

Social Impact Assessment in Rural and Small-Town British Columbia

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ABSTRACT

Social impact assessment is the primary ex-ante tool for achieving socially sustainable outcomes and for ensuring the equitable distribution of the burdens and benefits associated with major development projects. The objectives of this research project were to evaluate the social impact assessments that are conducted as part of mandatory environmental assessments for proposed major projects in rural and small-town British Columbia (BC), Canada and to recommend practicable changes for improving social impact assessment practice and policy. I addressed these objectives by analyzing the content of social impact assessments, interviewing interested parties with technical knowledge, and conducting a multiple case study evaluation of assessments undertaken for mining projects in Northwest BC. Although my findings show that excellence is possible under the current BC Environmental Assessment Act and supporting guidelines, there is little consistency in the methods, measures, approaches, and overall quality of assessments conducted in BC. A major shortcoming that emerged was the lack of attention to issues of equity, a fundamental principle in sustainable development and social impact assessment. Further, the social impact assessments being conducted in BC are generally not supported by conceptual frameworks or grounded in theory. Ultimately, it is recommended that the provincial government provide greater guidance regarding social impact assessment and examine what appears to be an ad hoc system of professional reliance. Finally, the practice of social impact assessment would benefit from a transparent discussion regarding what constitutes a qualified social impact assessment practitioner and a more in-depth examination of the theoretical foundations of social impact assessment.

PREFACE

Although I identified the research problem, designed and executed the research approach, and prepared this thesis, it was not without the valued guidance of my supervisory committees: Drs. Rob Kozak, Dave Cohen, John Innes, and Frank Vanclay.

Dr. Kozak provided considerable guidance regarding the research design, data collection, and analysis. He helped refine the content analysis approach presented in Chapter 3 and contributed to the development of the interview schedules presented in Chapters 4 and 5. He also provided direction regarding the sampling approaches throughout the project and greatly improved the quality of the thesis by advising with regard to the structure of the document and by reviewing multiple drafts.

Drs. Cohen, Innes, and Vanclay provided input on the research design, results interpretation, and the final thesis. Dr. Cohen helped refine the research objectives and questions. Dr. Innes helped position the work in a broader context and informed the discussion and conclusions. Dr. Vanclay guided research design and the development of the analysis framework in Chapter 3.

In addition to the contributions of the supervisory committee, Phil Grace advised on the evaluation of the economic content in the case study described in Chapter 5 and produced Figure 5.1. Location of proposed projects included in case study.

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1 THESIS INTRODUCTION

Located on the west coast of Canada, the province of British Columbia (BC) has a population of 4.6 million people. Approximately 25% of BC residents, including over 60% of the Aboriginal¹ population (BC Stats, 2008), live in rural and small-town settings (Statistics Canada, 2011). While the Canadian economy, in general, struggles with adapting to globalization, climate change, and price fluctuations for natural resources and commodities, rural areas and small towns currently face an additional set of challenges that include a slow rate of economic growth, a lack of economic diversification, a low level of entrepreneurial activity, a low rate of labour-force growth and employment creation, a reduction in government jobs and services, and population decline amongst adults under 30 years old (Rural BC Project, 2014).

According to the BC Ministry of Jobs, Tourism and Skills Training's (2013) quarterly *Major Projects Inventory*, there are 70 natural resource-dependent industrial projects under development in rural and small-town BC with an estimated capital cost of over \$25 billion. In 2012, natural resources accounted directly for 7.1% of provincial gross domestic product (British Columbia Ministry of Finance, 2013), and royalties from natural resources provided approximately \$2.5 billion in annual revenue to the provincial government (BC Stats, 2013). A key component of the provincial government's economic development policy hinges on the increased production and export of commodities (Government of British Columbia, 2014)—commodities that are produced and, to some extent, processed in rural BC. Ensuring the equitable distribution of the benefits and burdens of industrial development is integral to the viability of rural communities and First Nations. Regulated under the BC Environmental Assessment Act

¹ "Included in the Aboriginal identity population are those persons who reported identifying with at least one Aboriginal group; that is, North American Indian, Métis or Inuit, and/or those who reported being a Treaty Indian or a Registered Indian, as defined by the Indian Act of Canada, and/or those who reported they were members of an Indian band or First Nation" (BC Stats, 2008, p. 1).

(EAA, 2002) and conducted as a component of comprehensive environmental assessments, social impact assessment is the primary *ex-ante* tool employed in ensuring that new developments meet the goals of social and economic sustainability (BC EAO, n.d.).

Over a decade ago, the BC provincial government committed to ongoing deregulation and policy streamlining in order to facilitate economic growth through accelerated industrial development and resource extraction (British Columbia Environmental Assessment Office [EAO], 2003; Ministry of Energy and Mines, 2003, 2004; Regulatory Reform BC, 2013). The provincial government's commitment to deregulation resulted in the government repealing the 1996 version of the BC EAA. With the new act, the requirements for local participation were changed by removing the requirement for project committees (i.e., advisory working groups), which included the representation of local government (EAA, s 9, 1996).² With regard to consultation, the current act simply refers to general policies and the Public Consultation Policy Regulation (2002). In contrast, the previous version of the act set out the steps required for public consultation and outlined the process for creating a public advisory committee that would provide recommendations to the project committee. These changes also included the simplification of the Environmental Assessment process and the implementation of a 180-day limitation on the amount of time a project application can be under review by the provincial government.

Nearly 40 years have passed since the renowned Canadian Mackenzie Valley Pipeline Inquiry (the Berger Inquiry), which continues to be cited internationally as one of the premiere examples of environmental and social impact assessment. The Berger Inquiry is also recognized as the first example of the incorporation of social impacts into

² Despite these changes to the language of the BC EAA, project committees are still engaged during the environmental assessment process and are referred to as advisory working groups.

major project decision making (Burdge & Vanclay, 1996; Parkins, 2012). Having conducted this landmark process, one might expect that Canada and its provincial governments would be amongst the leaders in the assessment of the social impacts of industrial development.

Although there is a large body of literature discussing social impact assessment practices in general and a growing body of literature addressing specific countries and regions, the research, academic or otherwise, directly addressing social impact assessment in BC is limited. A 2010 review of the mandatory BC Environmental Assessments conducted under the BC EAA (2002) described a lack of clarity in the presentation of proponent-generated content versus content generated by assessment professionals (Haddock, 2010). The report also identified the lack of follow-up and monitoring as a major shortcoming (Haddock, 2010). A similar concern regarding a lack of EAO follow-up monitoring was reiterated in a subsequent report from the Auditor General's Office of British Columbia (2011).

Based on a review of three assessments identified by the EAO as containing exemplary examples of social impact assessment,³ Horsman (2011) identified examples of a number of promising practices that included effective engagement with neighbouring communities and First Nations, incorporation of intangible social values and appropriate selection of valued components⁴ and indicators. The author also reported a need for greater emphasis on monitoring and evaluation activities (Horsman, 2011). The three assessments relied heavily on quantitative information, which emphasized expert

³ Two of these proposed projects are located in a rural location (Galore Creek Copper-Gold-Silver Project and Ruby Creek Molybdenum) and the third is located (New Fraser River Crossing) in an urban project located near Vancouver, British Columbia.

⁴ "For the purpose of environmental assessment in BC, Valued Components (VCs) are components of the natural and human environment that are considered by the proponent, public, Aboriginal groups, scientists and other technical specialists, and government agencies involved in the assessment process to have scientific, ecological, economic, social, cultural, archaeological, historical, or other importance" (BC EAO, 2013, p. 4).

validation rather than qualitative, values-based information validated by communities (Horsman, 2011). The author recommended that social impact assessment in BC could be improved by shifting toward a more integrated approach that incorporated both qualitative and quantitative information through an increasingly participatory, integrated process (Horsman, 2011).

Thus, the premise that Canada and its provincial governments are leaders in the assessment of the social impacts of major development remains unproven, leaving us with little understanding of how provincial decision-makers are managing the social costs and benefits associated with industrial development in rural and small-town BC and achieving the goal of social and economic sustainability (BC EAO, n.d.). To address this gap in the knowledge, I set out to conduct an evaluation of social impact assessments conducted for major projects proposed in rural and small-town BC and to make practicable recommendations to strengthen the practice of social impact assessment.

The process of conducting the evaluation provided the structure for this thesis. The remainder of this chapter introduces my objectives and research questions and introduces the methods and methodology that I employed in these studies.

