role, the pathway forward and what is being agreed to (Eabametoong First Nation, 2018). Other Matawa communities do not necessarily have that approach to the concept of “Prior” and may be comfortable with a project level focus. For Eabametoong, this approach has the great problem of being reactionary, generating no continuity or plan for going forward and providing no opportunity to assess the overall, long term implications of the granting of consent. It is a “slippery slope”, where once one project approval decision is made, it becomes easier and easier for the other decisions to seem inevitable. As opposed to seeking consent for developing the region and how best to move forward, the process only seeks consent for small pieces.

Understanding consent is challenging for the parties. Consensual processes have been identified as a priority but have collapsed throughout the period of the Ring of Fire deliberations because it has never been clear what communities are consenting to. The development of a road is framed primarily as a means for access to the communities, but the maps show clearly that a road provides access for mining. Consenting to a road does not necessarily mean that communities are consenting to a mine. However, as these proposed roads would be built in a way to provide access to mines, the pressure to approve mining assessments and start permitting and construction will be intense. Additionally, the province has committed to engaging in project level assessment. Therefore, proposals would be brought forward for each mine and additional development on an ad-hoc basis. Communities would be consenting or fighting each puzzle piece in a larger picture that was not subject to public examination and was not approved by communities. Even the provincial government may not have assembled the whole picture, though it set the process in motion when exploration permits were handed out.

One of the primary concerns that emerged with Ontario's overall approach was the focus on process provisions for consultation with EFN and other Matawa First Nations rather than inclusion of EFN and other Matawa First Nations as co-authorities in decision making. The use of the term "participation" within Ontario's documents (Eabametoong First Nations & Neskantaga First Nation, 2017b; Matawa First Nations and the Crown, 2014) serves as a catch-all for discussion of potential improvements in project level EA without any guiding principles or commitments towards co-governance, joint decision-making or co-management regimes. Power to make the ultimate decision lies with the provincial Minister of Mining and Northern Development as the responsible authority. EFN and other Matawa First Nations have little basis for confidence that their participation in the process as proposed will be influential on matters central to their interests and concerns. Acknowledging TEK, translating the proceedings into Ojibwa and other languages, and generally being respectful are important. They lay the groundwork for constructive, culturally considerate conversations, but without a shared understanding of the substantive intention of the assessment, and clarity about the sharing of authority, it is very unlikely that transformative, sustainable results can emerge.

Understandings of FPIC and its implications are different across Indigenous communities, based on each community's interpretation of the concept (Sadiq, 2017, Aguon & Hunter, 2018; Doyle, 2018; Patzer, 2019; Scott, Lawrence, & Rice, 2016). However, FPIC has

not yet been given by Eabametoong or by any of the other Matawa First Nations. Consent from each community is required and the approach currently being taken seems unlikely to generate it. Within this dissertation, the evidence suggests that the application of basic conflict management approaches within assessment would prove beneficial to EFN and other parties. The objectives of massive development of the region utilizing conventional means and generating the usual outcomes (boom and bust, adverse ecological and social legacies, etc.) are the not objectives of indigenous people within the region. Adapting processes by ensuring they are translated into Ojibwa does not reduce the concern that Indigenous people are fighting to achieve something different, while Ontario continues to push conventional practices without engaging in the issues of concern to the community. Ensuring that communities, government and industry have a mutually agreed upon objective is crucial. For parties like Eabametoong, that objective will require engagement in development of a credible regional plan through sustainability-based strategic assessment of the potentially reasonable options. Other parties may not need that level of information to provide a basis for consent. Regardless, it is crucial for parties in conflicts to jointly define the ultimate objective in order to generate consent.

#### 6.4.3.2 Sustainability and Regional Assessment Not Central to Approach

The benefits from developing the Ring of Fire have been poorly identified by the government and proponents. Money and jobs are attractive, but poorly specified benefits, and histories of negative consequences for Indigenous communities from resource developments are at the top of mind for much of the leadership of Eabametoong. Eabametoong is seeking assurances that the approach undertaken maximizes benefits and that trade-offs are minimized through careful planning and anticipating problems based on their historic challenges. One method of ensuring that these problems are managed is applying sustainability criteria in regional assessment of overall options.

While most standard environmental assessment practices are rooted in mitigating significant adverse biophysical effects at the project level, demonstrated best practice in Canada and globally has moved to ensuring lasting socio-ecological gains while mitigating adverse effects (Gibson, 2012). In particular, within the case of the Ring of Fire, sustainability-based criteria and a regional level assessment process are crucial and mutually re-enforcing. An emphasis on strategic level assessments (including regional ones) provides credible and

authoritative guidance to project level planning and assessment and monitoring, and assists in building consensus by providing alternative framings of the future for dialogue and collaboration (Eabametoong First Nations & Neskantaga First Nation, 2017b; EFN Resource Stewardship Department, 2017; Kleinfelder & Yesno, 1984; Siebenmorgen, 2017). A sustainability-based approach, as identified in Chapter 4, would consider social, economic, cultural and biophysical factors and their interactions over the long term; identify the positive and adverse effects of available options, determine what supporting programs, policies and initiatives must be in place for the development to succeed, and generally aim for the maximum lasting long-term benefits and minimal trade-offs for all parties. Eabametoong's RSD is concerned that the province could implement an enhanced process at the project level that embraces a sustainability-based approach, but would be of minimal value without the regional strategic level application. The absence of strategic level attention to the cumulative effects, broad alternative and big policy issues undermines the credibility of the process. Conversely, implementing a regional assessment without integrating sustainability criteria could limit the focus of the assessment to biophysical concerns, and by-pass the crucial socio-economic opportunities and challenges that could arise.

#### 6.4.3.3 Inclusion of Gender

Indigenous women are foundational to Indigenous resilience and FPIC, and current research on how to support that role remains limited (Anderson & Lawrence, 2003; Burnette, 2015; Koutouki, Lofts, & Davidian, 2018). At the EFN community level, the role of women is discussed anecdotally as crucial, but there has been limited strategy or work done to explicitly enhance their role in decision-making. The integration of gender considerations into policy making is referred to as gender mainstreaming. Gender mainstreaming is defined in 1997 by the UN Economic and Social Committee as,

...the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal is to achieve gender equality."



Beyond mainstreaming, gender effects cannot simply be addressed through one lens. Approaches need to consider ethnicity, sexuality, religion and other considerations. Intersectionality, according to the Ontario Commission for Human Rights, means:

“An intersectional approach takes into account the historical, social and political context and recognizes the unique experience of the individual based on the intersection of all relevant grounds. This approach allows the particular experience of discrimination, based on the confluence of grounds involved, to be acknowledged and remedied.”

For Indigenous women, planning and assessment requires an intersectional approach to gender mainstreaming and an understanding that planning and assessment problems are more complex than they are generally understood to be.

For environmental assessment and planning, gender mainstreaming provides added dimensions to be incorporated into the many factors needing attention to fix the public policy process surrounding planning and decision making for mines and mining regions.

#### 6.4.3.4 Summary

In summary, EFN is seeking an approach forward that focuses on establishing FPIC, considers sustainability as they understand the concept, incorporates other elements of next generation assessment, and includes gender dimensions in its analysis. The concept of Prior in FPIC can also be interpreted to entail the application of a strategic assessment prior to providing consent. These concepts need to be integrated into the design of criteria categories.

#### **6.4.4 Steps 3 and 4: Integrate Generic Sustainability Concerns and Develop Manageable Categories**

Developing a set of context specified criteria that incorporate the generic sustainability understandings can now be undertaken. These criteria can be utilized to assess the desirability of impacts that any undertaking and its alternatives might have on the community. The categories and criteria reflect an understanding of sustainability tailored to the context of EFN and the Ring of Fire. The context specification is developed through the analysis undertaken in previous chapters, the work of RSD and the work of the Well-Being Study. Much of the groundwork for developing context-specific sustainability criteria for EFN was generated in previous academic and community studies. Thus, in practice, the focus of my work was to ensure that the categories and criteria developed with other academic partners and the community previously were

sufficient to cover the context-specific concerns relevant to all eight of the generic sustainability categories. The specification of criteria in the broad categories was developed primarily by RSD, and the criteria refined utilizing the Wellbeing Study (Bradshaw et al., 2012). They have been presented to the Matawa Chiefs' Council. The sustainability criteria presented below incorporate the substantive considerations in the eight major categories of Gibson's sustainability criteria set but are categorized to reflect the case and context. Within each category, the gathered criteria and questions are based on the detailed materials from the Wellbeing Study. The importance of utilizing those measures is that they can provide a baseline for comparison of alternatives (Bradshaw et al., 2012). However, the Wellbeing Study did not cover all aspects of sustainability analysis, particularly in relation to the environment and long term socio-economic prospects. Additional criteria that have been developed to supplement these concepts have been included and bolded and starred in the table below. This bold text thus indicates that there are no baseline or comparative data available in the wellbeing study. There may be existing data available from provincial studies, third party studies, or materials from other indigenous communities.

The six broad categories developed by EFN's RSD are: ***Improving Community Wellbeing, Healthy Environment and Relationships, Wisdom and Equity for Generations, Open and Responsible Governance, Walking together with Respect and Precaution,*** and ***Combining Action, Learning and Planning***. These categories and their definitions were developed by EFN's RSD department after undertaking a training workshop on sustainability assessment. The assessment categories are based on concepts already conceptualized within the community as part of their understanding of well-being (Bradshaw et al., 2012; Kleinfelder & Yesno, 1984; Siebenmorgen, 2016).

The category of ***Improving Community Wellbeing*** refers to considering livelihood sufficiency, opportunity and quality of life – socially, economically and in terms of health. It refers primarily to livelihood sufficiency and opportunity, economic stratification and equity, economic diversification, small business development, social life and interaction and community health. Community well-being has been a major focus of EFN's policy approaches in the past 15 years, including developing services to assist in reducing drug addiction and dependence, and increasing business opportunities through government grants.

The category of ***Healthy Environment and Relationships*** considers the health and integrity of socio-ecological systems, as well as the relationship that community members have

with their environment. Within EFN, the community understands itself as “stewards of the land” (Atlookan, 2018). This responsibility, as well as their use of country foods, their use of water, and their spiritual connection to the land as provided to them by the Creator, forms the basis of the concepts. The term relationship is, therefore, of fundamental importance. From the well-being study, the concepts included within this section refer primarily to socio-ecological systems integrity, community stewardships, and cumulative environmental effects.

The category of *Wisdom and Equity for Generations* refers to integrating intra- and inter-generational equity into decision-making. For EFN, considering the wisdom and experience of elders, and the needs and understandings of youth is crucial to decision-making. Most members of the community discuss the future in terms of the lives of their children and grandchildren, particularly in terms of opportunity. From the well-being study, the concepts included within this section refer to community values and decision-making priorities, education, community vitality, family completeness, and traditional practices.

The category of *Open and Responsible Governance* relates to the transparency, effectiveness and responsiveness of decision-making. Free prior and informed consent, a major focus for EFN, is housed within this category. The focus also considers consultation practices, control over resources and inter-jurisdictional cooperation. Along with governance, this category also considers transparency and community safety. The prevalence of addiction, violence and suicide in the community has become a major focus of chief and council, not simply as a community health issue, but also as a policy issue. Ensuring that band members feel safe and secure, are free from violence, and feel that their voices on these issues are heard by leadership is an important part of this category. Additionally, this category considers dialogue between EFN, proponents, and government. Translating and communicating community priorities in negotiations with these parties is another emphasis in governance.

The category of *Walking Together with Respect and Precaution* primarily considers uncertainty and the need for adaptation. EFN is a remote and isolated community. Development of any nature in the region of will likely change its degree of remoteness and isolation. This category attempts to consider likely change, as well as how preserve and enhance the resilience of valuable components and relationships, as defined by the community, in the face of external changes. For resilience, it is important to first distinguish those characteristics that people want to preserve and enhance, from those that need to be developed or transformed. In the community

well-being study, those factors are identified so that resilience can be measured. In the Ogoki Road study, Kleinfelder and Yesno found that the community would likely be vulnerable to significant negative risks from a road. Thus, this category primarily entails needs for strategic level guidance for projects and programs, community and regional adaptive management and developing resilience.

The category of *Combining Action, Learning and Planning* considers the implications for essential needs and services for the EFN community. These include water, roads, electricity, internet, etc. and the sufficiency of those services. EFN has considerable infrastructure, housing and servicing needs. They want to plan and ensure that those needs are given adequate attention. The focus of this chapter is on increasingly strategic and informed planning, and mutually reinforcing and strategic gains in development.

These categories are further broken down into criteria (see Table 9, below). Due to the well-being studies undertaken with help from experts at the University of Guelph, the criteria set out below in table 9 could be elaborated to incorporate attention to pre-existing and community approved baseline measures (excluding the criteria that are bolded and asterisked which do not have baseline data). EFN's baseline data are confidential and cannot be shared publicly. However, more fully elaborated criteria could be developed quite readily and used to compare alternative undertakings, whether those be scenarios for future development of road corridors or mining proposals. Each criterion requires consideration of how the community might be impacted by a development and application of the criteria will require careful analysis, including the use of traditional knowledge, historical precedents, and scientific modelling. Application of these criteria is beyond the scope of this dissertation, but may well be initiated in the future.