1.1 Methods

Given the uncertain state of social impact assessment practices and the important role that these assessments play in rural and small-town BC, my overarching research objectives were:

- to evaluate the social impact assessments that are conducted as part of the BC Environmental Assessment process for proposed major projects in rural and small-town BC, and
- to recommend practicable changes for improved social impact assessment practice and policy.

An evaluation of social impact assessment may address the quality of the assessment and it may address the effectiveness of the assessment. I focused primarily on the quality of social impact assessments, relying on the peer-reviewed literature to provide metrics and best practices. While most of the literature addressing methodologies for evaluating the quality of impact assessments has focused on the quality of comprehensive or biophysical assessments (O'Faircheallaigh, 2009), a handful of projects have specifically evaluated social impact assessment reports (e.g., Ahmadvand, Karami, Zamani, & Vanclay, 2009; Chadwick, 2002; Deng & Altenhofel, 1997; Fisher, 2011; Glasson & Heaney, 1993; Hildebrandt & Sandham, 2014; Leandri Hildebrandt, 2012; Suopajärvi, 2013). I drew on these previous studies to develop the methods.

With these factors in mind, and recognizing the dearth of documentation addressing the current practices in BC, my two broad objectives led to a number of supporting research questions that provided the blueprint for this research project by guiding three separate studies. Within the context of social impact assessments that are conducted under the BC EAA, I addressed the following questions:

- How are social impact assessments conducted for major projects proposed in rural and small-town BC?
- How do practitioners, governments, proponents, and other interested parties with technical and regulatory knowledge perceive the quality of the current social impact assessment practices and policies?
- How do interested parties believe that current practices and policies can be improved?
- What is the quality of the social impact assessments that are conducted for proposed major projects in rural and small-town BC?

A key component of the quality of social impact assessments is the accuracy of the content and predictions. However, accuracy of the social impact assessments could not be evaluated as such an exercise would require access to proprietary information held by proponents.

To paraphrase O'Faircheallaigh (2009), the following three factors drive the discussion of the effectiveness of social impact assessment: completion of the requisite set of activities, completeness of the content constituting a social impact assessment, and the degree to which a social assessment fulfills its intended purpose. The degree to which BC Environmental Assessments—of which social impact assessments are a component—complete the requisite set of activities as set out in the policy, was addressed in earlier research (Auditor General of British Columbia, 2011; Haddock, 2010) and, therefore, was also not included in this research.

Officially, the purpose of social impact assessments of major projects is defined by the BC EAA (2002), which states that Environmental Assessments are intended to support the decision-making ministers in their determination of whether a project will have significant adverse effects and should or should not be granted a BC Environmental Assessment certificate. The BC EAO website states that Environmental Assessments are conducted to ensure that major projects meet the goals of environmental, social, and economic sustainability (BC EAO, n.d.). Although addressing the effectiveness of social impact assessment was not amongst the primary objectives or research questions, the findings did provide some insight into this arena and direction for further study.

In the following sections, I explore the theoretical underpinnings for my research approach. Then, I provide a broad-stroke overview of the research methods. Lastly, I provide an overview of the structure of this dissertation and the ways in which my objectives, research questions, and methods interrelate.

1.1.1 Methodological Approach

I built this research project with a mixed-method framework. Tashakkori and Teddlie (1998) described a mixed-method study as one that employs qualitative and quantitative data collection and analysis housed in a research paradigm that employs both constructivist and positivist perspectives. Yin (2003) stated that a mixed-method study also employs inductive and deductive reasoning simultaneously.

Becker (2003) argued that advances in social impact assessment now demand “reflection on the foundations of science” (p. 142). Smith (1999) stressed the importance of achieving “a more critical understanding of the underlying assumptions, motivations, and values which inform research practices” (p. 20). Yet, disappointingly, there is continued tension between those who subscribe to a constructivist/phenomenological research paradigm and those who embrace a positivist worldview. As paradigms ultimately guide research methods (Lincoln & Guba, 1985), this tension is also referred to as the quantitative-qualitative debate (Tashakkori & Teddlie, 1998). Interestingly, a similar tension has existed in social impact assessment as there is growing pressure to incorporate both research inquiry paradigms (Becker, 2003; Bradshaw, Wood, & Williamson, 2001). To overcome the research limitations associated with these two dominating worldviews and meaningfully address the research questions, I have rooted this research in a pragmatic worldview.

Pragmatism evolved from the gulf between these two dominating paradigms. It allows for inductive and deductive reasoning, quantitative and qualitative methods of data collection and analysis, and for objective and subjective points of view (Tashakkori & Teddlie, 1998). For this study, utilizing pragmatism will ensure that I am able to delve into the context-specific data that may be relevant to the assessment of socio-economic impacts. Pragmatism will also allow for the incorporation of multiple data sources and

analysis methods, thus increasing the validity of the research. It is also noteworthy that pragmatism is highly compatible with social impact assessments' requisite combining of qualitative and quantitative information.

In keeping with the pragmatic inquiry paradigm, I endeavoured not to position this project at an unrealistic distance from the day-to-day realities of practicing professionals and policy makers involved in social impact assessment, the needs of resource-dependent communities, and the realities of operating businesses in BC. My goal was to conduct a research project with the potential to act as a catalyst for improvement in the field of social impact assessment.

Even by ensuring thorough research practices and design, subjectivity and bias cannot be completely eliminated in qualitative research and each researcher brings their own perspective to a project (Stringer, 1999). As the person responsible for designing, conducting and interpreting this research, I brought years of professional experience in community-based research and community sustainability planning. I have also lived and worked in small-town BC.

1.1.2 Research Design and Methods

This research project was broken down into three major research components that also formed the backbone of the three central research chapters. These are as follows: (a) review of past social impact assessments, (b) interviews with social impact assessment practitioners, governments, proponents, and other interested parties with technical and regulatory knowledge, and (c) a multiple case study evaluation of mining project social impact assessments in Northwest BC.

Component 1: A Base-Case Description of Social Impact Assessment Practices in Rural and Small-town BC

When the preliminary investigation revealed that there has been little or no review of the current practices employed in BC EAO social impact assessments for major projects in rural and small-town BC, I set out to establish a base-case description. Thus, I tackled the first research question: How are social impact assessments conducted for major projects proposed in rural and small-town BC?

To address this question, I reviewed a sample of 36 social impact assessments (over 2 million words) conducted under the BC EAA and submitted to the BC EAO as part of project applications for BC Environmental Assessment certificates. With the intention of working with a representative sample, I stratified the sample based on project type and location. I systematically collected and analysed the following information:

- the extent and balance of social concepts addressed in assessments;
- the type of information reported and how it is used; and
- the tools and frameworks that are employed.

I employed two distinct research methods:

1. Data transformation: For this activity, I quantified the qualitative (Creswell, 2009) or, more specifically, counted the number of occurrences of and/or the amount of content relating to specific concepts (described in detail below).
2. Qualitative analysis: Simultaneously, I coded (categorized) content into emergent themes that were either reoccurring or reflected issues described in the literature.

Additional details are provided in Chapter 3.

Component 2: The Practice of Social Impact Assessment in Rural and Small-town BC

In the second research component, I addressed the following research questions: How do practitioners, governments, proponents, and other interested parties with technical and regulatory knowledge perceive the quality of the current social impact assessment practices and policies? And, how do interested parties believe that current practices and policies can be improved?

This involved interviews with BC social impact assessments practitioners, proponents, policymakers, and community representatives to assess their perceptions of the assessment practice, process, and objectives. Interviews addressed the following concepts:

- examples of best practices,
- perceptions regarding current practice including tools and methods,
- perceptions regarding the current government process,
- satisfaction with outcomes and perceptions of procedural justice, and
- understanding and perceptions of objectives.

I interviewed a purposive (nonprobability) sample of community representatives, First Nations representatives, provincial government employees, and proponents identified from the sample of assessments used in Phase 1. In total, 30 participants participated in semistructured face-to-face and telephone interviews (individual and group). Interviews were transcribed, checked, and analyzed using qualitative analysis methods. Additional details are provided in Chapter 4.

Component 3: Multiple Case Study Evaluation of Three Proposed Mining Projects in Northwest BC

Lastly, I set out to further explore the research question: What is the quality of the social impact assessments conducted under the BC EAA?

To address this question, I carried out a multiple case study of the social assessment processes that were conducted for three metal mines in the northwest region of BC. This regional and sector focus reduced context- and project-driven variation.

Most of the literature addressing methods of evaluating the quality of impact assessments has focused on comprehensive or biophysical assessments (Momtaz & Zobaidul Kabir, 2013; O’Faircheallaigh, 2009). Only a handful of projects have

specifically evaluated social impact assessments and clearly described their methodologies. With few exceptions, these evaluations focused exclusively on the written social impact assessment (i.e., did not address supporting documents or triangulate their data with other sources) and were conducted using a matrix or checklist approach that tracked various criteria ranging from the attributes of the report to the specific content. Both Fisher (2011) and Hildebrandt and Sandham (2014) incorporated methods and tools originally developed by Lee, Colley, Bonde, and Simpson (1999) for the purposes of evaluating comprehensive environmental assessments. In the absence of a widely accepted approach, I developed an evaluation framework based on these previous projects.

I reviewed each assessment and the accompanying documentation and rated it relative to the evaluation matrix. Simultaneously, I identified (coded) content that was relevant to the criteria in the matrix. To add depth to the understanding, I also interviewed a small number of local residents and community representatives (seven) who had participated in these assessments. Interviews were transcribed and analyzed to identify emerging themes. More detailed methods are provided in Chapter 5.

1.2 Dissertation Structure

Figure 1.1 summarizes the structure for this dissertation. Chapter 2 provides a review of the relevant policy and peer reviewed literature that informs the background for this research. Chapter 3 describes the current practices employed in social impact assessment in rural small-town BC. In Chapter 4, I characterize BC social impact assessment from the perspective of individuals with technical and regulatory knowledge. In Chapter 5, I narrow the focus and apply the findings from Chapters 2 and 3 by evaluating the social impact assessments that were conducted for three proposed metal mining projects in BC. In Chapter 6, I integrate the results from the previous chapters

within the context of the current BC policy and make recommendations for the improvement of social impact assessment of major projects in rural and small-town BC.

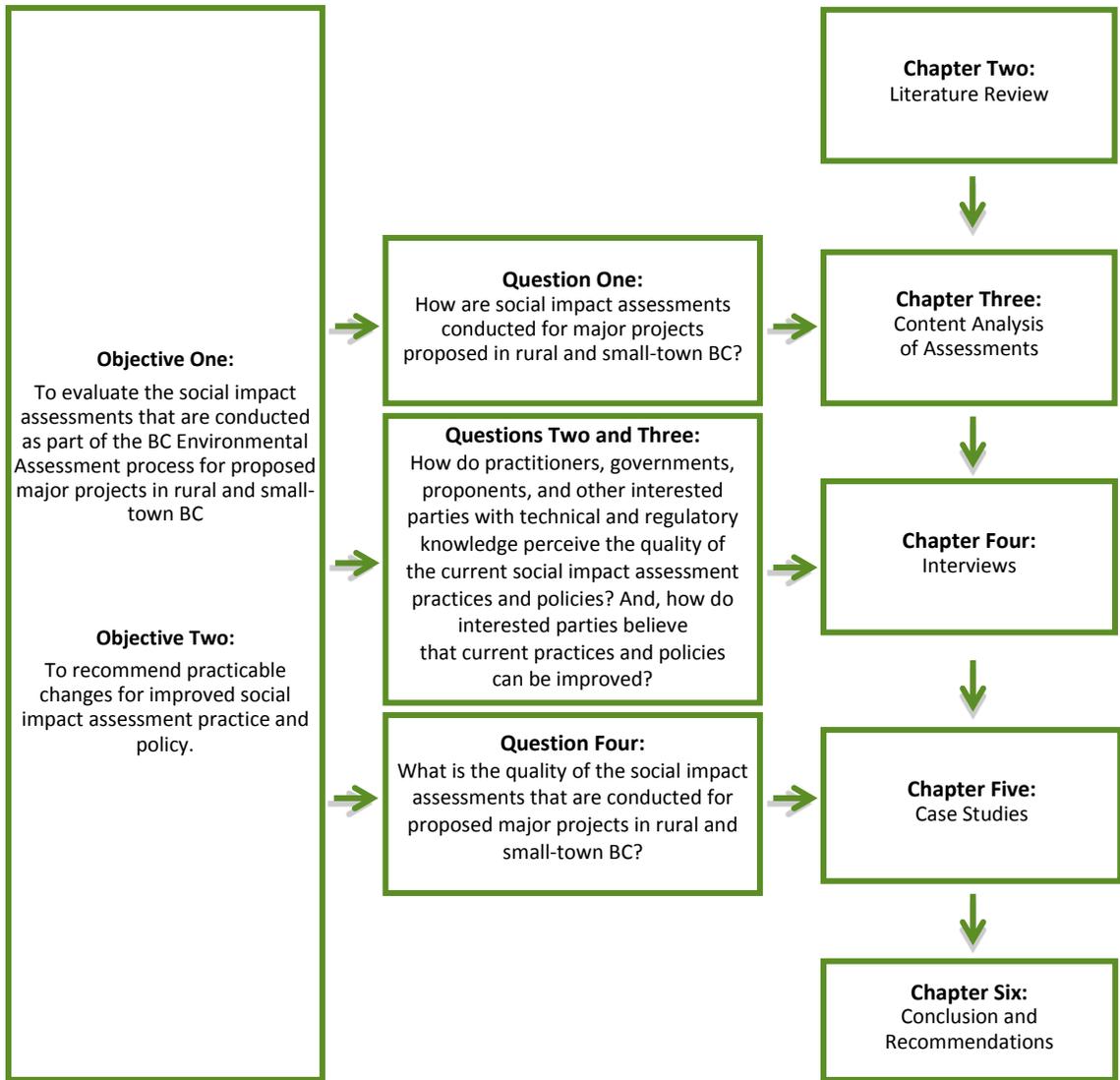


Figure 1.1 Interrelation of research objectives, questions, and research chapters

2 SOCIAL IMPACT ASSESSMENT: DEFINITIONS, THEORY, AND PRACTICE

Although the BC EAA regulates the assessment of social impacts for major projects, neither it, nor any of the supporting policy, contains a definition of *social impacts*, *social impact assessment*, or *socio-economic impact assessment* (BC EAA, 2002; Horsman, 2011). Similar to many areas of study, the literature also lacks consensus regarding the definitions of these terms. In fact, even the term *social* belies consistent definition within the broader realm of sustainable development (Lehtonen, 2004). For the purposes of this research, I employed Burdge and Vanclay's (1996) definition:

All social and cultural consequences to human populations of any public or private actions that alter the ways in which people live, work, play, relate to one another, organize to meet their needs, and generally cope as members of society. (Burdge & Vanclay, 1996, p. 59)

Furthermore, and integral to this research, social impacts must be “experienced or felt in a corporeal (physical) or cognitive (perceptual) sense, whether at the level of individual, household, or society/community” (Slootweg, Vanclay, & Van Schooten, 2001, p. 25).

Debate continues regarding the marriage of social and environmental impact assessment (du Pisani & Sandham, 2006). However, decoupling these two practices assumes a reductionist worldview and a perspective that compartmentalizes environmental impacts as distinct from the social and economic impacts of development, neglecting what Burdge (2003a) referred to as their interconnected nature. According to Vanclay (2003), “The good practice of social impact assessment accepts that social, economic and biophysical impacts are inherently and inextricably interconnected. Change in any of these domains will lead to changes in the other domains” (p. 6) as social and ecological wellbeing are inextricably linked (Flint & Lulloff, 2005). The linking of social impact assessment with biophysical environmental impact assessment is also more attuned with the worldview of many indigenous cultures, which may not distinguish

between the issues facing the natural environment and those confronting society (Nadasdy, 1999). Sociologically, this argument is rooted in almost a century of literature. For instance, the early accounts of rural agricultural communities in the United States recognized the inextricable ties between social and biological systems in rural communities (Vance, 1929).

To varying degrees, economic impact assessment, community impact assessment, health impact assessment, and environmental impact assessment address issues also considered under the umbrella of social impact assessment. Sloodweg, Vanclay, and Van Schooten (2001) used the word *human* rather than *social*, with the intent of avoiding debate regarding what ought or ought not be addressed under social impacts and social impact assessment. With few exceptions (e.g., du Pisani & Sandham, 2006), the term social impact assessment is applied to assessments that also address economic impacts when they affect social values (Becker, 2003; Burdge, 2003; Taylor, Bryan, & Goodrich, 1995; Vanclay, 2002), and the terms *social impact* and *socio-economic impact* are used interchangeably. Although the term *social impact assessment* may be more commonly employed in the published literature, in BC policy, *socio-economic impact assessment* is also common. Throughout this work, I used the term social impact assessment with the understanding that it is synonymous with socio-economic impact assessment.