Considering the interactivity between these concepts is also crucial to this analysis but challenging to capture. In complex socio-ecological systems, the major effects arise for the interactions among component factors, stresses, and feedbacks. In the generic eight sustainability criteria, this is primarily captured in *Immediate and long term integration*, which means, to “Apply all principles of sustainability at once, seeking mutually supportive benefits and multiple gains” (Gibson, 2005). To capture the interactivity in the system, I generated a matrix that could consider the impact of the subcategories listed on the other subcategories (see Appendix 2). In evaluation, these categories can be considered within the context of other categorical change. The likely trends forward, as discussed in chapter 3, and historically similar cases could likely be

utilized to anticipate the impact of one sub-category on another (i.e. Small Business/ Indigenous Owned Business Expansion would likely positively influence Livelihood and Sufficiency).

However, looking at interactivity in the future requires a precautionary lens (Cornish, 2005).

## 6.5 EFN Sustainability Categories and Criteria

Table 9: EFN Sustainability Categories and Criteria

EFN Category	Sub-categories	Criteria/ Questions The * refers to criteria without pre-existing baseline data
<p><b>1. Improving Community Wellbeing</b></p> <p><i>Standard Sustainability Characteristics include:</i></p> <p>Livelihood Sufficiency and Opportunity</p> <p>Socio-ecological Civility and Democratic Governance</p>	<p><b>1. Livelihood sufficiency and opportunity</b></p> <p>Economic Stratification/ Equity</p> <p>Economic Diversification</p> <p>Small Business/ Indigenous Owned Business Expansion</p>	<p>a. Would this option still allow people to pursue a traditional lifestyle (as opposed to a Western lifestyle)?</p> <p>b. Would this option increase the availability of employment options within EFN?</p> <p>c. Would this option improve local economic conditions in EFN?</p> <p>d. Would this option increase the number of members who have participation in on-the-job training or local certification?</p> <p>e. Would this option increase the proportion of members employed part-time?</p> <p>f. Would this option increase the proportion of members employed full-time?</p> <p>g. Would this option increase the proportion of members employed in management or leadership positions?</p> <p>h. Would this option increase the proportion of members employed in indigenous owned business or partnership?</p> <p>i. Would this option increase the proportion of members employed in local band administration or other public service?</p> <p>j. Would this option increase the proportion of members employed in mineral exploration, support service, or mine-related company?</p> <p><b>k. Would this option decrease economic stratification in the community?*</b></p>
	<p><b>2. Social Life and Interaction</b></p>	<p>a. Would the option increase participation in faith-based activities?</p> <p>b. Would the option increase affiliation with local spiritual groups?</p> <p>c. Would the option strengthen spiritual connection with land?</p> <p>d. Would the option increase the frequency of participation in dances?</p>

		e. Would the option increase participation in community sports and other games?
		f. Would the option increase attendance at community events?
		g. Would the option increase participation in fund-raising and other charitable events?
		h. Would the option increase the sharing of country foods and resources?
		i. Would the option increase membership in community groups?
	<b>3. Community Health</b>	a. Would the option positively impact the cost of food?
		b. Would the option positively impact the quality of traditional food?
		c. Would the option decrease the consumption and reliance of store-bought foods?
		d. Would the option increase the consumption and reliance of traditional foods?
		e. Would the option impact the presence of lifestyle illnesses?
		f. Would the option decrease the likelihood of lifestyle illnesses?
		g. Would the option decrease access to drugs and alcohol?
		h. Would the option decrease the prevalence of drug and alcohol abuse?
		i. Would the option improve opportunity for physical exercise?
		j. Would the option decrease the prevalence of mental health issues?
		k. Would the option improve overall mental health?

<b>EFN Category</b>	<b>Sub-categories</b>	<b>Criteria/ Question</b>
<b>2. Healthy Environment and Relationships</b>  <i>Standard Sustainability Characteristics include:</i>  Resource maintenance and efficiency	<b>1. Socio-ecological system integrity (and relationships) must be maintained and improved</b>	a. Would this option increase the quality of game fish?
		b. Would this option increase the quality of large game?
		c. Would this option increase the quality of small game?
		d. Would this option increase the quality of other important/ ecologically significant species?
	Community stewardship values and principles	e. Would this option increase the quantity of game bird species?
		f. Would this option increase drinking water quality in lake and river water?
	Socio-ecological systems and stewardship relationships	g. Would this option decrease the presence of abnormalities on game species?
		h. Would this option decrease the presence of refuse or other visible pollutants in traditional territories?
	Cumulative environmental effects and conditions	<b>i. Would the option decrease linear corridors in the traditional territories?*</b>

Socio-ecological system integrity		<b>j. Would this option decrease fossil fuel emissions overall?*</b>
		<b>k. Would this option improve carbon sinks?*</b>
		<b>l. Would this option improve river navigability (considering water levels, dams/levees, etc.)?*</b>

EFN Category	Sub-categories	Criteria/ Question
<p><b>3. Wisdom and Equity for Generations</b></p> <p><i>Standard Sustainability Characteristics include:</i></p> <p>Intragenerational equity</p> <p>Intergenerational equity</p> <p>Immediate and Long-Term Integration</p>	<p><b>1. Education</b></p> <p>Community values and decision-making priorities</p>	<p>a. Would this option increase high school completion rates?</p> <p>b. Would this option increase c in adult education programs?</p> <p>c. Would this option increase enrollment in out of town secondary or post-secondary programs?</p> <p>d. Would this option increase completion of industry training programs, apprenticeships, or other qualifications?</p> <p>e. Would this option increase completion of college diploma or university degree programs?</p> <p>f. Would this option increase community learning of traditional knowledge?</p> <p>g. Would this option increase Ojibwa language skill proficiency?</p> <p>h. Would this option increase the quality of Native-centred curriculum for children (including history, traditional skills, and values)?</p> <p>i. Would this option increase the quality of overall academic instruction?</p> <p>j. Would this option increase the quality of the learning environment?</p> <p>k. Would this option decrease annual dropout rates?</p> <p>l. Would this option increase access to library and public computers with reliable internet?</p> <p>m. Would this option increase community member confidence in English reading and writing?</p> <p>n. Would this option increase community member confidence in Ojibwa reading and writing?</p>
	<p><b>2. Cultural vitality and traditional practices</b></p>	<p>a. Would the option improve the regular use of Ojibwa overall?</p> <p>b. Would the option improve the regular use of Ojibwa by adults?</p> <p>c. Would the option improve the proficiency of use of Ojibwa by children and youth?</p> <p>d. Would the option increase the societal importance of utilizing Ojibwa?</p> <p>e. Would the option improve adult participation in extended hunting/ trapping/ fishing trips?</p> <p>f. Would the option improve youth and child participation in extended hunting/ trapping/ fishing trips?</p> <p>g. Would the option encourage or facilitate participation in extended hunting/ trapping/ fishing trips?</p> <p>h. Would the option encourage or facilitate the practice of traditional cooking?</p>



		I. Would the option encourage or facilitate the practice of traditional craft making?
		j. Would the option encourage or facilitate the teaching and sharing of traditional skills?
		k. Would the option encourage or facilitate the participation in celebrations and events?
		l. Would the option encourage or facilitate the participation in family gatherings?
		m. Would the option foster longer family gatherings?
		n. Would the option increase community members reliance upon each other/ mutual assistance for each other?
	<b>3. Family, youth, and children</b>	a. Would the option decrease the likelihood of family members dislocation?
		b. Would the option decrease the number of family members living away from the community (for 2+ months)?

EFN Category	Sub-categories	Criteria/ Question
<p><b>4. Open and Responsible Governance</b></p> <p><i>Standard Sustainability Characteristics include:</i></p> <p>Socio-ecological Civility and Democratic Governance</p> <p>Immediate and Long Term Integration</p>	<p><b>1. Free, prior and informed consent</b></p> <p>Indigenous jurisdiction and decision-making context</p> <p>Participatory community governance and processes</p> <p>Capacity Building &amp; Experience in Deliberations</p>	<p>a. Would this option improve access to information about mining process?</p> <p>b. Would this option improve access to information regarding traditional use areas?</p> <p>c. Would this option improve participation in consultation process?</p> <p>d. Would this option improve community control over resources or project development?</p> <p>e. Would this option improve participation in land use planning, cultural mapping, or other community based research/ planning?</p> <p>f. Would this option increase the frequency of leadership reporting to the community?</p> <p>g. Would this option increase the frequency of member opportunity to comment and make suggestions for leadership?</p> <p>h. Would this option increase participation in community dialogue?</p> <p>i. Would this option increase access to information regarding Council decisions and/or project proposals?</p> <p>j. Would this option increase access to information regarding community plans and other initiatives?</p> <p>k. Would this option increase participation in committees or other local advisory groups?</p> <p>l. Would this option increase participation in local referendums, electing leaders or other voting processes?</p> <p>m. Would this option increase active involvement in community leadership?</p> <p>n. Would this option increase involvement of youth or young adults in local governance?</p> <p>o. Would this option increase involvement of elders in local governance?</p> <p><b>p. Would this option increase the numbers (or percentage) of women in leadership roles?*</b></p>
	<p><b>2. Community Safety</b></p>	<p>a. Would the option decrease the incidence of violence?</p> <p>b. Would the option make people feel safer?</p> <p>c. Would the option decrease the incidence of vandalism or theft?</p> <p>d. Would the option decrease the fear of experiencing bodily harm?</p> <p>e. Would the option decrease the likelihood of witnessing or being a victim of violent acts?</p> <p><b>f. Would this option increase the likelihood of partner violence?*</b></p> <p>g. Would the option increase the likelihood of children being left outside to play unsupervised?</p>

		h. Would the option increase community trust?
		i. Would the option increase the sense of safety within the community?
		<b>j. Would the option improve mutual support and understanding with other First Nation communities?*</b>
		<b>k. Would the option improve mutual support and understanding with the Provincial government?*</b>
		<b>l. Would the option improve mutual support and understanding with the Federal government?*</b>
		<b>m. Would the option improve mutual support and understanding with industry partners?*</b>

EFN Category	Sub-categories	Criteria/ Question
<p><b>5. Walking together with Respect and Precaution</b></p> <p><i>Standard Sustainability Characteristics include:</i></p> <p>Resource maintenance and efficiency</p> <p>Socio-ecological Civility and Democratic Governance</p> <p>Socio-ecological system integrity Precaution and adaptation</p> <p>Immediate and Long Term Integration</p>	<p><b>1. Developing resilience</b></p> <p>Adaptive management</p> <p>Strategic level guidance for projects and programs</p> <p>Community and regional adaptive management</p>	a. Would this option decrease outsider hunting or fishing on traditional land?
		b. Would this option decrease outsider visits to EFN per month?
		c. Would this option decrease outsider working in EFN per month?
		d. Would the option improve community resilience (take desired outcome improvements divided by total number of measurable possible improvements)?
		<b>e. Would this option have the institutional and technical flexibility to change course?*</b>
		<b>f. Would this option allow for legacy planning?*</b>
		<b>g. Is redundancy built into the system?</b>
		<b>h. Would this approach be able to be reversed (to revert the system to its pre-existing state)?</b>

EFN Category	Sub-categories	Criteria/ Question
<p><b>6. Combining Action, Learning and Planning</b></p> <p><i>Standard Sustainability Characteristics include:</i></p> <p>Precaution and adaptation Socio-ecological Civility and Democratic Governance</p> <p>Immediate and Long Term Integration</p>	<p><b>1.</b> Progress towards local opportunity</p> <p>Increasingly strategic and informed planning</p> <p>Mutually-reinforcing and strategic gains</p> <p>Processes of community learning</p>	a. Would this option provide reliable internet service?
		b. Would this option improve community road maintenance?
		c. Would this option decrease the cost and reliability of heating?
		d. Would this option decrease the cost and reliability of electricity?
		e. Would this option increase drinking water quality in homes?
		f. Would this option provide sufficient housing for the community's needs?
		g. Would this option provide sufficient affordable housing for the community's needs?
		h. Would this option provide sufficient quality of housing for the community's needs?
		i. Would this option provide sufficient housing for elderly community members?
		<b>j. Would this option allow for sufficient electricity for projected sufficient housing?*</b>
		<b>k. Would this option allow for sufficient clean water for projected sufficient housing?*</b>

## **6.6 Sustainability Criteria Application**

The application of these criteria is far ranging. These criteria could be utilized for both project assessment and regional assessment considerations. These criteria should be applied to compare options and alternatives, across time periods. Sustainability is a long-term objective. Anticipating short and long term implications is crucial to the application of these criteria (Gibson, 2016a). In the following section, I will explicitly consider one means of utilizing the criteria – strategic level assessment.

## **6.7 Vehicles for Implementing Strategic Level Assessment**

The second objective of this chapter is to determine means to operationalize these criteria and generate grounds for a regional assessment of the Ring of Fire and its impacts on the Matabwa First Nations. In chapter 4, I establish the benefits and potential governance frameworks for strategic assessment. In the following sections, I consider if any vehicles exist that might help with the implementation of sustainability based regional assessment and look in particular to existing agreements to see if there is a fit. The current approach to assessment and related decision making in the Ring of Fire is undesirable. The forward trajectory is one of fragmented development, where the numerous projects will be undertaken concurrently and overall options, interactions and implications are not openly examined. As a result, major problems are left unconsidered, including that conflict has not been managed, sustainability has not been prioritized and FPIC has not been achieved. Managing conflict, developing sustainably and achieving FPIC are exceptionally challenging goals to achieve.

In order to shift to a more desirable development trajectory and better consider the problems of conflict, sustainability and FPIC, some of the approaches recommended in chapter 4 should be deployed. In particular, matters would be improved with the implementation of a regional assessment approach, with the application of case specific sustainability criteria and with the integration of monitoring. The three sides of the triangle: relationships, process and substance, can be strengthened by effective regional analysis, through providing process guidance for project level assessment, creating substantive regional visions, and establishing a cooperative framework for dialogue on development to assist in development.

The understandings developed within the previous chapters indicate that strategic level assessment provides the best opportunity to capture cumulative effects, anticipate regional

challenges and discuss the region's future. Additionally, numerous informed parties have identified the need for regional assessment in the Ring of Fire (Chetkiewicz & Lintner, 2014; Chetkiewicz & Ray, 2017; ECO, 2015). However, within the existing legislative framework and Canadian case history, there are limited opportunities to implement EA and few salient examples (Aschemann et al., 2012; Harriman & Noble, 2008; Multi-Interest Advisory Committee, 2016). Therefore, one of the requested considerations from EFN's advisors was how regional strategic analysis could be implemented within the Ring of Fire. Document analysis and discussion with Chief, resource advisors, consultants and RSD provided some potentially effective approaches available to institute a regional analysis. Additionally, the Far North Act has been suggested in academic meetings that I attended in Guelph in 2015 as a means of regional inquiry. The primary approaches for structuring assessment according to community experts for best practice are:

1. Regional strategic assessment to evaluation overall development options and prepare a regional plan and associated other strategic initiatives for implementation
2. Large Infrastructure Based Assessment
3. Community by Community plans

Simultaneously, attention to legacies and monitoring will be crucially important for on-going analysis. In the following section, I will consider four specific avenues to implement regional assessment. I will then compare the merits of each approach for achieving the overall sustainability objectives that EFN desires.

### **6.7.1 Option 1: Regional Scale Assessment**

The first option for the Ring of Fire is the development and implementation of a formal regional plan. The province has tried to address regional scale issues with limited results. The evident internal-to-government barriers to success have been institutional in nature and relate to the limited perspectives of the relevant provincial government departments and agencies. Challenges with the Far North Act and the Far North Planning Initiative were discussed in Chapter 5. The Ring of Fire Secretariat is designed to act as an intermediary between government departments, the indigenous communities and industry. The Regional Framework Agreement and the Jurisdiction table attempted to elucidate how the powers of indigenous communities could be wielded in the process. Within this institutional arrangement, there are key missing elements

required to ensure appropriate development and promote FPIC and next generation assessment methods.

To manage conflict, ensure FPIC and move towards sustainability, the parties need an institutional arrangement that can require better practice, such as sustainability assessment and regional assessment, and require integrated identification and assessment of regional future options. Objectives, criteria, and institution arrangements should be based on sustainability and meeting FPIC requirements. A regional strategic environmental assessment could manage pace and scale, with a linked complimentary monitoring organization. Regional assessment and monitoring could also link to regional planning and project approval. In combination, these processes could assist in drastically improving the development process, as proposed in theory in chapter 4.

The fact that strategic level, sustainability-based assessment has not been conceptualized by the provincial government does not mean that there would not be significant merit in undertaking an approach that would anticipate problems and cumulative impacts at a regional scale. The idea of tiering decision-making (e.g., designing regional plans to guide and learn from local plans and specific projects) in Canada is not unprecedented. Urban planning has utilized tiered approaches to decision making for decades, as have efforts to consider strategic power grid planning prior to individual assessments (Gibson et al., 2016).

The benefits of this approach would be to address cumulative effects, broad alternatives and big policy issues, to provide an anticipatory tool for proponents, and to minimize the duplication of effort through providing credible and authoritative guidance for each project level EA. Following the plan would contribute to a proponent's ability to gain a "social licence to operate". This policy could provide proponents valuable planning and project development guidance that would improve their EA applications. For EFN, it would provide general guidance about whether or not a given proposal is acceptable and meet with regional goals. Essentially, it could do the heavy lifting and strengthen the capacity of the Matawa governments to fully participate in EA.

Ideally, the Federal Cabinet or provincial mandate could order a SEA without additional supporting legislative imperatives. Additionally, new proposed Federal assessment legislation would enable use of regional level assessment as a tool (Bill C-69, 2018). However, the Federal government has not been involved in the Ring of Fire at any scale and the Province has shown a



strong preference for avoiding new approaches. In the Ring of Fire, there are multiple laws and policy frameworks that could provide an opportunity to implement sustainability-based strategic assessment, as advocated in chapter 4. Two pre-existing policy structures could be utilized to implement a regional strategic assessment. These structures are the Far North Act and the Regional Framework Agreement.

### **6.7.2 Option 2: Far North Planning Act and Initiative**

Far North Act, which came into effect on January 31, 2011, provides “the legislative foundation of land use planning in the Far North” (Government of Ontario, 2014), with the following purposes:

“1 The purpose of this Act is to provide for community-based land use planning in the Far North that,

- (a) sets out a joint planning process between the First Nations and Ontario;
- (b) supports the environmental, social and economic objectives for land use planning for the peoples of Ontario that are set out in section 5; and
- (c) is done in a manner that is consistent with the recognition and affirmation of existing Aboriginal and treaty rights in section 35 of the *Constitution Act, 1982*, including the duty to consult. 2010, c. 18, s. 1.”

Within the Act, the Government of Ontario set the more specific objectives that First Nations are to play a significant role in the planning process, that “the protection of areas of cultural value and protection of ecological systems by including at least 225,000 square kilometres of the Far North in an interconnected network of protected areas designated in community based land use plans”, that “the maintenance of biological diversity, ecological processes and ecological functions, including the storage and sequestration of carbon in the Far North” and that the Act would facilitate the “enabling sustainable economic development that benefits the First Nations” (Government of Ontario, 2014).

Under this Act, community-based land use planning throughout the region has attempted and continues to map and designate areas of cultural value, travel routes, animal migration routes, etc. The intention is to determine what parts of a community’s traditional areas could be open for development and which cannot be. Under the Far North Act, the community-based land-use plans must be jointly approved by the First Nation and the Ministry of Natural Resources and Forestry (MNRF). Once the final plan is approved, all decisions to authorize land-

use activities must be “consistent with” the land-use designations specified in the plan (Scott, 2017). The Land Use plans would be combined throughout the Far North, creating a quilt of different plans when combined. This approach is considered in more depth later in the chapter.

The Act restricts application to community scale land use planning processes. Community scale land planning refers to a large extent of land. For example, EFN and Mishkeegogamang First Nations, who agreed to undertake their planning together, identified an Area of Interest for Planning that encompasses 2,487,752 hectares (Eabametoong First Nations et al., 2013). The area covered, however, is only a fraction of the whole Ring of Fire region in which the cumulative effects of development would be felt.

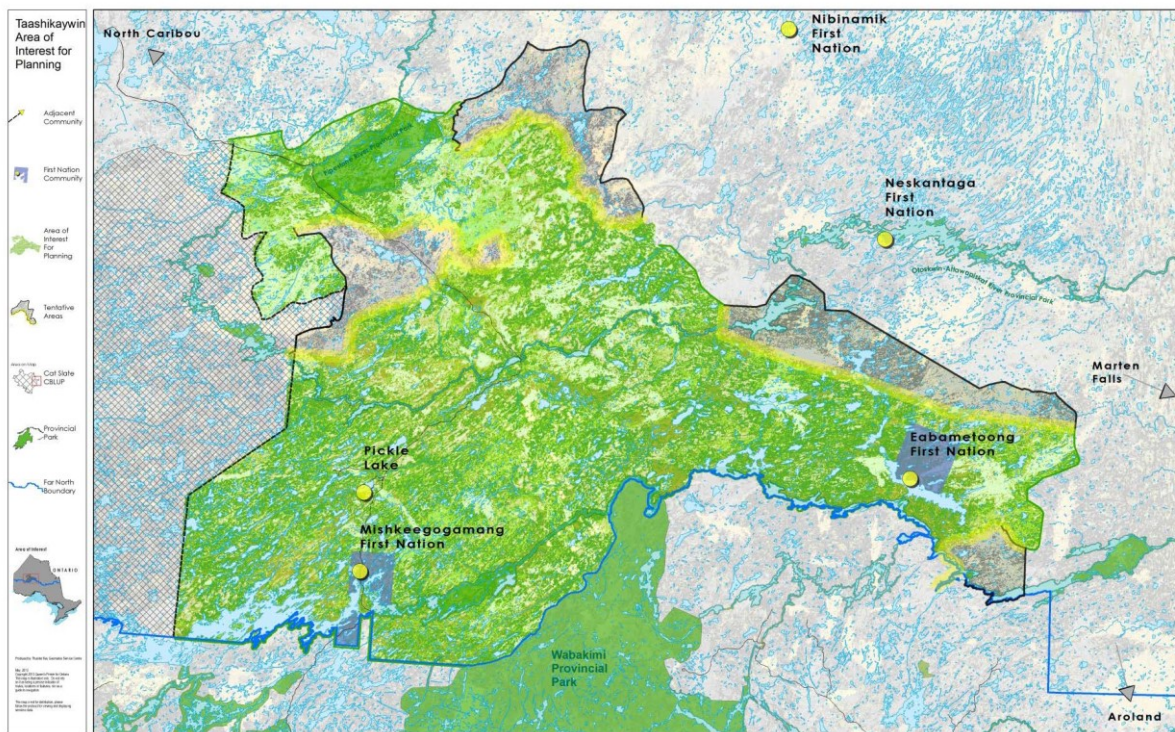


Figure 6-7: EFN and Mishkeegogamang First Nations Area of Interest for Planning (Source: Eabametoong First Nations, Mishkeegogamang First Nations, & Ministry of Natural Resources, 2013)

The land use plan area is designated primarily by government and First Nations based on current land use and traditional territory (Government of Ontario, 2014). There are traditional territories from neighbouring First Nations that overlap. The province’s intention is for those families to be consulted during the planning process by the neighboring community. Neskantaga did not consent to this community plan process as they felt that it impeded their sovereignty. Additionally, the community plans do not consider pace, scale, or desirable futures for the region. Objectives are defined already by the Province within this Act as sustainable economic

development and the maintenance of ecosystem function and biodiversity through the Far North Act, and are complemented by the objectives co-defined in the Terms of Reference (Eabametoong First Nations et al., 2013). These objectives are very general and one size fits all, despite the insistence on community by community-based planning.

The Act and the implementation of the plans have not prevented the concurrent applications for project assessment by proponents, nor have there been any suggestions that a SEA would be undertaken to assess the capacity to meet sustainability concerns. A SEA could be applied to appraise whether the land use plans, when compiled, meet regional sustainability objectives (Tony Jackson & Dixon, 2006; Therivel, 2012). This form of SEA would be a “stapled SEA”, which would assemble the puzzle pieces of the individual community land use plans and test the result against some larger strategic objective. Thus, the Act does have the capacity to be a vehicle for SEA by generating a regional plan of sorts, and allow some evaluation the overall implications of the combined community plans. The result of a SEA of this nature would be that, “The subsequent EIA of projects is intended to dovetail with the strategic guidelines established in the assessed development plan” (Tony Jackson & Dixon, 2006). However, by itself the assembling of community land use plans would not reflect any overall identification and comparison of regional development options, or any means of addressing pace and scale, community benefits, social programs, etc.

### **6.7.3 Option 3: Regional Framework Agreement and Enhanced EA Assessment Agreement**

Utilizing the Regional Framework Agreement (RFA) or the Enhanced EA Agreement between the provinces and the Matawa First Nations could provide an opportunity to develop a next generation assessment regime, particularly through the evaluation of policy. The RFA between the Province and the Matawa First Nations seeks to set the terms for negotiation between the parties, while the Enhanced EA Agreement provides an “enhanced” EA process for RoF developments and policies (Matawa First Nations and the Crown, 2014; Matawa First Nations & Government of Ontario, 2015).

The Enhanced EA Agreement provides little additional support from the RFA, except for the commitment to utilize Panels for assessment review and for the panels to conduct reviews of:

- 1.2.1 “all project environmental assessment terms of reference,
- 1.2.2 all project environmental assessments, and

- 1.2.3 all policies,  
in respect of mineral developments and/or related infrastructure undertakings in the  
Ring of Fire area”

The RFA’s scope of opportunity is considerably expanded by article 1.2.3. The ability to review all policies within the Ring of Fire related to mining or infrastructure provides considerable benefits, particularly when combined with the review of infrastructure project assessments. This requirement is supported by the RFA agreement, which states in section 2a.ii:

2a) the negotiation of one or more related agreement(s), on a timely basis and within constitutional and Ontario’s legislative frameworks along with consideration of relevant Canadian best practices and precedents, on:

...

ii) industrial and regional infrastructure planning and implementation, including transportation, energy generation and transmission, on-reserve infrastructure, and regional communications technology;

Analysis of the long term cumulative effects consequences of a large development could be achieved through the assessment of a large-scale infrastructure and supporting policies under both agreements. This could lead to assessment processes with approaches similar to that of the Mackenzie Gas Project Review Panel, which considered sustainability, pace and scale of development in its assessment (Gibson, 2011; Joint Review Panel for the Mackenzie Gas Project, 2010).