According to Vanclay (2002), social impact assessment is as follows:

The process of analyzing (predicting, evaluating and reflecting) and managing the intended and unintended consequences on the human environment of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions so as to bring about a more sustainable and equitable biophysical and human environment. (p. 191)

This process has the intent of ensuring sustainable development and communities. In addition, Vanclay (2002) noted that social impact assessment is an umbrella or

overarching framework that encompasses all human impacts including aesthetic (landscape analysis), archaeological and heritage, community, cultural, demographic, development, economic and fiscal, gender, health, indigenous rights, infrastructure, institutional, political (human rights, governance, democratization), poverty-related, psychological resource issues (access and ownership of resources), the impacts of tourism and other impacts on societies. (p. 190)

I employed this broad scope definition of social impact assessment proposed by Vanclay (2002). Of course, a broad definition of social impact assessment results in the need to address a very wide range of issues in the study.

2.1 Approaches to Social Impact Assessment

Although not always entirely distinct, a review of the literature reveals that there are a set of somewhat hierarchical concepts to be addressed in a discussion of social impact assessment. These concepts are as follows: research paradigms and approaches; theoretical foundations and conceptual frameworks; procedural frameworks and processes.

2.1.1 Research Paradigms and Approaches

Becker asserted that social impact assessment “assessors will have to participate in reflecting on the foundations of science” (Becker, 2003, p. 142). This is most certainly due to the reality that the meaningful assessment of social impacts is a delicate balancing act between approaches based in a positivist paradigm and those based in a constructivist paradigm. In the Canadian context, this debate dates back at least as far as 1985 (Canadian Environmental Assessment Research Council, 1985; Yap, 2003).

The marrying of qualitative and quantitative data, and the called-for incorporation of increasingly participatory and flexible approaches into a previously prescriptive process,

requires knowledge of positivist/reductionist research and constructivist-based research. Although these research traditions have historically been cast in opposition, there is increasing recognition of the benefits of employing both (Becker, 2003; Bradshaw, Wood, & Williamson, 2001). This is particularly true when confronting complex and dynamic systems such as those present in social impact assessment (Colfer, 2005). To employ both, practitioners must have either an understanding of the underlying assumptions associated with each research tradition or a willingness to collaborate.

The current trend in best practices, is a move away from an exclusive emphasis on the accuracy of predictive efforts to an assessment that places greater emphasis on the efficacy of including impacted populations in a more participatory project assessment (Becker, Harris, Nielsen, & McLaughlin, 2004; Buchan, 2003; Esteves, Franks, & Vanclay, 2012; Gagnon, 1995; Lockie, Franetovich, Sharma, & Rolfe, 2008; Tang, Wong, & Lau, 2008; Vanclay & Esteves, 2011; Vanclay, 2003, 2006). This approach emphasizes public participation throughout the planning process and beyond, suggesting that social impact assessment should also include ongoing monitoring and adaptive management. Increased public involvement can enhance the assessment by capturing local knowledge, increasing social capital, building trust, and increasing community support for proposed changes (Baines, Taylor, & Vanclay, 2003; Buchan, 2003; du Pisani & Sandham, 2006; Vanclay, 2003b).

Additionally, higher levels of public participation can increase local knowledge (Baines, Taylor, & Vanclay, 2003; Buchan, 2003; du Pisani & Sandham, 2006; Vanclay, 2003b), enabling communities to assess proposed activities on their own terms and contribute to informed decisions based on the potential benefits and costs (Sinclair, Diduck & Firzpatrick, 2008). According to Sinclair, Diduck, and Fitzpatrick (2008), despite being undervalued, in some situations, participation in environmental assessments is consistent with critical education methods. The educational

opportunities associated with environmental assessments potentially empower local communities to take ownership of the decisions that affect them and also strengthens the participatory nature of assessments. Further, Diduck (1999) asserts that non-formal, public environmental education could facilitate improved public involvement and additionally empower local communities.

The appropriate level and timing of public involvement is a primary focus of discussion in the literature in regard to the (Buchan, 2003; du Pisani & Sandham, 2006; Lane, Ross, & Dale, 1997; Vanclay, 2006). Doelle and Sinclair (2006) identified two fundamental shortcomings of consultation during environmental assessment processes (federal and provincial) in Canada. The first is a lack of appreciation of the need for early and ongoing participation and the second is insufficient willingness to rethink projects during public engagement. According to Doelle and Sinclair (2006), environmental assessment would benefit from a legislated shift toward early engagement and a decision-making process that uses techniques aimed at achieving consensus. The primary benefits to the public being that proponents would be encouraged to seriously consider and address public concerns and there would ultimately be a shift in the balance of power between the public and the proponent. Proponents would benefit from greater certainty of process and regulatory agencies would benefit from improved process and decision satisfaction of involved parties.

Despite the many potential benefits of increased public participation, there is considerable debate regarding the objectives of public participation (O'Fairchellaigh, 2010). O'Fairchellaigh (2010) identified the following three broad purposes for participation in environmental assessments: "as an aid to decision making which remains separate from the participating public; as a mechanism for achieving a role for the public as joint decision makers; and as a mechanism for reconstituting decision making structures." (p. 20) Further, O'Fairchellaigh cautions that these categories are not

rigid and they advocated for a move away from a hierarchal, static model of public participation such as those suggested by Arnstein (1969) or Thomas (1990).

Despite widespread calls for a move towards participatory social impact assessment, government agencies continue to subscribe to a more prescriptive process. In a comparison of the *International Principles for Social Impact Assessment* and the *United States Principles and Guidelines for Social Impact Assessment*, Vanclay (2006) noted a fundamental divergence between the two documents. While the American policy describes a technocratic positivist process, the international principles describe a constructivist approach to a participatory, democratic process. Although BC lacks guiding principles for social impact assessment (or environmental assessment), in a case study of three social impact assessments conducted under the BC EAA, Horsman (2011) concluded that assessments in BC tend toward the technocratic and would benefit from a more participatory approach.

2.1.2 Theoretical Foundations, and Conceptual Frameworks

Howitt (2011) stated that social impact assessment is “atheoretical—an unsophisticated and uneven amalgam rather than a thoughtful and robust synthesis.” (p. 91). There have been infrequent but unrelenting calls for an increased focus on the theoretical foundation of social impact assessment (Dietz, 1987; Howitt, 2011; Parkins, 2012; Ross & McGee, 2006; Suopajarvi, 2013).

Dietz (1987) put forward Habermas’s (1971) model of the science-policy interface, in which there are three modes by which values and scientific information are integrated into policy decisions (*pragmatistic, technocratic, decisionistic*). In Habermas’s model, the ideal mode is pragmatistic, wherein values and scientific information are integrated by an informed public which participates in policy decisions. According to Dietz, an optimal social impact assessment would be closer to Habermas’s ideal. Dietz cited the Berger

Inquiry as an example of such a mode in that the process brought to light citizen input and demonstrated how it was essential to the decision process. However, Howitt (2011) stated that this framework was inappropriate as an underlying theoretical basis for social impact assessment, largely because of the complexity of tasks to which social impact assessment is set. Furthering this argument, Howitt suggested that, while social impact assessment may never be underpinned by a single preferred theoretical foundation, it could be enriched through a more sophisticated consideration of the discourse shaped by keywords such as power, place, community, and scale and the ideas of culture, sustainability, and difference.

Habermas's (1966) theory of knowledge interests was applied to an analysis of social impact assessment in Finland (Suopajärvi, 2013). The study concluded that in Finland, social impact assessment is grounded in an empirical-analytical tradition that reflects neither the best practices in social impact assessment as described in the literature nor the recent "cultural turn" in social science (Suopajärvi, 2013, p. 29).

Despite numerous offerings, there are no widely accepted conceptual frameworks for the assessment of social impacts (Ross & McGee, 2006). To be truly useful in social impact assessment, conceptual frameworks must move beyond description and venture into prediction and explanation (Blishen et al., 1979). Frameworks developed through rural sociology tend to be unsuitable, possibly due to the critical and discursive tendencies of the discipline of sociology (Burdge & Vanclay, 1996) and to the lack of integration from a range of other disciplines, including psychology, anthropology, human ecology, and planning (Ross & McGee, 2006).