The Enhanced EA Agreement itself has focused on the development of a panel to vet project terms of reference and assessments, as well as all policies related to infrastructure development. Primarily, the RFA also focuses on improving process elements, like increasing consideration of traditional ecological knowledge, in the Ontario EA review process, without a commitment to a sustainability-based test. The improvement of process enhances participation but does not provide for effective consideration of the regional implications of mining development and associated options. Neither agreement ensures explicit consideration of legacy effects, sustainability or cumulative effects. However, the mandates of the panels could be interpreted broadly to include issues like legacies.

Project level assessment is the direct focus of the agreement and historically, cumulative effects have been poorly integrated into project level assessments in Ontario (Lindgren & Dunn, 2010). The RFA is focused on pursuing methods within Ontario’s pre-existing legislative

frameworks. Gibson notes that the challenge with focusing on project assessment as opposed to larger scale regional assessment is that project assessment does not have the capacity to engage in the problems or opportunities beyond the immediate project that require discussion (Gibson, 2016c). The design of the current policy process fragments decision-making in the region, without any holistic examination of strategic overall direction. The best opportunity to consider regional scale concerns through the RFA is through the evaluation of infrastructure and mining plans and policies. This approach may be needed but it is not currently on the table with the Province.

#### **6.7.4 Option 4: Project Assessment of Large Infrastructure Project**

The Mackenzie Gas Project case, a complex and large-scale infrastructure project, and the induced development it was expected to facilitate, provided the basis for the approximation of a regional development assessment that integrated attention to long term sustainability considerations. A similar initiative to engage in strategic planning on infrastructure to define options and alternatives, along with providing access for mining developments in the Ring of Fire region would provide an entry point for next generation assessment techniques. Infrastructure in the Ring of Fire is not as powerful at defining the path and intensity of future development as it was in Mackenzie. However, utilizing large scale infrastructure assessment as a point of entry for larger scale analysis could provide the communities with an excellent opportunity to direct the development of Ring of Fire in a way that is more beneficial to the First Nations while demonstrating a desire to collaborate with the Province and the proponents.

This approach could generate a secondary by-product that could be useful for the nine Matawa nations. An assessment of the preferred road corridor and alternative corridors that anticipates likely developments, could be used to identify needs for and means of managing growth in the region and protecting significant lands. It could provide opportunities to plan for a Matawa-defined sustainable future that works in tandem with the ongoing MNR Community Planning efforts.

Importantly, this approach would utilize pre-existing legislative frameworks by evaluating a large project, like an infrastructure corridor. The process could continue to utilize recognized tools through the application of sustainability-based criteria, like those developed earlier in the chapter.

This approach to SEA more closely resembles the concurrent method of SEA, where on-going project EAs of proposed mines will be undertaken, but the assessment of the road determines the course forward. While this approach of assessing a road corridor is far from ideal because it does not assess all components of development, it will allow for some potential gains and could prevent some harmful cumulative effects from being overlooked.

### **6.7.5 Option 5: Community-by-Community Plans**

This approach is an alternative method of SEA under the Far North Act through a concurrent model of SEA, meaning “SEA is a distinct exercise undertaken at various stages of the plan-making process in an iterative fashion. The assessment process runs in parallel to the preparation of a proposals, policies and programs, appraising each stage: strategy, options, specific policies and proposals, and allowing revisions to be incorporated on an ongoing basis” (Tony Jackson & Dixon, 2006). Thus, each community plan would be cobbled together to form a regional plan.

Community-by-community plans that integrate the acceptable levels of development in each community plan and patching them together to form a quilt to cover the region. In this type of approach, the government and community in tandem would determine how much development would be acceptable, where would be acceptable and what type of industry will be allowable.

At present, the Ministry of Natural Resources and Forestry has undertaken a community planning approach that considers the traditional “zoning” based approach. Namely that:

“Community based land use planning with each First Nation establishes which areas will be set aside for long-term protection and which areas will be open for sustainable economic development, while emphasizing the importance of continuing to care for all of the land and water. The Far North Land Use Strategy will assist joint planning teams in the preparation of land use plans and guide the integration of matters that are beyond the scope of individual planning areas.” (Ministry of Natural Resources and Forestry, 2014)

Utilizing a community-by-community approach would simplify initial negotiating spaces. However, in indigenous communities, map-based delineations of indigenous band traditional areas do not necessarily follow familial traditional use areas. Additionally, areas allotted for industrial development may border or flow downstream towards protected or sensitive areas defined in other communities’ plans.

The approach relies on expectations that the individual community land use plans will compile into a coherent larger regional puzzle. Once the puzzle is assembled, the larger scale planning issues such as road placement, infrastructure corridors and other issues will be more readily resolved through SEA or integrated planning. Mining and other industrial development will be undertaken in designated areas, dependent on project level assessment and approval.

Logistically, this approach is easier to conceive. However, it may prove less than effective as a means to anticipate and manage cumulative impacts for the region, including through attention to the pace and scale of overall development. For example, intra-generational equity could be prominent if one community's plan stresses development more than another. Careful commitment to sustainability is crucial within the development of this approach.

Once an objective and an institutional approach forward is determined, developing sustainability-based criteria will be necessary, to assess both projects and potential regional development options. Criteria for projects and for regional futures would be somewhat different (Only one set of illustrative general use criteria is developed in this dissertation). Finally, scenarios for future development, with varying pace, scale and placement of infrastructure will need to be generated and assessed.

### **6.7.6 Best Solution for Regional Assessment**

The analysis above indicates that most promising and flexible solution is to develop a new regional assessment regime, perhaps utilizing the regional assessment vehicle provided under the new federal environmental assessment legislation if it is passed and if a collaboration agreement with Ontario and the Indigenous authorities can be negotiated. A regional assessment that is not constrained by pre-existing interpretations of agreements and terms of reference would allow for the best opportunity to engage effectively in the cumulative effects problems and alternative development options at hand. The limitations of the other approaches make them less desirable. Additionally, the new legislation, if implemented, would provide significant opportunity to engage in sustainability based regional assessment because sustainability is a major tenet of the proposed federal legislation.

Application of the Far North Planning Act could allow SEA to be applied to the completed plan. However, this approach assumes that the community land use plans are sufficient, which many First Nations question (Atlookan, 2018; Gardner et al., 2012), and that

the objectives and criteria for assessment would be robust enough to ensure that indigenous concerns are integrated. Additionally, in option 3, the assumption is that each plan, upon completion, would be reviewed under standardized regional objectives and criteria. There is no indication that those evaluations are occurring (Government of Ontario, 2014).

Applying the Regional Framework Agreement would prove challenging because there is no direct indication from the Province that regional assessment is to be sought or considered desirable. However, the evaluation of infrastructure and mining plans and policies could be sought through the Regional Framework Agreement and Enhanced EA Agreement. Assessment of plans and policies of specific sectors within the region would allow for a strategic level analysis, but without the full level of scope that a dedicated regional assessment would provide.

Finally, assessing an infrastructure project for regional impacts has the potential to provide options when other opportunities to generate regional focus have not been pursued. However, this option requires careful consideration of criteria and objectives.

Any approach on a regional assessment would also need to link into a monitoring regime and legacy planning for the region. In the following sections, I briefly consider the need for monitoring and legacy planning in the region.

## **6.8 Monitoring Regime**

The development of a long-term monitoring board in the Ring of Fire is crucial in the development of the region. Provisions for monitoring were built into agreements in Voisey's Bay and the Northwest Territories diamond mines, among others. The important characteristics for a long-term monitoring process include the following. It should:

- consider socio-economic/cultural and biophysical factors;
- have a foundation of credible baseline data, including traditional ecological knowledge;
- monitor compliance commitments and terms and conditions of approval;
- monitor actual socio-economic/cultural and biophysical effects versus the predicted effects;
- be co-managed;
- be regional, covering all activities including infrastructure, as well as individual mines, etc., and their interactive effects;



- be supported by the insistence on adaptable design in initial mine and infrastructure planning and approval so that effective responses to unexpected opportunities, adverse effects and risks are possible; and
- include capacities and mechanisms to ensure effective responses to monitoring findings (Gibson and Atlin, 2014).

The board from the Enhanced EA Agreement could be utilized or aligned to ensure that the monitoring practice is designed and implemented to retain the characteristics listed above and that its data and findings are effectively integrated into decision making. It would also be responsible for the identification of response needs and responsibilities, and for effective adaptive management of industrial processes in the region.

## **6.9 Legacy Funding and Planning**

The current proposals outline the importance of fair process and the need to recognize First Nation rights in the upcoming deliberations. However, their focus is primarily on the near future, with little consideration for how legacy issues will be considered other than in the discussions on the Community Development Fund proposal. The legacy issues of the proposed mines in the Ring of Fire are an issue of cumulative effects and will require regional consideration beyond that which can be provided in a panel EA.

Most frequently, EAs focus on “mitigating significant adverse effects”. It is a term utilized in most government documents and is standard practice in most jurisdictions. However, these negative impacts are often framed in ‘tradeoff’ terminology – e.g. “There will be a significant impact on caribou populations, but there will be significant opportunities for local employment and access to royalties.” The presumption is that there is greater value to one component over another, and that those risks can be measured via statistical analysis. Advanced EAs allow the community to have a greater stake in risk analysis and determining what risks threaten their way of life, what ways would best minimize these risks and how to best minimize the tradeoffs. In order to achieve sustainable results for the community, it is important to focus on local definition of what a healthy future looks like in EFN and what scenarios best achieve that.

Having a shared vision of what an optimal future looks like in EFN contributes to being better able to negotiate to that place. Frequently in negotiations, participants get stuck in a

position because it is presumed that if they take a different approach that they will lose ground and that other participants are diametrically opposed to their position. When facilitators engage in future visioning with opposing parties, they often are able to determine that they share many common points of what an ideal future would look like. They just see different paths to get there and are willing accept different levels of risk.

## **6.10 Summary**

This chapter combines the work undertaken by Eabametoong (especially RSD) and generates a conceptual package on how to go forward with assessment. In this chapter, sustainability criteria are specified for the Ring of Fire case and Eabametoong in particular, using knowledge that EFN has compiled, along with the work of previous academics and researchers in the community. Additionally, within this chapter, I consider which avenues provide the best opportunity to generate strategic level analysis of the region, ideally utilizing assessment criteria similar to the ones generated within this chapter.

The chapter presents a) sustainability based criteria and b) different options for implementing a regional focus. Initially to develop the sustainability criteria, I overviewed the results from workshops and other sources that resulted in the development of an objective for assessing the Ring of Fire. Conflict management tools, in particular a party/ stakeholder conflict analysis chart, assisted in the development of the objective. From the objective, I considered trajectories forward, particularly a large scale and rapid development scenario based on materials from Price Waterhouse Cooper and visualized by RSD. I also briefly considered other likely future scenarios for the Ring of Fire region. Based on those scenarios and the materials collected from the community, EFN and RSD developed categories of criteria. I then confirmed that the categories covered the generic sustainability concerns and identified individual criteria based on the well-being indicators.

In the second stage, I compared four different options to determine the best path forward for regional consideration. The paths were based on developing strategic assessment from the Far North Act and its subsequent community plans, the Regional Framework Agreement, the assessment of a major transportation infrastructure project with regional implications, and the development of an independent strategic assessment. The development of an independent regional assessment was deemed the most advantageous, though each approach could assist in

delivering some form of planning with a regional focus. Monitoring and legacy planning were also briefly discussed.

The most likely path forward was analyzed during the criteria development process. The challenges with fragmented, project-by-project assessment can be readily identified. The future consequences would likely match those of most existing development processes in Canada, with future prospects being determined by the unanticipated collective effects of individually assessed projects. The future is thus defined as the results of a succession of decisions about whether a proposed project goes through or it doesn't. This chapter supplies fodder for why this approach leads to undesirable outcomes. Under assessment practice in Ontario, each project considered worthy of some public assessment would be examined individually under Ontario's current assessment regime.

The current decision making processes for the Ring of Fire development as projected do not include development and application of generic or context specific sustainability concerns, means to achieve FPIC, or a focus on improving long term community well-being. The route forward favoured by the province is one that would facilitate moving development projects forward as quickly as possible. By taking this approach, the latent conditions for conflict, such as colonial oppression or boom and bust legacies in Canadian mining regions, are not integrated into the project planning or decision-making. The evident provincial assumption is that an influx of money into the region will alleviate these problems or at least provide the means for alleviating them. This assumption is not supported by the experience of the Indigenous communities of Northern BC and Northern Alberta that have found increased financial capacity does not alleviate the burdens generated from poor assessment and planning (see Blueberry River FN, Mikisew Cree FN, etc.), but generates additional colonial burdens for communities. Eabametoong is seeking the opportunity to define what overall development in the region should proceed and how it should be planned and delivered.

A sustainability-based assessment regime that considers long-term cumulative effects consequences for the region is achievable. Effectively and impartially developing a sustainability-based criteria set with pre-existing baseline data is possible, as this chapter demonstrates. The sustainability-based criteria developed within this chapter are built using the extensive work of the well-being study and RSD. Determining a way to bring other components of next generation assessment, especially tiered regional and project assessment, into the process

will be a greater challenge. Current processes focus upon land use planning from a community-based perspective and for enhancing participation in traditional assessment practice. A collaborative regional assessment process with products designed to guide project assessment would be most suitable. If reliance on current structures cannot be avoided, using the existing project assessment process for assessment of a major infrastructure system plan may be the easiest option.

Additionally, no “ethical space” exists for making decisions in the region. Lack of transparency and deep distrust entrenches these challenges. In order to move forward, the Ring of Fire requires that potential sources of conflict and cooperation be identified to determine where the process is failing and what a mutually beneficial objective for developing the region would be. Anticipating what will generate conflict, where points of mutual understanding exist, and what sources of power are accessible to parties is another means of “mapping” the Ring of Fire. The proposal operationalizes the concepts from chapters 2 and 4.

Determining a better course forward that manages the pace, scale and placement of development, integrates development with the community’s socio-cultural and economic needs, and determines a clear and predictive method of assessment is necessary to generate a Triangle of Better Decisions. Arguably, most at the table would agree that those needs must be met. However, negotiations keep breaking down because parties have different concepts about how to plan for those needs, who makes those decisions, and what mechanisms need to be implemented to examine those decisions.

## **Chapter 7: Conclusion**

### **7.1 Introduction**

Conflict, uncertainty and unsustainable outcomes dominate the agenda in regions like the Ring of Fire where major opportunities for development centre on extractive industries. The industries generate complex, cumulative effects in remote, roadless, ecologically significant, non-industrialized Indigenous lands. Given this context: What should be done? Should mining and related infrastructure development proceed? If so, where, and in what ways? When and at what pace? How do you distribute benefits and risks? What is the best overall development option, as well as, what more specific options may be desirable? These questions are among the main ones that circle the dialogue, though not all have been addressed directly, collaboratively and transparently.

Mining is inherently contentious because non-renewable resources often deliver short-term economic benefits but the potential gains and losses are unevenly and inequitably distributed. Mining also creates short and long-term socio-ecological problems that include negative socio-economic and ecological legacy issues, cumulative effects from multiple mines and poor regional planning, and a mix of positive and adverse impacts to indigenous communities (Bankes & Sharvit, 1998; Chambers, 2000; O’Faircheallaigh & Corbett, 2005). Determining the best strategy forward will generate conflict, as will the failure to plan ahead. Recognizing the importance of conflict, and its role in shaping sustainable outcomes, is crucial in contentious mining situations.

In the opening page of this dissertation, I ask the question: how could decision making be made better in the Ring of Fire? For the next hundred plus pages, I provided a broad approach, framed from a deep dive into the relevant literatures, insights from Eabametoong’s Resource Stewardship Department and participant observation of deliberations over five years of research. In this dissertation, the focus is primarily on combining bodies of knowledge that reinforce and complement one another to paint a more holistic picture of what needs to be included in decision-making for strong, sustainable futures.

Throughout the discussion, the core dissertation agenda has continued to be represented by the four successively more focused questions set out in the introductory chapter:

- 1) What is the relationship between sustainability and conflict management and how can the concepts be integrated?
- 2) How can understandings from the integration of sustainability and conflict management be applied to mining in Northern Canada?
- 3) How might the combined insights inform and be informed by case application to the sustainability and conflict challenges in assessment and mining development in Northern Canada?
- 4) In particular, how might the insights inform and be informed by application to identify better approaches to the sustainability and conflict challenges faced by Eabametoong First Nation in the face of anticipated Ring of Fire mining and associated infrastructure development?

The research findings in response to these initial questions have implications for theory, broad applications to assessment and planning practice in the Northern industrial development, and particular application to sustainability and conflict in the Ring of Fire. This dissertation developed a framework to integrate understanding of and attention to:

- Sustainability (long term well-being)
- Conflict and conflict management
- Indigenous rights and interests
- Non-renewable resource development

The criteria and regional assessment alternatives set out above in chapter 6 are designed for use in appraising the effectiveness of existing and proposed approaches to development, planning and decision making in the context of maximizing the likelihood of sustainable outcomes and mutual benefit, and minimizing trade-offs. New approaches that support dialogue, trust building and sustainability through the use of next generation assessment methods are particularly valuable in realizing a better future. Additionally, this analysis focuses on the need for decision-makers to anticipate and address the various implications of conflict, boom and bust economies, colonialism, legacies, racism, misogyny, inequity, and plan with foresight to move towards desirable future options and avoid adverse ones. Mining in the Ring of Fire should be used as a bridge to a better, more sustainable future. A sustainable future is an impossibility without major interventions in the current processes for planning and assessment.

## **7.2 Major Findings**

Sustainability and conflict management are best understood as mutually reinforcing concepts. Sustainability is a largely substantive objective (with some key process components and implications) while conflict management is part of the fair process necessary to get there (though it also has implications for substantive options). Another crucial part of any move towards better decisions is building strong relationships on trust and enhancing the capacity for dialogue. More positive inter-relationships among process, substance and relationships are crucial for better decisions. The triangle of better decisions links substance, process and relationships. Factors that put stress on the triangle and those that enhance the triangle's strength are also included within the framework.



*Figure 7-1: TRIANGLE OF BETTER DECISIONS*

Integrating substantive sustainability guidance, conflict managing fair process, and trusting relationships in mining in Canada's North can prove challenging, particularly given that there is a long history of adverse cumulative and legacy impacts in the region. Boom and bust patterns have the capacity to generate complex and largely negative socio-economic and ecological consequences. These consequences can be even more significant for Indigenous people and women. Mining is driven by often volatile global markets. Within this dissertation,

the factors that emerged as the most common threats to long term well-being in mining region assessments are 1) temporarily high wages; 2) cyclical economics; 3) high mobility; 4) remoteness; 5) risks of injury and exposure (G. Gibson & Klinck, 2005); 6) legacy concerns, including lasting socio-economic and ecological costs and risks; 7) side effects of mechanization and technological advancement; 8) poor assessment and planning processes; 9) globalized processing and markets, which are indicative of international and transnational networks directly dictating and shaping the future of communities within the mid-North resource corridor of Canada; 10) insufficient returns, including to the affected regions, from taxation and royalties; 11) constraints on the exercise of Indigenous and treaty rights, reflecting i) a history of colonial oppression in Canada and ii) the insufficient acknowledgement of the need to respect and partner with Indigenous people within resource development on their traditional lands; and 12) inequitable gender impacts. These twelve factors are at the foundations of the context of assessment and justify the application of next generation assessment processes that scope these concerns into their evaluations. All are important considerations in efforts to determine how mining can best provide a bridge into more resilient socio-ecological systems by utilizing opportunities, including revenues, from mining to foster new economic development, improve social services and maintain and monitor ecosystems.

Applying next generation processes, as set out in chapter 4, and associated tools can provide the opportunity to implement better conflict management, focus substantively on sustainability and create “ethical spaces” for dialogue for improved relationships. In particular, the common opportunities and challenges that emerge in mining in Canada’s north could be identified and integrated into assessment and planning through sustainability-based assessment, strategic assessment, and Indigenous rights based approaches. Ideally, these mechanisms could lead to better decision making even in face of the wicked problems generated by mining in the North and strengthen the principles within the Triangle of Better Decisions.

In particular, the Ring of Fire represents a case where there are high development stakes, conflicts among the parties, and limited opportunities for innovative resolution. At present, there are also few opportunities for people in the indigenous communities in the region to escape poverty, addiction and other health challenges. Along with important opportunities, development on the Ring of Fire’s proposed scale opens the region up to considerable risks and unknown challenges. Additionally, colonialism and systemic oppression have impose latent conflict



conditions that have been left unaddressed by conventional planning and assessment process. The prospects for Eabametoong to benefit from Ring of Fire development would be improved by comparing multiple different avenues of moving forward through developing clear objectives for regional development, applying regional assessment in building and comparing future scenarios and development options, creating and applying context-specific sustainability criteria, and implementing a complementary monitoring regime.

### **7.3 Limitations of this Research**

The research undertaken here was necessarily qualitative and subjective. I worked with one community to formulate an understanding of this region. Their perspectives are not necessarily reflective of others in the Matawa community. Additionally, this research was framed from the need to design a sustainability-based criteria set to support the community's assessment needs. The findings reflect over four years of open dialogue among the Eabametoong community, as well as professional experience during a moment of increased focus on improved assessment practice through negotiations between the Matawa communities and the provincial government, and broader conversations inspired by federal assessment process reform initiatives. For this case, years of dialogue and participant observation were better suited to the available opportunities and more acceptable to the community than more formal interviewing and surveying. The process of gathering data was more organically than mechanically rigorous.

The proposed regional and sustainability assessment approach that were developed within this research remain untested within the region and in many other areas of Canada. Therefore, they exist for Eabametoong as a potentially viable approach. However, there are limited means for application without significant changes to current policy.

This dissertation also delves into diverse bodies of literature in an attempt to distil the important lessons for Eabametoong and other similar cases. The breadth of this research results in limitations in the depth of the analysis.

## **7.4 Implications for theory**

### **7.4.1 Need for Strategic Level Focus**

The impacts of uncoordinated mining and associated industrial development are widespread and often irreversible. They include habitat fragmentation and loss, boom and bust economies and the accompanying socio-economic issues, particularly for Indigenous communities and women, long term ecological legacies of improper decommissioning, etc. However, our approach to finding solutions for these wicked problems is frequently insufficient. The province of Ontario's current toolkit, for example, is ill-equipped to support decisions in wicked problem areas.

Wicked problems are “ill-defined; and they rely upon elusive political judgment for resolution” (Rittel & Webber, 1973, p. 160). Moreover, they will always exist (Rittel & Webber, 1973,p.160). Often we rely simply on scattered applications of scientific risk assessment (Fairbrother & Bennett, 1999) and bureaucratic competence in decision-making to resolve these problems (Lenihan, 2012) because it is assumed that these problems emerge from cognitive uncertainty, due in part to technical and scientific knowledge gaps (Weber & Khademian, 2008). However, many wicked problems are based on strategic uncertainty, meaning that due to multiple actors, “their strategies to address the problem are based on perceptions of problems and their solutions, which may differ from the views of others” (Weber & Khademian, 2008, p. 193).

Data finding and information gathering are important to support effective assessment, but making clear judgements based on sound and transparent reasoning that considers alternatives requires political acuity and managing the interests and desires of multiple parties. The Ring of Fire represents a case of strategic uncertainty, meaning that the best direction moving forward is unknown and requires political judgement to move forward. Most approaches to the Ring of Fire have focused on reducing cognitive uncertainty by gathering additional data to clarify conditions, potential impacts and implications for potential approaches forward. Unfortunately, additional data will not limit the need to make effective decisions in the context of uncertainty and disagreement and the current toolkit of the province offers limited methods of managing strategic uncertainty. Approaches that compare alternatives, generate dialogues and acknowledge challenges are better suited to addressing strategic uncertainty (Ludwig, Hilborn, Walters, & others, 1993; Mitchell, 2010). In the Ring of Fire case, strategic uncertainty is combined with the serious problem that the province has not provided any indication that will participate in long term, collaborative decision-making at a regional scale. Their fragmented approach exacerbates

uncertainties and deepens disagreements, further entrenching colonialism (Chetkiewicz & Ray, 2017; Environmental Commissioner of Ontario (ECO), 2013; Government of Ontario, 2014; Scott, 2018).

The criteria to evaluate development options that is designed within this dissertation provides a means to identify strategic uncertainties and address the key long term issues in a way that has more potential for managing conflict and contributing to sustainability. The criteria provide a mechanism to analyze how comprehensive and sustainability-enhancing a process could be, as well as to determine what potential impediments to sustainability and conflict management are likely. It provides a consolidated listing of important concerns that warrant analysis.

#### **7.4.2 Relationships between Sustainable Outcomes and Conflict Management**

A major concern for this work was attempting to determine what, if any, relationship sustainability and conflict management have at a conceptual level. There is an implicit understanding that without people working together, it is hard to achieve anything positive, let alone sustainability-enhancing overall outcomes. This work underlines that understanding-improved relationships where conflict is acknowledged, accepted and, to some extent, embraced, can contribute to sustainability through dialogue, innovation and inclusion. Better process and relationships alone cannot yield sustainability. Conflict transformation and sustainability both require different measures and different approaches. This transformation will assist in reconciliation, the fairness of negotiated settlements, and provide the grounds for communities to effectively and capably engage in sustainability-based discussions. Sustainability requires a contextually defined definition that utilizes the basic sustainability requirements, and commitment to move towards long term well-being. There need to be general sustainability-based guidelines and mobilized local knowledge to guide those conversations on the development of contextually informed criteria, desired futures and associated goal posts for those involved to aim for.

Sustainability assessment's potential as a means of helping to manage conflict is in part a consequence of its emphasis on respecting the specific context and its discursive approach to discourse. In order to progress towards sustainability, a multitude of perspectives must be

represented and participants must collaborate (Doelle & Sinclair, 2006). The implementation of next generation assessment requires engagement of multiple parties and, in order to have those conversations about futures, benefits and consequences, conflict must be managed. The eventual emergence of conflict can become catastrophic when conflict emerges in rigid social structures, where there are major power differentials, and past conflicts have been either suppressed or avoided (Sidaway, 2005). Steps towards sustainability require decision-making spaces that are flexible, resilient and have a capacity for iterative change, dispute, and dialogue without risk of process failure. As such, sustainability requires inclusive decision-making, integrating the perspectives of multiple stakeholders into the identification and comparison of potential options. Sustainability assessment requires a holistic examination and comparison of the available options to identify what would make the most positive contributions while avoiding or mitigating significant adverse effects (R. Gibson, 2006b). In order to achieve this decision-making space, sustainability assessment theory and practice must learn from experience about the inadequacies of conventional assessments and from the benefits of sustainability-based applications. As a result, sustainability assessment has inherently included many of the basic tenets of conflict management into its best practice.