Taylor et al. (1995) suggested that the diversity of problems addressed in social impact assessment make the development of a single underlying framework impossible. Contrarily, Ross and McGee (2006) posited that it may be possible to identify scenarios with enough similarity to validate the call for conceptual frameworks. In an attempt to

assess the utility of social impact assessment conceptual frameworks, Ross and McGee were able to identify only three frameworks created specifically for social impact assessment and at a scale deemed appropriate for guiding the design of a community social impact assessment study: the community response model, the social organisation model, and the community organization model.

The community response model is based on behavioural and subjective indicators of three local community process variables: social vitality, economic viability, and political efficacy (Blishen, Lockhart, Craib, & Lockhart, 1979; Bowles, 1981). This model is based on assessment work with British Columbia First Nations and was developed with the intent of fostering a “sympathetic policy environment” (Blishen et al., 1979, p. 81). Despite an emphasis on policy and governance, the study concluded that it is important to involve communities in dealing with social, economic, and political challenges (Blishen et al., 1979).

The social organisation model (Branch, Hooper, Thompson, & Creighton, 1984) incorporates direct project inputs with community resources, community social organizations, and indicators of wellbeing. Although direct project inputs are limited to measurable factors, such as people, jobs, income, organizations and regulations, resources, and health and safety, the authors did make the noteworthy observation that, in the absence of this type of information, community perceptions of potential change will also affect a community (Branch et al., 1984). Community resources refer to the following:

- historical experience,
- cultural characteristics,
- demographic characteristics,
- occupational/labour force characteristics,

- employment/income characteristics,
- facilities/services/fiscal resources,
- organizational and regulatory structure,
- leadership characteristics, and
- attitudes toward development and perceptions of community.

Community social organizations refer to the processes and structures that define how people relate to one another the following: diversity/complexity, outside linkages, distribution of resources/power, coordination and cooperation, and personal interactions. The indicators of wellbeing fall into the categories of behaviour, access to resources, and perceptions of wellbeing. Little and Krannich (1998) identified “the relative exclusion of more distinctly social and cultural aspects of communities” (p. 25) as a weakness of this model.

The community organization model incorporates values, community structures (economic, political, formal social, and informal social), community activities and processes (socialization, social control, reinforcement of values and norms, social participation, and mutual support) and, ultimately and most significantly, social wellbeing (indicator rates, perceived wellbeing, and community satisfaction) in order to identify the key issues occurring within a community (Little & Krannich, 1998). Values play an integral role in impact assessment as they affect a community’s resilience and the way a community responds to the effects of development. This model was distinguished from the community response model by its inclusion of values and use of processes rather than resources (Ross & McGee, 2006).

Ross and McGee (2006) retrospectively applied these seemingly distinct frameworks to an *ex-post* case study addressing lead contamination in a rural community. They found that the three frameworks are more similar than any initial review suggested and

that all would benefit from greater attention to the interconnectedness between the natural environment and social systems (Ross & McGee, 2006). None of the frameworks would have accurately predicted the breakdown in community cohesion and sense of individual disempowerment that were the primary impacts of the lead contamination (Ross & McGee, 2006). Interestingly, the authors did not discount the value of conceptual frameworks. They concluded that the selection of a framework is context-specific and that frameworks are most useful when supplemented by context-specific knowledge (Ross & McGee, 2006).

The resource community cycle, originally published by Taylor and Fitzgerald (1988), bridges the gap between rural sociology and social impact assessment. The model includes the following stages: resource development, labour force growth, recruitment and infrastructure establishment, continued growth and community development. These are followed by business operation, maturity, wind-down, and depression—often followed by yet another cycle. The framework emphasizes the relationship between “economic growth and decline, workforce and infrastructure decision-making, population dynamics and social capital” (Lockie, Franettovich, Petkova-Timmer, Rolfe, & Ivanova, 2009, p. 2) and is descriptive, explanatory, and predictive in nature.

In a comprehensive longitudinal study of multiple New Zealand resource-dependent communities (mining, forestry, agriculture, energy, and tourism sectors), Taylor et al., (2003) enhanced the resource community cycle model with the intention of developing a robust model suitable to the practical application of social impact assessment. The study identified a number of additional factors that impact communities’ abilities to be resilient through change:

- the integral and long-lasting effects of decisions made prior to initiation of development;

- the catalyzing nature of new technologies resulting in changing and decreasing labour demands;
- the shift from local to regional labour markets due to improved infrastructure;
- individual workers holding multiple jobs;
- a reduced demand for outside workers and the associated housing and facilities previously associated with development projects;
- periods of economic downturn resulting in lower costs of housing and the in-migration of relatively unskilled, social service-dependent newcomers;
- single-industry cultures that are typically conservative, and not well-positioned to minimize the social effects of the boom-bust cycle due, resistant to economic change and sustainable resource management practices, and noticeably lacking in entrepreneurship; and
- the promotion of tourism near the end of the project cycle (Taylor et al., 2003).

Lockie, Franettovich, Petkova-Timmer, Rolfe, and Ivanova (2009) revisited the model in an *ex-ante* review of two Australian mining projects. They found that additional factors impacting the community cycle include the cumulative impacts of other development projects, labour recruitment practices, and the ability of local communities to capture economic benefits from development. The mining operations that engaged residents in a manner that enhanced this local capacity reduced negative impacts by maximizing local benefits. These findings emphasize the value of effective mitigation strategies.

Slotweg et al. (2001) proposed the environmental functional model to incorporate biophysical environmental impacts with social and economic impacts. This model describes the cycle through which changes in a project's biophysical or social settings result in changes in the functions of those settings, thus leading to interventions and possibly, further changes (Slotweg et al., 2001; Slotweg, Vanclay, & Van Schooten,

2003, 2005; Van Schooten, Vanclay, & Slootweg, 2003). According to the environmental functional model, *direct impacts* result from social changes processes caused by a project. *Indirect impacts* are a result of changes a project causes in the biophysical environment. Impacts that occur as a result of other impacts are referred to as *second order*. The environmental functional model also relies on the application of *filters* for the purposes of identifying and narrowing the spectrum of potential impacts (Slootweg et al., 2001, 2003, 2005; Van Schooten et al., 2003). Within the context of assessing biophysical impacts, a *landscape filter* is created through knowledge of the landscape and ecosystems.

A notable use of the environmental function model is that it distinguishes between *interventions* (e.g., major industrial projects or policy changes), *social change processes* and *social impacts* (Van Schooten et al., 2003; Vanclay, 2002). A distinction also raised by Little and Krannich (1998). Interventions catalyze social change processes. These social change processes occur regardless of the context (e.g., community, nation, culture, history) and result in context-specific social impacts (Van Schooten et al., 2003; Vanclay, 2002). In other words, "Social change process can be measured objectively, independent of the local context" (Van Schooten et al., 2003, p. 77). Potential social change processes include, but are not limited to, demographic, economic, institutional, and legal processes; emancipatory and empowerment processes; socio-cultural processes; and geographical processes (Van Schooten et al., 2003; Vanclay, 2002). Social impacts must be "experienced or felt in a corporeal (physical) or cognitive (perceptual) sense, whether at the level of individual, household, or society/community" (Slootweg et al., 2001, p. 25). Based on this interpretation, the arrival of new residents is a social change process. The experiences of pre-established community members, such as annoyance or a lack of connection to the changed community, are impacts.

Although the concept of distinguishing between change processes and social impacts is paramount to the meaningful identification of the effects of interventions, and the environmental functional model makes significant contributions toward conceptualizing this distinction, translation of the environmental functional model for social impact assessment has proven difficult. Vanclay (2002) used this framework to conceptualize the impacts potentially caused by interventions and, with the caveat that it was not intended to be used as a checklist, identified 81 indicative social impacts. In reviewing the list and rationale, I found questions arose surrounding the distinctions between social change processes and social impacts and also amongst the nature of the social impacts themselves. For example, Vanclay (2002) identified “availability of housing facilities” (p. 203) as a social impact. Vanclay (2002) also stated the following:

Prostitution, in itself, is not a social impact. However, prostitution can cause social impacts such as health impacts (through the spread of HIV and other sexually transmitted diseases). Prostitution may cause moral outrage, a range of gender impacts, and other concerns. It also provides economic opportunities and employment—which, in fact, can lead to further social impacts. Prostitution itself is not an (experienced) impact, but in this schema, it is considered to be a social activity (process) that leads to impacts. (p. 189)

If the same logic were applied to prostitution as that which is applied to housing, the potential impacts would include the availability of prostitution or perhaps demand for prostitution. Alternatively, changes in the availability of housing could produce social impacts such as fear (of homelessness), inadequate housing, and higher rates of transmission of communicable diseases.