Conflict management also helps participants navigate the context-specificity of sustainability and aid in determining a direction forward. Gibson writes,

...the core characteristics of sustainability-based assessment establish net gains as the basic objective. Ideally these involve multiple, mutually reinforcing benefits and avoidance of all potentially significant adverse effects. This begs questions, however, about what are the key benefits to be sought, and what adverse effects are especially to be avoided (Gibson et al, 2005, p. 20).

Sustainability assessment moves from the usual assessment focus on adverse effects to a broader agenda that aims to determine which option for an undertaking (project, regional plan, etc.) could contribute most positively to a community (as well as avoid damage and risk) to the delivery of greater long-term wellbeing. It utilizes criteria-based metrics that consider ecological implications, but also socio-cultural factors and their interactions, based on generic concepts of sustainability and place-based considerations. Conflict management can be considered as an exercise in ensuring democratic and fair participation, but it also contributes to sustainability as a means of handling uncertainty in decision-making, which is an essential challenge in all complex assessment processes. As multiple options are, or ought to be, presented on any given project or

plan, it is only reasonable to feel doubt and uncertainty on any given direction. Stakeholders and decision-makers may become entrenched in a position that leads a project in one direction or another, without considering where points of commonality lie.

In conflict management, these points of commonality are referred to as “interests”. Maximizing interests and minimizing tradeoffs is the essential goal of any conflict resolution process. Intuitively, one can see that this combination is also the essential goal of sustainability assessment, with the crucial caveat that the interests of future generations must be considered and represented. Conflict management is insufficient by itself to generate sustainability because in conventional conflict resolution processes, there is limited need or interest to consider future generations. Conflict management tends to focus on the needs and interests of those at the table in the present. Sustainability requires a focus beyond that.

## **7.5 Implications for Practice**

### **7.5.1 Identifies Practice Insufficiencies**

For industrial development proposals of any nature to receive more positive reception in host communities and regions, they will need to be planned, reviewed and approved in ways that ensure they contribute to more sustainable regional futures (Gelinas, Horswill, Northey, & Pelletier, 2017). In fact, the Federal government acknowledged the growing distrust among the public, NGOs, Indigenous communities and others in the assessment process, in their establishment of a federal panel in late 2016 to initiate an assessment law reform process mandated to regain public trust (Gelinas et al., 2017). The comments that the panel received and the commitment of the panel members and staff resulted in a document that comprehensively acknowledged public sentiments and incorporated them into a loose framework of ideas for assessment law and process reform. The panel’s work indicates a key moment of recognition in the field. The public had lost trust in the federal government to engage in assessments properly, particularly after the gutting of the original (1995) Canadian Environmental Assessment Act (CEAA) in 2012. The government acknowledged a lack of trust in the process, through establishing the panel. The panel also explicitly acknowledged this lack of trust. Additionally, the panel recommended a move to sustainability-based assessment, with serious respect for Indigenous rights and interests integrated into assessment, plus effective attention to cumulative

effects, less reliance on proponent positions, and earlier and more meaningful public engagement, among other recommendations (Gelinias et al., 2017). Current assessment process deficiencies were well understood and identified.

This dissertation finds that from a sustainability and conflict management perspective, basic project assessment needs to do a much better job of addressing the complex interactions that development has on socio-ecological systems. Due in part to the limited scope of project level assessments, many of the most contentious issues, such as cumulative effects and legacy impacts, are not given adequate consideration. Conflict with stakeholders, indigenous communities and public participants can emerge due to the myopic focus of project EAs (Rutherford & Campbell, 2004). Therefore, complexity, sustainability and conflict are not well addressed in traditional project level EA. In order to address complexity and sustainability more effectively, other assessment tools could be utilized in ways that support and guide project level deliberations. As a result, assessment has to become more complex. A key requirement is to focus more on cumulative effects in assessment – identifying them, considering alternative response options, choosing the options that best ensure that the negative effects on lasting wellbeing are avoided or mitigated, that positive effects are maximized and that the resulting insights are integrated in long term planning for cumulative effects at the strategic level.

In tandem with capturing cumulative effects, a much more promising approach is planning and assessment centred on the more comprehensive and positive “contribution to sustainability” objective. In order to determine if a regional plan (or an individual project) can contribute to lasting sustainability gains, alternatives must be compared to see which scenario generates the maximum long term, fairly distributed benefits and minimizes tradeoffs. Sustainability-based assessment covers the full suite of socio-economic, cultural and biophysical factors, and their interactions in its evaluation and helps determine what supporting programs, policies and initiatives must be in place for the proposed undertaking to succeed (Adger & Jordan, 2009; R. Gibson, 2016; R. B. Gibson et al., 2005).

### **7.5.2 The Important Role of Conflict**

Conflict can be beneficial and functional. Conflicts can operate as spotlights on long term, festering problems and provide a means of working towards better solutions. Conflict can also drive innovation, problem solving and mutual understanding. However, conflicts in larger

resource regions are often underpinned by larger issues with deep roots – for example the legacies of colonialism, the unfair burden of mining legacies, the socio-economic problems that emerge with mining, and the unsavory history of Canada on all of these issues (Davis & Franks, 2011; R. B. Gibson, 2014; Nikiforuk, 1997; Sandlos & Keeling, 2016). If these larger scale, root concerns are not integrated into how problems are defined and solutions are generated, the conflicts about how to approach the Ring of Fire will never be resolved. Additionally, if credible responses to these root conflicts are not integrated into solutions, sustainability will never be achieved.

Over and over in Canada, environmental decision-making skims the surface of many of these issues, marginalizing some (Hendriks, Raphals, & Bakker, 2017) and scoping and streamlining out others (Bond, Pope, Morrison-Saunders, Retief, & Gunn, 2014). Outlets such as demonstrations, violence and national smear campaigns frequently emerge (Campbell, 2003; Putnam, 2003). The result of this approach is that stakeholders become less flexible in negotiation (Jurin, Roush, & Danter, 2010, p. 257) and mutually beneficial outcomes become less likely (Gibson, Holtz, Tansey, Whitelaw, & Hassan, 2005, Chapter 2). As Lawrence Susskind remarks, “Too few people realize that the processes used to negotiate global agreements are as important as the technical capabilities and scientific understanding that the negotiators bring to the bargaining table” (Susskind, 1994, p. 7).

### **7.5.3 Assessment and Conflict**

Assessment processes are lightning rods for conflict. The goal of environment assessment is, thus, to, “[...] change the nature of decision-making. Under ordinary circumstances, decision makers can be relied upon to consider economic and technical matters. Governments also have reliable incentives to pay attention to political concerns. Environmental assessment (EA) was introduced as an incentive as well as a means to take environmental factors just as seriously.” (Gibson et al., 2005, p. 15). Broader sustainability-based assessment looks to consider decisions through the lens of lasting well-being, thus holistically integrating social, cultural, economic, and environmental concerns into decision-making (Gibson, 2016).

Typical project assessments consider fully conceptualized undertakings, with proponents often shovel-ready upon approval. Assessments then become the battleground for people

seeking to further their position, often confronted with win-lose scenarios. This existential concern is particularly problematic in the North where there are sparse populations, a history of negative impacts primarily imposed on indigenous communities, and limited government oversight. The concept of desirable futures emerges often obliquely at the assessment level, but there is limited space for dialogue and debate. For Eabametoong and other Northern communities, assessment is the step that requires the most engagement and has the highest stakes for future impact. Proposed undertakings could bring important opportunities and tangible gains, but also threaten peoples' direct interests, for example, the quality or value of their land, and their prospects for a desirable future.

When these project level limitations frustrate or exclude attention to key public concerns, the result is a loss of public trust in the process and a shift in conflicts to other venues (demonstrations, courts, etc.). The structure of conventional project assessments exacerbates these issues due to the narrow scope of most project assessments with consideration of few and narrow alternatives, limited attention to cumulative effects and future planning options, limited time for review and deliberation; and limited expectations to anticipate and address likely information biases given that proponents prepare the initial assessments.

#### **7.5.4 Regional Approaches**

There is a specific need for regional level examinations of cumulative effects, related future considerations and options, and appropriate action in anticipation of them. Where multiple past, present and reasonably foreseeable undertakings will affect a region, an anticipatory regional response is needed. Regional level assessments, often involving multiple jurisdictions, need sufficient scope, authority, access to information and arrangements for meaningful public engagement to ensure credible analysis covering wide-ranging cumulative effects, examining broad implications, comparing future scenarios, and considering multiple alternatives (Arts, Tomlinson, and Voogd 2005; Aschemann et al. 2012; Gunn and Noble 2009).

The understanding of current and potential cumulative effects and possible options for responding to them can be enhanced through regional studies. Authoritative guidance for individual project planning and assessment, however, typically depends on the integration of these studies into the development and approval of legislatively mandated broader undertakings. Broader undertakings may be regional plans developed through processes equivalent to rigorous



and participative assessments or policies developed through credible strategic assessment processes. Such regional or strategic initiatives can address many well-recognized project level assessment insufficiencies. SEAs “systematically assess the potential environmental effects, including cumulative effects, of alternative strategic initiatives, policies, plans, or programs for a particular region” (Harriman and Noble 2008, 16). Because of shared authority under the Constitution of Canada, strategic (and project) level undertakings, particularly those involving resource extraction, often involve multiple jurisdictions – federal, provincial/territorial and Aboriginal – as well as municipal and sectoral authorities.

One of the largest problems in project level cumulative effects assessment is that the responsibility for assessing cumulative effects is placed on individual project proponents. Such proponents, especially those in the private sector, rarely have the motivation (beyond legislated obligation), authority, capacity, potential credibility, or information base (at least about other anticipated projects) to do good cumulative effects assessment in a way that addresses the core needs and rising expectations by the public, Indigenous authorities, and proponents for better decision making. Project-level proponents may be able to identify the likely range and potential importance of cumulative effects, but it is unreasonable to expect them to examine their implications in light of desirable and undesirable future scenarios, consider and assess broad alternatives, and point to the best options for action (Adger and Jordan 2009, Dalmer, 2012; Duinker and Greig 2007; Gibson et al. 2005).

Project proponents would benefit from capable cumulative effects assessments and associated regional plans or the equivalent that address these overarching issues and provide credibly developed and authoritative guidance for project planning. The immediate and long term concerns and aspirations surrounding project proposals now often extend well beyond the individual project – especially where there have been and/or will be multiple undertakings with uncertain overall future effects. Where the projects involved include mines, with their limited life expectancies, uneasy combination of opportunities and risks, and often unfortunate legacies, proponents have much to gain from good cumulative effects assessments to clarify and smooth the path for project planning and approval (Gibson 2014, Gratton 2016). Such assessments and associated benefits would seem much more likely to be delivered by careful attention to cumulative effects in sustainability-oriented anticipatory regional planning and associated policy and program initiatives than by project level cumulative effects efforts.

In order to achieve sustainable outcomes, regional level planning and assessments that incorporate sustainability-based objectives best align with the public interest concerns presented in recent development controversies and meet best practice expectations recognized by independent EA professionals and scholars (Adger and Jordan 2009; Arts, Tomlinson, and Voogd 2005; Aschemann et al. 2012; Chaker et al. 2006; Fischer 2012; Government of Canada 2008; MITAC 2016). These regional and strategic initiatives must go well beyond the standard environmental assessment practices that are focused narrowly on mitigating significant adverse biophysical effects.

A regional planning initiative integrated into regional strategic assessment based on our best understanding of cumulative effects, desirable and plausible futures, alternatives and context-specified sustainability-based criteria could provide credible and authoritative guidance for planning and assessment of individual new (or continuing) projects and other undertakings in the region. Strategic environmental assessments apply to policies, plans and programs, while regional plans primarily relate to land-use planning at a large scale. Regional planning and RSAs are frequently cited as a means for making strategic level decision-making that can then guide planning and decision making at the project level (Aschemann et al. 2012; Dalal-Clayton and Sadler 2005; Francis and Hamm 2011; Fischer 2012; Gualini 2015; Therivel 2012; Wilson, Roseland, and Day 1996). Integrated relations among the different layers of assessment and planning is called tiering, especially where the guidance from one level to the next is authoritative and there are multiple scales of decision making (Arts, Tomlinson, and Voogd 2005). Arts, Tomlinson, and Voogd (2005) define tiering as “distinguishing different levels of planning – policy, plans, programs – that are prepared consecutively and influence each other. Tiering is about how the different levels of planning relate to each other.”

Effective tiering must be law-based to be authoritative and have public credibility (produced in a properly open, comprehensive, participative and accountable process, and regularly reviewed to keep up to date). Otherwise the guidance from strategic assessments and/or regional planning is unlikely to be accepted as a legitimate base for project assessment and approval. If authoritative and credible, the plan would provide reasonable clarity and certainty of expectations for proponents of individual undertakings and remove much of the burden these proponents carry under Canadian environmental assessment law to do the cumulative effects assessment themselves (Gibson et al. 2010). Under a tiered structure, much of the task facing a

proponent participating in a project level assessment would be to ensure the character of the proposed undertaking, its effects, and their associated potential for contribution to regional cumulative effects would comply with the requirements and expectations of the regional plan. Regional plans should also link to national or international obligations, such as climate change commitments, or specific community expectations, such as adhering to local planning designations. Therefore, for regional purposes, the primary objective of the project assessment process would be to ensure its compliance with the larger scale plan.

In Canada, ensuring appropriately authoritative decisions is complicated by the constitutional reality of overlapping jurisdictions. Mining projects may raise issues subject to federal, provincial or territorial and Indigenous authority. The relevant mandates and powers overlap, are often not precisely defined and, especially in the case of Indigenous authority, have been clarified only gradually and incompletely by an ongoing series of high court rulings on contested matters. Effective and reasonably efficient attention to cumulative effects and associated options therefore, often depends on formal or informal bi- or multi-jurisdictional collaboration, which can take many forms and be established through case-by-case negotiation (MIAC 2016, chapters 4 and 6). The concerns to be addressed in the negotiation of collaborative arrangements include allocation of roles and responsibilities, some of which involve funding and other resources. Additionally, next generation assessment practices can act as a common standard of requirement for process, scope and focus. When regional strategic assessments are driven by needs to anticipate or respond to private sector development project proposals, private sector project proponents may be asked to contribute to regional assessment funding.

Project level assessments typically offer individual puzzle pieces, without a full conception of how they might fit with each other and contribute to the larger vision. Regional scale scenarios provide a more fulsome picture of possibilities, risks and objectives. Additionally, backcasting (working back from the characteristics of a preferred future scenario, in contrast to forecasting that presents future that present trends will deliver) can be effective for planning and policy generation where we wish exercise some influence over the pathways to be chosen and the future that will result.

### **7.5.5 Indigenous Authority**

For Indigenous peoples, the day to day struggles of living on the margins of colonial society with limited control over what happens to their own land and future is exhausting and disheartening,

“They [*indigenous peoples*] believe that the impacts of industrial development are allowed in their critical lands to a large extent because they are economically disadvantaged, a distinct cultural group with non-western values (i.e. values not understood or respected by Canadian society), that they are far away from the majority of the non-indigenous society which benefits from resource extraction and that because of their disadvantages in economic or political clout they can be bullied by the federal and provincial governments promoting industrial resource extraction activities” (Booth & Skelton, 2011, p. 697)

Research of this kind assists in providing tools and directions for indigenous people when engaging in assessment and planning. It can assist in better facilitating Indigenous authority in decision making, through the co-development of objectives, criteria, alternatives, and assessment outcomes. It also stresses the importance of improved relationships and trust-building, which are crucial considerations for reconciliation and decolonization. Sustainability also can provide a better frame for dialogue and for the consideration of Indigenous interests and knowledge. Other approaches, such as strategic cumulative effects assessments, could benefit Indigenous communities through the improved consideration of the legacy impacts and complex socio-cultural and ecological changes that development presents, as could more time for capacity building and careful deliberation. However, all of this depends on time, respect, and the capacity for Indigenous authorities to make their own choices.

### **7.6 Specific Implications for Eabametoong**

According to the Resource Stewardship Department, the benefits of this research have been to:

- A) assist with the internal dialogue and local consideration of alternative futures and processes to formalize that dialogue with the Crown;
- B) draw increased academic and public attention to the context and content of local participation in impact assessment; and,
- C) develop new partnerships that could assist with A) being achieved.

Eabametoong has a long road ahead to achieve their desired future. Their unwavering commitment to improving the community's well-being has provided the opportunity to push towards approaches like those advocated in this dissertation.

### **7.7 Directions for Further Research**

This research yields numerous questions and avenues for additional inquiry.

Further testing and applying the Triangle of Better Decisions would be beneficial to determine its effectiveness, its limits and its capacity for application in the Canadian North and beyond. The Triangle of Better Decisions in particular has the capacity for widescale application and integration in theory and practice. It is a visual representation of the need for integrated decision making, and can be used as a tool for policy development and planning, but also for criticism. Critically applying the framework in the evaluation of approaches currently in play can be illuminating about the evaluated approaches but also help to reveal the framework's own shortcomings and openings for improvement.

O'Leary and Bingham (2003) define environmental conflict as upstream, midstream, or downstream. Upstream conflict refers to conflict at the policy making or planning stages. Midstream conflict is more site-specific and involves administrative permitting of actions. Downstream conflict refers to compliance and enforcement concerns. One of the primary recommendations of this dissertation is to move conflict concerning mining developments at the regional scale in the Canadian north upstream to the policy level and at the regional scale. The major reason for moving the conflict upstream is to shift the focus of an assessment fundamentally – from project level approval, which has limited capacity for mutual benefit between parties, to a space that allows and facilitates a foundational evaluation of its contribution to a larger picture (e.g., a region); or to a greater goal (sustainability with consensus on a desirable future). Midstream conflict provides less room for alternatives than upstream conflict. Within this dissertation, the best practice assessment processes have emphasized early planning stages, broader scoping, regional based assessment with tiered effects, and other elements in order to broaden alternatives and generate more productive dialogue. These occur upstream. Other effective approaches that engage mid-stream and down-stream conflict stages, and their relationship, could yield a fruitful line of inquiry.

Much of this analysis steers the reader to the next generation offspring of conventional assessment. In a 2000 report from the Canadian Institute for Environmental Law and Policy, the elements of a fair legal regime surrounding extractives are broken into five parts: a) Controls on Exploration and Land Access; b) Assessment of the Impact of Mining Operations; c) Controls on Mining Operations - Permits, Approvals, Pollution Prevention and Waste Management; d) Mechanisms to Ensure Industry Responsibility for Closure, Remediation and Reclamation of Abandoned Mines; and e) Policies to Stimulate Alternatives to Virgin-Metal Mining (Chambers, 2000). The primary focus of this dissertation is part b) Assessment. Assessment can be selected as a focus for addressing conflict and sustainability concerns, because assessment is a particularly important process in mining and the phase where conflict is most likely to occur and sustainability-enhancing options can be generated (Davis & Franks, 2011; R. Gibson, 2006b). However, significant sustainability and conflict management improvements could also be achieved through reforming other elements of the fair legal regime surrounding extractives.

Additional research about the powerful roles of private contracts, such as exploration agreements (MOUs) and impact and benefit agreements in this system would be valuable. Private contracts change the landscape of consent and transparency. It also effects of the roles of government, implications for program needs, changes distributional effects, etc. Another important avenue for research is to consider the distinction between Constitutionally entrenched Indigenous rights and Indigenous' people inherent right to govern, and how initiatives such as regional planning and assessments should be designed to empower indigenous peoples/communities. The role of empowerment and self-government has significant implications for choosing among the regional planning/assessment options, including indigenous-led assessment. The deeply uneven distribution of power is a major contributor to the failure to engage regional approaches, as the most powerful party, Ontario, is deeply disinterested. Empowerment could be a primary objective of and criterion for the selection of a regional strategy to planning, assessment, decision making, etc.

The final questions for future research are likely the most important and most challenging to answer: Why are the approaches recommended here not already employed more? What are the institutional and other barriers? Determining how to operationalize these approaches is crucial for the long term future of communities like those in the Ring of Fire and across Canada. Co-

governance and other governance models could play an important role in considering these questions.

### **7.8 Coda**

The framework and conceptual tools developed in this dissertation respond to the questions asked, linking sustainability and conflict, and provide means of improving practice, including the justification of next generation assessment approaches for current and future application.

However, this dissertation also addresses needs and mobilizes concepts that were passed on to me by experts, elders, friends and mentors in both the North and the South. The risks for Eabametoong and other Indigenous communities are not theoretical. My work with this community continues even after this dissertation concludes. This research will become more important as current and anticipated political pressure pushes the Ring of Fire towards unsustainable development approaches.

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## Appendix 1: Project Consultation and Review Topics (EFN Resource Stewardship Department, 2017)

Category of Issues	Major Themes from Feedback
	MAJOR THEMES FROM FEEDBACK
<b>Mineral Exploration</b>	Concern over history of negative impacts from exploration and dirty/abandoned sites
	Understanding of limited benefits to the community from previous exploration
	Frustration with exclusion from government decision making on permitting
	Mix of anger towards some exploration companies and good relations with other companies
	Fear of future staking and exploration in sensitive and cultural use areas
	Lack of timely information and ability to say no to certain projects
	Interest in partnering on some projects, but lack of equity in most partnerships
	Goal of requiring companies to obtain an EFN Permit prior to any activity
	Exploration should be guided by LUP zones and direction from membership
	Future exploration could and should benefit community through jobs and businesses
	Some interest in exploring on-reserve mineralization (gold potential) in the future
	Exploration should be restricted and constrained to certain areas and not too much at one time
	Waterways, wetlands, and sensitive areas must be protected from impacts of exploration
	Companies like Landore should not be allowed to work in EFN territory if they lie or are disrespectful
<b>Mineral Projects and Proposals</b>	Noront and any Ring of Fire projects must be subject to the highest standard of environmental review
	Noront has not yet meaningfully engaged with Eabametoong, they are working mostly with others
	ROF projects may have generational or perpetual impacts in the region and can't be rushed
	So far, news on ROF projects have primarily focused on benefits to the company and government, very little about First Nations
	Noront and Government seem to want a road to the mine site without really understanding community interests and concerns

	ROF projects might bring good things to the north, but how do we know if the benefits outweigh the risks?
	We don't have enough information on Noront or other projects yet to decide what to do, but we need to have a say in future decisions in ROF
	With any major change like major mining or road development, we need to decide as a community how to go forward
	Eabametoong should be working closely with other remote First Nations to have our views respected by government
	EFN should be working to get business and training opportunities in place so our people can benefit from future development
	Greenstone Gold is in Geraldton area, and that impacts many EFN members
	EFN people should be able to get job training and employment at Greenstone Gold if a mine is built
	We need to ensure that the water is protected from that gold mine, and the Albany isn't impacted
<b>Infrastructure Projects and Proposals</b>	ANY future community or industrial road through EFN territory can only proceed with community consent
	EFN must control or be able to regulate a future road, and limit spur roads off the main corridor
	We have to carefully plan for access into our territory, there are many risks and possible benefits
	If a road is built, it should be used to connect our communities to the south and other First Nations
	The Noront/ROF road proposal is not the best corridor. There are sensitive areas there, and other options to consider
	We need to carefully work with other First Nations to plan how and where we might want to connect
	No matter if a road happens or not, we need life in the communities to improve for our people and protect the environment
	The government might not listen to us, and we shouldn't approve a road without being able to control it
	Some off reserve members want a road more than on reserve members, and we need to decide carefully
	One road could lead to many others and forever change in the area, so we need a way to control all types of development
	If MFFN is a shareholder in Noront, then are they conflicted?
	Watay Power passes through part of EFN territory and we need to have a say in that project

	Transmission and grid connection might be a good thing in the future, but why not an independent EFN/Matawa-led business?
	We need more information on what Watay power is proposing
	KWGs North-South corridor passes through EFN territory and we need to have a say if anything is to happen there
	The news of Marten Falls working with KWG and FSDI (Chinese engineering firm) is concerning if we don't have a role in deciding
	Any major road or rail option in the N-S corridor could have serious impacts on caribou and moose
	The N-S option sounds like it has a lot of business support, but would lead to major change throughout the North and many projects in the future
	For now, it sounds much more risky than a community road among the 4 FNs

### Regional Framework Agreement

<b>General Direction</b>	Go and see how much the Matawa Chiefs and communities can change with Ontario, in the 4 pillars and other relationships
	Work to get more control over each of the 4 pillar areas [of the Regional Framework Agreement: Environment, Socio-Economic Conditions, Revenue Sharing, & Infrastructure], so we can have a greater say over the ROF
	Build unity with the other Matawa FNs
	Our people need to have their voices heard and understood, so we can actually decide how to go forward
<b>Environmental Assessment</b>	Ontario's Environmental Assessment process does not allow for meaningful involvement of EFN and other FNs
	Environmental impacts must be considered along with social and cultural impacts, according to community priorities
	ROF projects will have regional impacts, and must be considered on a regional scale with a focus on cumulative effects of potential projects as well
	The EA process must have a positive test of community sustainability, not just minimizing the significance of environmental impacts
	A community-based process of assessment must be used, and involve communities in discussing all relevant issues within the remote communities
	FNs must have a say in the final EA decision, not just accepting what a Minister or even EA Panel recommends
	We should 'do our own EA' based on what is important in the community, and how we understand connections with the environment and people
	Assessments need to be based on our inherent rights, and recognize our jurisdiction... not just be the place to fight over these things

<b>Environmental Planning/ Management</b>	Project-specific assessments shouldn't decide our future, we need to build a system of land management together with other FNs
	Each project that comes our way will be argued over, but in the system that exists, some that we oppose may be built
	We need a way of controlling the pace and scale of development, as well as reviewing individual projects
	We see the whole environment and community life as connected, as part of the environment, and need to build something on this understanding
	The Chiefs Council can't be the long term solution, we could develop a team or organization among the remote FNs
	A management board or other community-based and regional approach could help us work with other FNs
	We should learn from the experiences of other First Nations in the north who have co-governing agreements for regional boards
	Our approach must be based on our principles and values
<b>Infrastructure Planning</b>	We have almost always been excluded from the major planning by Ontario and Canada for infrastructure (rail, hydro power, roads, etc.)
	Infrastructure enables future development, both community focused development and industrial development
	Roads have been discussed in EFN for a whole generation, and no government has really listened to our concerns or been willing to address them
	There is a broad range of likely risks and impacts from roads that need to be addressed before we get too focused on the benefits or dreams of access
	EFN and other Matawa Nations have a lot of interests in road development, but want to study them carefully before deciding anything
	We need to separate out control and governance over the road from the routing options, and work on them better than previous studies
	The 4 FN study raised many concerns that had been discussed in the 80s and previous studies, and we need to have a detailed social and cultural impact assessment before making decisions
	We want a study and plan that the community leads, not just outside engineers who show up for one day
	Infrastructure is about community life in the long run, and we need to focus on our needs (energy, road access, communications, local facilities)
	There should be a way to build a road to the south that we can control, like other gated roads, and only allow some use
	Not sure if we should have a provincial road or a private community road
	How can we take advantage of tolls or other business opportunities beyond road construction?