The 81 impacts also varied considerably in that some included a definitive direction of change (e.g., “loss of local language” [Vanclay, 2002, p. 205]) and others did not (e.g., “availability of housing facilities” [Vanclay, 2002, p. 203], “obligation to ancestors”, “family violence” [Vanclay, 2002, p. 206]). Although, in some cases a directional change

is widely understood (F. Vanclay, personal communication, February 6, 2015) it would seem that greater clarity could be gained by explicitly identifying who or what is experiencing any given impact. Interestingly, a key aspect of the environmental functional model in biophysical impact assessment is the application of a *landscape filter* (Slootweg et al., 2001, 2003). Slootweg et al. (2003) identify the parallel social concept as a *social group filter*. This concept however, was not widely explored or operationalized. Slootweg et al. (2003) cite complications and practitioner resistance. It seems that operationalizing this concept would add considerable clarity to an already, significant model.

Although the environmental functional model was not the focus of their study, Lockie et al. (2008) applied the environmental functional model as a classification system to facilitate their review of public participation in assessments conducted for a series of mining projects. For most of the social impacts identified, the researchers were able to clearly identify the impacted person, people, or organization, and thus incorporated the distinction between social change processes and social impacts.

2.1.3 Procedural Frameworks and Processes

According to Fenton, Coakes, and Marshall (2003), procedural frameworks exist to guide the sequence of tasks to be undertaken and generally speaking, most social impact assessments follow a similar process. The Interorganizational Committee on Principles and Guidelines for Social Impact Assessment's (2003) *Principles and Guidelines for Social Impact Assessment* outlined a procedural framework that included 10 steps for social impact assessment:

1. develop public involvement program,
2. describe proposed action and alternatives,
3. describe relevant environment and zones of influence,

4. identify probable impacts,
5. investigate probable impacts,
6. determine probable response of affected parties,
7. estimate secondary and cumulative impacts,
8. recommend changes in proposed action or alternatives,
9. mitigation, remediation, and enhancement plan, and
10. develop and implement monitoring plan. (p. 244)

Additionally, interested and affected parties should be included in all steps of the process (Interorganizational Committee on Principles and Guidelines for Social Impact Assessment, 2003). The methods employed and the relative emphasis placed on specific steps varies based on objectives and also on the philosophical underpinnings of the assessment, nuances that are captured in the activities identified in the *International Principles for Impact Assessment* (Vanclay, 2003b).

Identifying the appropriate issues to address in social impact assessments and the appropriate measures of change to assess is a contentious issue. There is ongoing discussion regarding the merits of flexibility versus standardization (du Pisani & Sandham, 2006). While this determination is largely a scoping exercise that relies on expert, local, and regulator guidance, there is a need to ensure that assessments are comprehensive. Many lists of issues, variables, and data exist that may potentially be useful for defining pre-intervention baseline and context and for predicting changes and impacts (e.g., Burdge, 1999; Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1995; Vanclay, 2002). The literature specific to social impact assessment often shies away from the use of lists out of concern that they will be employed as checklists (Vanclay, 2002). The risk is that many context- and intervention-specific nuances will be obfuscated by the need to adhere to a checklist. Innovation could possibly be inhibited, and assessments could become too form-based and

procedural (Cashmore, 2004). Yap (2003) suggested that the creation of prescriptive terms of reference may ultimately result in overlooking concerns that are highly prioritized by the impacted communities. Expert opinion regarding significant impacts may differ considerably from citizen opinion (Buchan 2003; Stolp 2003; Stolp et al., 2002). Vanclay (2002) added that there is some risk that “charlatan consultants—those with little training in social sciences—may use the checklists instead of undertaking a scoping” (p. 184).

Vanclay (2002) reviewed the social impacts outlined in the *Interorganizational Committee on Guidelines and Principles for Social Impact Assessment* (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1995) and those outlined in a widely recognized publication by Burdge (1999). Vanclay (2002) called into question the efficacy of these and most published lists of potential social impacts. He suggested that current lists are inadequate and contradictory and that they are ill-equipped to identify both positive and negative impacts. Many of the social impacts identified in the current literature are the measurable outcomes or variables of social change processes that may or may not cause impacts depending on the individual host community’s characteristics and history (Vanclay, 2002, 2006). Distinguishing social change processes from social impacts is integral to the meaningfulness of an assessment, as resulting social impacts will vary from one community or context to the next (Vanclay, 2002). Examples of the many variables currently considered to be social impacts include population change, ethnic and racial diversity and distribution, relocated populations, seasonal residents, influx or outflow of temporary workers, change in community infrastructure, and industrial/commercial diversity. To demonstrate this important distinction, Vanclay (2002) developed a list of 81 indicative social impacts that address health and social wellbeing, quality of the living environment (livability) impacts, material wellbeing, cultural impacts, family and

community impacts, institutional, legal, political and equity impacts, and gender relations impacts.

Burdge and Vanclay (1996) stated that tourism and mining were the two first domains to address predictive social impacts, followed closely by oil and gas development. In regard to methods, Taylor, Goodrich and Bryan (1998) identified the following approaches:

- Trend extensions: Projection of a current trend such as population change or employment into the future;
- Population multipliers: Extrapolation of population size by a coefficient to account for the change in another variable such as demand for community infrastructure or services;
- Consulting experts: Use of expert knowledge such as researchers, professional consultants, local authorities, or knowledgeable citizens;
- Historical comparisons: Examining how a particular community or social setting has responded to change in the past;
- Comparison communities: Comparing communities to be affected by an alternative with communities that have already undergone a similar action;
- Institutional analysis: Analysis of the social structure of a community—usually in terms of the number, nature, and diversity of ways for the delivery of human services vital to the survival and prosperity of the community;
- Economic base models: Projections of direct, indirect and induced changes in employment and expenditure by sector, using multipliers from an existing base; and
- Willingness to pay: An indirect measure of the value of an externality (i.e., non-market impacts) to the individual (p. 213).

The diachronic model for comparative cases (Burdge, 2004; Taylor et al., 2003), further elaborates the way in which comparison communities can be used to inform the predictive component of a social impact assessment. The model requires a comparable longitudinal case study and longitudinal control case. The social impact assessment is then, a process of reconstructing the social impacts that occurred in the case study using this to identify likely future impacts (Burdge, 2004). Of course, this model is limited by the availability of appropriate longitudinal case studies (Taylor et al., 2003).

Similar to economic base models, input-output models are widely-used in economic impact assessment (Becker, 1997). In both cases, the models are used to predict the magnitude of economic change cause by projects. For the purposes of social impact assessment, the changes in available employment are used to predict changes in population and local and household economies. Both economic base models and input-output models use a linear mathematical model that relies on multipliers to determine the magnitude of effects (Pierce Lefebvre Consulting, 2012).

The final procedural step listed above is monitoring, which is closely related to auditing and evaluation. According to Storey and Noble (2004), monitoring is the least comprehensive of the procedural steps and involves observation and monitoring of project-related activities. Auditing, inclusive of monitoring, also entails an assessment of conformance to standards and expectations. And finally, evaluation entails making value-based judgments and creating adjustments to and feedback for objectives and decision-making (Storey & Noble, 2004).

2.2 History of Social Impact Assessment

Today, social impact assessment is widely practiced and studied, yet our contemporary efforts do not mark the commencement of society's attempts to understand how changes impact communities. In academic circles, anthropologists have

performed retrospective assessments of social impacts since the 1950s (Burdge & Vanclay, 1996). These efforts have paved the way for contemporary social impact assessment. For example, Wilson's (1973) book, *People in the Way*, provides a retrospective case study of the effects of the Columbia River Dams in southern British Columbia. Despite the author's assertion that it is not a technical study, it is one of the first Canadian examples of an industrial social impact assessment (P. Boothroyd, personal communication, May 22, 2009).

Another noteworthy example is Dixon's (1978) description of the many impacts experienced by the residents of the town of Fairbanks, Alaska, during the construction of the Trans-Alaska Oil Pipeline. Dixon's (1978) work employed many of the practices associated with anthropology and ethnography to the practice of social impact assessment. Unlike predictive social impact assessments, Dixon's work was conducted near the completion of the pipeline; thus, the author had the luxury of reporting specifically how changes impacted unique people, groups, and organizations within the community. The author was able to compare these documented outcomes to expectations and predictions. In addition to describing the effects of rapid resource development on an isolated community and providing a valuable case study, Dixon's detailed examination revealed many unanticipated negative social impacts. The author's practice of approaching the pipeline from multiple unique perspectives elegantly demonstrated the value of framing predictive assessments and the need to clearly identify those with the "most to lose and the least to gain" (Dixon, 1978, p. 227).

In 1969, the American National Environmental Policy Act mandated the assessment of social impacts in the United States and later clarified this through the courts and the Committee for Environmental Quality guidelines in 1973, 1978, and 1986 (Burdge, 2004b; see Table 2.1). The creation of the National Environmental Policy Act marked the first time that social impact assessment was required by any government as part of the

project assessment process. By 1983, most American federal agencies had integrated social impact assessment into their procedures and, in 1993, President Clinton mandated social impact assessment of all Pacific Northwest timber-dependent communities (Burdge & Vanclay, 1996).

Predictive social impact assessment was incorporated into Canadian policy in 1973 in the *Environmental Assessment and Review Process Guidelines Order* (later replaced by the Canadian Environmental Assessment Act (2002; see Table 2.1). Launched in 1974, the Berger Inquiry addressed a proposed pipeline to transport natural gas from the Prudhoe fields in Alaska through Northern Yukon, Mackenzie Delta, and Beaufort Sea and across the Mackenzie Valley south to Alberta (Berger, 1977). In response to strong opposition from indigenous people in Northern Canada, a Royal Commission led by Justice Thomas Berger was launched. Based on extensive consultation with potentially impacted local indigenous people and social, cultural, and economic impacts associated with similar projects, Justice Berger recommended that the pipeline be put on hold for 10 years. He voiced concern that if the project were pursued at that time it would likely lead to “devastating” (Berger, 1977, p. 143) social impacts in addition to significant negative cultural and economic impacts for the indigenous people in Northern Canada. The process was unique within the field of impact assessment in that locally impacted populations were given an opportunity to participate in the assessment process and to share their concerns, which were subsequently incorporated into the final findings. Together with Wilson’s (1973) *People in the Way*, the Berger Inquiry paved the way for predictive assessments in British Columbia (P. Boothroyd, personal communication, May 22, 2009).

Table 2.1
Milestones Significant to the Evolution of Social Impact Assessment

1969	United States National Environmental Policy Act adopted
1970	Lawsuit filed against the Alyeska Pipeline Company and the United States Department of the Interior regarding the Trans-Alaska Pipeline and the inadequate assessment of environmental impacts
1970–1979	BC operates under policy-based assessment guidelines under the Environment and Land Use Act
1970–1980s	International donor agencies integrate the assessment of social impacts into their development activities
1971–1976	United States Council on Environmental Quality confirm inclusion of socio-economic factors in the National Environmental Policy Act
1973	Wilson publishes <i>People in the Way</i>
1973	Canadian Environmental Assessment and Review Process established
1974	Chief Justice Berger inquiry into the Mackenzie Valley pipeline initiated
1977	Canadian Environmental Assessment and Review Process amended
1978	Dixon publishes <i>What Happened to Fairbanks?</i>
1980	Assessment of energy projects legislated in BC
1982	First international Social Impact Assessment conference (Vancouver, British Columbia)
1989	European Economic Community requires members have policy in place to address environmental and social impacts
1989	Assessment of major industrial projects in BC required through policy
1991	Assessment of mining projects legislated in BC
1992	Canadian Environmental Assessment Act adopted
1995	British Columbia Environmental Assessment Act adopted
2002	British Columbia Environmental Assessment Act significantly amended
2012	Canadian Environmental Assessment Act amended

Note. Adapted from “Evolution of Provincial Environmental Assessment Processes in British Columbia by Decade 1973 to 2012,” by Crooke, 2012, Victoria, BC, Canada: Unpublished.

As the Canadian provincial governments have jurisdiction over most land and natural resources, assessing the social impacts of development activities falls largely on their shoulders. Since the early 1980s, the impacts of various types of industrial projects have

been assessed in BC (see Table 2.1). Prior to 1995, assessments were addressed first through policy (policy guidelines approved by the Environment and Land Use Committee under the Environment and Land Use Act (1971), and later legislated through various acts (Environmental Management Act, 1981; Utilities Commission Act, 1996; Mine Development Assessment Act, S.B.C. 1990, c 55).

2.3 The State of Social Impact Assessment: A Review of the Literature

In addition to twelve principles (see Table 2.2), Vanclay's (2003b) *International Principles for Social Impact Assessment* provides extensive guidelines for the assessment of social impact assessments. In short, the collaboratively developed and widely cited document (e.g., Ahmadvand & Karami, 2009; Asselin & Parkins, 2009; du Pisani & Sandham, 2006; Franks, 2012; Tang et al., 2008; Suopajärvi, 2013), describes current best practices in social impact assessment. Importantly, the principles demonstrate that social impact assessment has moved beyond an exclusive emphasis on the accurate prediction of impacts and now require address of equity, human rights, public participation, incorporation of local knowledge, and a focus on ongoing adaptive management of impacts (Vanclay, 2003).

Despite recognized best practices, it is questionable whether social impact assessment is meeting its potential to contribute meaningfully to the sustainability of communities. The number of peer-reviewed publications calling for general improvements in social impact assessment is indeed impressive. Burdge (2002) and others (Chadwick, 2002; Glasson & Heaney, 1993; Hildebrandt & Sandham, 2014; Ross & McGee, 2006; du Pisani & Sandham, 2006) suggested that, in some jurisdictions, social impact assessment is secondary to environmental assessment or the "orphan" of the assessment process.

Table 2.2

International Principles for Social Impact Assessment Practice

1. Equity considerations should be a fundamental element of impact assessment and of development planning.
2. Many of the social impacts of planned interventions can be predicted.
3. Planned interventions can be modified to reduce their negative social impacts and enhance their positive impacts.
4. SIA should be an integral part of the development process, involved in all phases from inception to follow-up audit.
5. There should be a focus on socially sustainable development, with SIA contributing to the determination of best development alternative(s) – SIA (and EIA) have more to offer than just being an arbiter between economic benefit and social cost.
6. In all planned interventions and their assessments, avenues should be developed to build the social and human capital of local communities and to strengthen democratic processes.
7. In all planned interventions, but especially where there are unavoidable impacts, ways to turn impacted peoples into beneficiaries should be investigated.
8. The SIA must give due consideration to the alternatives of any planned intervention, but especially in cases when there are likely to be unavoidable impacts.
9. Full consideration should be given to the potential mitigation measures of social and environmental impacts, even where impacted communities may approve the planned intervention and where they may be regarded as beneficiaries.
10. Local knowledge and experience and acknowledgment of different local cultural values should be incorporated in any assessment.
11. There should be no use of violence, harassment, intimidation or undue force in connection with the assessment or implementation of a planned intervention.
12. Developmental processes that infringe the human rights of any section of society should not be accepted.

Note. Reprinted from “International Principles for Social Impact Assessment,” by F. Vanclay, 2003, *Impact Assessment and Project Appraisal*, 21(1), p. 5.

Assessments often include variables and indicators without rationale (Freudenburg & Keating, 1982; Lockie, 2001). To remedy this and other shortcomings, stronger foundation in theory and better integration of conceptual frameworks is frequently called for in the literature (Becker et al., 2004; Becker, 2003; Esteves et al., 2011; Howitt, 2011; Parkins, 2012; Ross & McGee, 2006). A lack of these can result in assessments that “consist of indicators and variables, with little attention to why those indicators are relevant and how they relate to each other” (Parkins, 2012, p. 2).

Indicator selection may be disproportionately based on “convenience in data availability, cost and time constraints, and the qualifications and experiences of the researchers” (Becker et al., 2004, p. 179). Gramling (1992) cautioned that researchers must resist the appeal of focusing on conceptually and politically convenient issues. More complex concepts such as social capital, wellbeing, and community resiliency—while difficult to measure—play key roles in meaningful social impact assessment.

Yap (2003) found that qualitative researchers and practitioners of social impact assessment still find themselves justifying the value of qualitative data, which is often integral to the measurement of more challenging concepts such as community wellbeing and quality of life. While the inclusion of qualitative data presents a hurdle for a highly regulated process such as social impact assessment, the reality that qualitative data are often more relevant and insightful at the community level (Bradshaw et al., 2001), and often more culturally appropriate, suggests that continued efforts should be made to further incorporate qualitative data into these assessments.