	Many questions and options regarding energy and future transmission and generation, all need to be built into a useful long term plan
	Road or infrastructure connection should not reduce funding for vital community programs
<b>Socio-Economic Wellbeing</b>	We have a much broader understanding of wellness than just jobs, money, and education... spiritual and mental health are vital parts of life
	A good life has the opportunity to be well and pursue the life we want, not be restrained or restricted by conditions or government
	People in Eabametoong have endured and overcome major pain and trauma, and need healing on a deep level... not just a pot of cash
	We think of many future generations and do not want to accept something in exchange for our land or culture and spiritual connection with the land
	The community benefit fund concept could be a good start to getting funding for important local projects, but is just a start
	We also need to think about the long term changes to the system and relationship with government that contributed to the current situation
	Some groups in EFN are working on treatment centres, plans and programs that are helpful. Ontario should fund those ideas
	Any funding to the RFA communities needs to be focused on the remotes, not just one or two closest to a project
	Community housing, health care, education, food security, and water treatment are immediate priorities for action
<b>Resource Revenue Sharing</b>	Based on the treaty relationship, we should be receiving 50% of revenues from any mining or other operation on our lands
	We value sharing, and expect it as a form of respect within our culture. We share and provide for each other out of our harvest
	Knowing what we could be receiving from development helps make the decision clearer
	Other FNs receive up to 30-40% of resource taxes for some projects, but we can also consider income tax from those resource jobs
	We need to work with other FNs to sort out who gets what from projects in shared territory, and what is acceptable for different projects
	Should develop community-based principles for resource revenue sharing and discuss with other FNs
<b>Jurisdiction and Resource Stewardship</b>	
<b>General Direction</b>	Need to get more control over current permitting process, road governance/ownership options, and broader land management plan
	Access to the north must be controlled by the northern FNs together
	Inherent jurisdiction is something that FNs have always had, just need to get Ontario/Canada to recognize it

**Appendix 2: Interactivity of Sustainability Criteria**

<b>Inter-activity of Sub-Categories</b>	Livelihood sufficiency and opportunity	Economic Stratification/ Equity	Economic Diversification	Small Business/ Indigenous Owned Business Expansion	Social Life and Interaction	Community Health	Socio-ecological system integrity	Community stewardship values and principles	Socio-ecological systems and stewardship relationships	Cumulative environmental effects and conditions	Education	Community values and decision-making priorities	Cultural vitality and traditional practices	Family, youth, and children	Free, prior and informed consent	Indigenous jurisdiction and decision-making context	Participatory community governance and processes	Capacity Building & Experience in Deliberations	Community Safety	Developing resilience	Adaptive management	Strategic level guidance for projects and programs	Community and regional adaptive management	Progress towards local opportunity	Increasingly strategic and informed planning	Mutually-reinforcing and strategic gains	Processes of community learning
Livelihood sufficiency and opportunity																											
Economic Stratification/ Equity																											
Economic Diversification																											

<b>Inter-activity of Sub-Categories</b>	Livelihood sufficiency and opportunity	Economic Stratification/ Equity	Economic Diversification	Small Business/ Indigenous Owned Business Expansion	Social Life and Interaction	Community Health	Socio-ecological system integrity	Community stewardship values and principles	Socio-ecological systems and stewardship relationships	Cumulative environmental effects and conditions	Education	Community values and decision-making priorities	Cultural vitality and traditional practices	Family, youth, and children	Free, prior and informed consent	Indigenous jurisdiction and decision-making context	Participatory community governance and processes	Capacity Building & Experience in Deliberations	Community Safety	Developing resilience	Adaptive management	Strategic level guidance for projects and programs	Community and regional adaptive management	Progress towards local opportunity	Increasingly strategic and informed planning	Mutually-reinforcing and strategic gains	Processes of community learning	
Small Business/ Indigenous Owned Business Expansion																												
Social Life and Interaction																												
Community Health																												

<b>Inter-activity of Sub-Categories</b>	Livelihood sufficiency and opportunity	Economic Stratification/ Equity	Economic Diversification	Small Business/ Indigenous Owned Business Expansion	Social Life and Interaction	Community Health	Socio-ecological system integrity	Community stewardship values and principles	Socio-ecological systems and stewardship relationships	Cumulative environmental effects and conditions	Education	Community values and decision-making priorities	Cultural vitality and traditional practices	Family, youth, and children	Free, prior and informed consent	Indigenous jurisdiction and decision-making context	Participatory community governance and processes	Capacity Building & Experience in Deliberations	Community Safety	Developing resilience	Adaptive management	Strategic level guidance for projects and programs	Community and regional adaptive management	Progress towards local opportunity	Increasingly strategic and informed planning	Mutually-reinforcing and strategic gains	Processes of community learning
Socio-ecological system integrity																											
Community stewardship values and principles																											

Inter-activity of Sub-Categories	Livelihood sufficiency and opportunity	Economic Stratification/ Equity	Economic Diversification	Small Business/ Indigenous Owned Business Expansion	Social Life and Interaction	Community Health	Socio-ecological system integrity	Community stewardship values and principles	Socio-ecological systems and stewardship relationships	Cumulative environmental effects and conditions	Education	Community values and decision-making priorities	Cultural vitality and traditional practices	Family, youth, and children	Free, prior and informed consent	Indigenous jurisdiction and decision-making context	Participatory community governance and processes	Capacity Building & Experience in Deliberations	Community Safety	Developing resilience	Adaptive management	Strategic level guidance for projects and programs	Community and regional adaptive management	Progress towards local opportunity	Increasingly strategic and informed planning	Mutually-reinforcing and strategic gains	Processes of community learning
Socio-ecological systems and stewardship relationships																											
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Inter-activity of Sub-Categories	Livelihood sufficiency and opportunity	Economic Stratification/ Equity	Economic Diversification	Small Business/ Indigenous Owned Business Expansion	Social Life and Interaction	Community Health	Socio-ecological system integrity	Community stewardship values and principles	Socio-ecological systems and stewardship relationships	Cumulative environmental effects and conditions	Education	Community values and decision-making priorities	Cultural vitality and traditional practices	Family, youth, and children	Free, prior and informed consent	Indigenous jurisdiction and decision-making context	Participatory community governance and processes	Capacity Building & Experience in Deliberations	Community Safety	Developing resilience	Adaptive management	Strategic level guidance for projects and programs	Community and regional adaptive management	Progress towards local opportunity	Increasingly strategic and informed planning	Mutually-reinforcing and strategic gains	Processes of community learning
Community values and decision-making priorities																											
Cultural vitality and traditional practices																											
Family, youth, and children																											

Indigenous jurisdiction and decision-making context	Free, prior and informed consent	Inter-activity of Sub-Categories
		Livelihood sufficiency and opportunity
		Economic Stratification/ Equity
		Economic Diversification
		Small Business/ Indigenous Owned Business Expansion
		Social Life and Interaction
		Community Health
		Socio-ecological system integrity
		Community stewardship values and principles
		Socio-ecological systems and stewardship relationships
		Cumulative environmental effects and conditions
		Education
		Community values and decision-making priorities
		Cultural vitality and traditional practices
		Family, youth, and children
		Free, prior and informed consent
		Indigenous jurisdiction and decision-making context
		Participatory community governance and processes
		Capacity Building & Experience in Deliberations
		Community Safety
		Developing resilience
		Adaptive management
		Strategic level guidance for projects and programs
		Community and regional adaptive management
		Progress towards local opportunity
		Increasingly strategic and informed planning
		Mutually-reinforcing and strategic gains
		Processes of community learning

Capacity Building & Experience in Deliberations	Participatory community governance and processes	Inter-activity of Sub-Categories
		Livelihood sufficiency and opportunity
		Economic Stratification/ Equity
		Economic Diversification
		Small Business/ Indigenous Owned Business Expansion
		Social Life and Interaction
		Community Health
		Socio-ecological system integrity
		Community stewardship values and principles
		Socio-ecological systems and stewardship relationships
		Cumulative environmental effects and conditions
		Education
		Community values and decision-making priorities
		Cultural vitality and traditional practices
		Family, youth, and children
		Free, prior and informed consent
		Indigenous jurisdiction and decision-making context
		Participatory community governance and processes
		Capacity Building & Experience in Deliberations
		Community Safety
		Developing resilience
		Adaptive management
		Strategic level guidance for projects and programs
		Community and regional adaptive management
		Progress towards local opportunity
		Increasingly strategic and informed planning
		Mutually-reinforcing and strategic gains
		Processes of community learning



Inter-activity of Sub-Categories	Livelihood sufficiency and opportunity	Economic Stratification/ Equity	Economic Diversification	Small Business/ Indigenous Owned Business Expansion	Social Life and Interaction	Community Health	Socio-ecological system integrity	Community stewardship values and principles	Socio-ecological systems and stewardship relationships	Cumulative environmental effects and conditions	Education	Community values and decision-making priorities	Cultural vitality and traditional practices	Family, youth, and children	Free, prior and informed consent	Indigenous jurisdiction and decision-making context	Participatory community governance and processes	Capacity Building & Experience in Deliberations	Community Safety	Developing resilience	Adaptive management	Strategic level guidance for projects and programs	Community and regional adaptive management	Progress towards local opportunity	Increasingly strategic and informed planning	Mutually-reinforcing and strategic gains	Processes of community learning
Community Safety																											
Developing resilience																											
Adaptive management																											

Community and regional adaptive management	Strategic level guidance for projects and programs	Inter-activity of Sub-Categories
		Livelihood sufficiency and opportunity
		Economic Stratification/ Equity
		Economic Diversification
		Small Business/ Indigenous Owned Business Expansion
		Social Life and Interaction
		Community Health
		Socio-ecological system integrity
		Community stewardship values and principles
		Socio-ecological systems and stewardship relationships
		Cumulative environmental effects and conditions
		Education
		Community values and decision-making priorities
		Cultural vitality and traditional practices
		Family, youth, and children
		Free, prior and informed consent
		Indigenous jurisdiction and decision-making context
		Participatory community governance and processes
		Capacity Building & Experience in Deliberations
		Community Safety
		Developing resilience
		Adaptive management
		Strategic level guidance for projects and programs
		Community and regional adaptive management
		Progress towards local opportunity
		Increasingly strategic and informed planning
		Mutually-reinforcing and strategic gains
		Processes of community learning

Increasingly strategic and informed planning	Progress towards local opportunity	Inter-activity of Sub-Categories
		Livelihood sufficiency and opportunity
		Economic Stratification/ Equity
		Economic Diversification
		Small Business/ Indigenous Owned Business Expansion
		Social Life and Interaction
		Community Health
		Socio-ecological system integrity
		Community stewardship values and principles
		Socio-ecological systems and stewardship relationships
		Cumulative environmental effects and conditions
		Education
		Community values and decision-making priorities
		Cultural vitality and traditional practices
		Family, youth, and children
		Free, prior and informed consent
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		Participatory community governance and processes
		Capacity Building & Experience in Deliberations
		Community Safety
		Developing resilience
		Adaptive management
		Strategic level guidance for projects and programs
		Community and regional adaptive management
		Progress towards local opportunity
		Increasingly strategic and informed planning
		Mutually-reinforcing and strategic gains
		Processes of community learning

Processes of community learning	Mutually-reinforcing and strategic gains	Inter-activity of Sub-Categories
		Livelihood sufficiency and opportunity
		Economic Stratification/ Equity
		Economic Diversification
		Small Business/ Indigenous Owned Business Expansion
		Social Life and Interaction
		Community Health
		Socio-ecological system integrity
		Community stewardship values and principles
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		Education
		Community values and decision-making priorities
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		Free, prior and informed consent
		Indigenous jurisdiction and decision-making context
		Participatory community governance and processes
		Capacity Building & Experience in Deliberations
		Community Safety
		Developing resilience
		Adaptive management
		Strategic level guidance for projects and programs
		Community and regional adaptive management
		Progress towards local opportunity
		Increasingly strategic and informed planning
		Mutually-reinforcing and strategic gains
		Processes of community learning