Other general improvements called for in the literature include the following:

- a stronger ethical foundation (Baines, Taylor, & Vanclay, 2013),
- better communication amongst and between practitioners and researchers (Burdge, 2002, 2003a),
- better integration of locally held and indigenous knowledge into conventional assessments (Lane et al., 1997),
- better reporting of methods and techniques (Stolp, 2003; Stolp et al., 2002),
- more balanced coverage of social impacts relative to biophysical impacts (Burdge, 2002; Chadwick, 2002; Lockie, 2001; Ross & McGee, 2006; Esteves et al., 2011; du Pisani & Sandham, 2006), and
- regulation of practitioner qualifications (Baines et al., 2013).

In order to strengthen the practice and improve the resources available to practitioners, some call for more longitudinal studies, case studies (Burdge, 2002; Taylor, Goodrich, Fitzgerald, & McClintock, 2003), and follow-up reviews of social impact assessments (Baines, Morgan, & Buckenham, 2003; Burdge, 2003b; Taylor, McClintock, & Buckenham, 2003).

Either as part of policy assessment or project planning, some form of social impact assessment is required throughout much of the world. In most jurisdictions however, the social component of environmental assessment is only indirectly mandated through for example, a comprehensive definition of the environment (Baines & Taylor, 2011). In the United States, social impact assessment has been required since 1969. In Australia, natural resource management is primarily under state jurisdiction and in most states, social impact assessment for major projects is required as part of comprehensive environmental assessments conducted to inform agency or ministerial decisions (Franks, 2012). Since 1989, the European Community has required that its members have policies in place to address the social and economic impacts of development. Furthermore, many major donor agencies and countries require that the social impacts of development projects be assessed.

In developing regions, social impact assessment is largely donor driven. Donor-driven social impact assessment developed in the late 1970s and early 1980s, with an increased emphasis on ensuring that benefits from development projects reached the intended target groups (Burdge, 1990). In 1986, the World Bank integrated social impact assessment into its project evaluation procedures that had previously focused on economic and financial criteria (Burdge & Vanclay, 1996). Other donor agencies, such as the CARE International and the Asia Development Bank, and donor countries, such as the United States, require assessment of the social impacts of donor-sponsored development initiatives. Currently, donor-driven social impact assessment is most likely

the domain in which the most innovative practices are being employed (R. Burdge, personal communication, March 27, 2009). Yet, in developing economies a lack of agency coordination (Momtaz, 2005) and a lack of integration into resource management and planning processes (Tang et al., 2008) undermine the potential efficacy of donor-driven assessments.

A robust description of the quality of international social impact assessment practice is limited by a largely unevaluated practice. To date, there has not been an English language peer-reviewed publication evaluating and comparing the quality or type of social impact assessment being conducted in multiple countries or regions around the world. Although a growing number of recent publications review the practices of individual countries (e.g., Summerville, 2006; Suopajärvi, 2013; Tang et al., 2008), they provide only a piecemeal understanding due to their limited numbers, the restricted scope of each individual research project, and rapidly changing socio-political environments. Mindful of these limitations, below I describe the evaluative peer-reviewed English language literature that addresses practices outside of Canada.⁵

A 1997 review of environmental impact assessments conducted by American federal agencies showed that several social and demographic factors were addressed in over 80% of the assessments, namely population trends, land use patterns, cultural and archaeological sites, and parks and recreation spaces (Deng & Altenhofel, 1997). Health concerns and quality of life were addressed in only 60%. Of the 4,979 environmental impact statements reviewed, only 22% were prepared by people or teams with backgrounds in the social sciences. Although the Deng and Atlenhofle (1997) study is

⁵ These studies described were identified by conducting the following key word searches: social impacts, social impact assessment, socio-economic impacts, socio-economic impact assessment. Web of Science, CAB Abstracts, Google Scholar, and Taylor & Francis Online were searched. I also conducted a secondary review of the literature cited in the relevant publications. I excluded papers that did not include a clear description of the evaluation methods.

nearly 20 years old, in a more recent review of the American National Environmental Policy Act (NEPA) and the implementing regulations, Eccleston (2011) reported that there is “virtually no guidance with respect to analysing socioeconomic impacts” (p. 174).

Research from the United Kingdom suggested that there had been some improvement in the quality of social impact assessments (Fisher, 2011) since Glasson and Heaney (1993) and Chadwick (2002) found that social impact assessments in England and Wales were superficial and lacking in coverage, scope, and depth, with a disproportionate emphasis on primarily beneficial economic impacts, such as direct employment changes. The most recent findings stated that a tendency to emphasize economic, beneficial, and direct impacts still exists, but that improvement in the scope of impacts had been considered.

The New Zealand regulations have been reported as flexible and as allowing for the inclusion of locally held indigenous knowledge (du Pisani & Sandham, 2006). Taylor, McClintock, and Buckerham (2003) provided examples of projects that have been halted due to socio-economic impacts. Policy in New Zealand also requires the strategic assessment of the socio-economic impacts of policy and planning changes (Baines et al., 2003b). These strategic social impact assessments are far less common than assessments conducted to identify impacts that may result from proposed developments (Baines et al., 2003b).

In Queensland, Australia, legislation creates the potential for meaningful assessment, but according to Summerville, Buys, Germann, and Cuthill (2006), the practice lagged far behind the policy in 2006. One challenge, likely shared by local governments throughout Australia (Summerville, Buys, Germann, & Cuthill, 2006), was a shortage of qualified personnel (Dale et al., 1997). A 1999 review of national level strategic impact assessments that addressed economic reforms found that guidance on

how to conduct assessments was lacking and that government initiatives to conduct strategic social impact assessment could be described as hesitant (Johnston, 1999).

A 2013 paper describing a case study of social impact assessments in Finland reported that social impacts were underrepresented relative to other environmental impacts and that the assessments did not meet the standards set out in the principles and guidelines developed by the International Association of Impact Assessment (Suopajarvi, 2013). The author also reported that methods were inadequately described (Suopajarvi, 2013).

In South Africa, social impact assessment is required by legislation, both by virtue of a comprehensive definition of *environment* that includes social aspects and by direct mention in the National Environmental Management Act frameworks (du Pisani & Sandham, 2006). According to du Pisani and Sandham (2006), many of the challenges that were facing South Africa are similar to those facing developed economies, yet in developing countries, these challenges were compounded by the number of disadvantaged communities. In practice, social impact assessments were found to be lacking qualified practitioners, lacking sufficient and effective public participation, and void of both legal and theoretical frameworks (du Pisani & Sandham, 2006). More recently, Hildebrandt and Sandham (2014) reported that, while still secondary to assessment of biophysical impacts, social impact assessment quality in South Africa has improved.

Reportedly, developing countries and regions have been slower to incorporate social impact assessment into policy, and even less is known of the degree to which social impacts are being addressed (Tang et al., 2008). Developing countries are dealing with a number of challenges impeding the potential implementation of effective social impact assessment guidelines (Tang et al., 2008). Implicit to social impact assessment's inclusion in government decision making is the assumption that governments or public

bodies carry and uphold a social responsibility (Tang et al., 2008). Social impact assessment originated in the West and is steeped in Western approaches to governance and resource management and the need for public participation. As Tang, Wong, and Lau (2008) stated, “Authoritative and monolithic political systems, which are common in the developing world, tend to resist public participation and create many barriers to the effective implementation of social impact assessment” (p. 59).

Under their respective environmental impact assessment systems, Taiwan, Malaysia, and Indonesia require that socio-economic impacts be addressed over ten years ago (Taylor & Burdge, 2004). At the time, the Indonesian guidelines were found to lack provisions for public consultation (Taylor & Burdge, 2004), and Walker, Mitchell, and Wismer (2000) found that, together with public participation, social impact assessment was the weakest component of Indonesian environmental assessments.

According to Tang et al. (2008), between 1988 and 2008, environmental assessment policy in China expanded beyond the biophysical environment to include social issues. Yet, like so many other regions in the world, the relevant policy, failed to describe how social impacts should be assessed (Tang et al., 2008). Tang et al. (2008), reported that, both the status of social impact assessment in China and its prospects were bleak due to a lack of legal and administrative backup, incompatibility with Chinese planning ideology and development approaches, incompatibility with Chinese traditional culture, and the national drive for economic development (Tang et al., 2008). The challenges identified by Tang et al. (2008) were remarkably similar to the difficulties predicted by Ip (1990) 18 years earlier, including recognition that the potential for social impact assessment to “increase equality, participation, and distribution of social justice” (p. 121) was at odds with the “socio-political conditions [which] could best be summarized as paternalistic, authoritative, and monolithic” (p. 121) and at odds with the identification of decision-making processes as “technocratic, partial and objective” (p. 121). Although not

specific to social impact assessment, a review of strategic environmental assessment in China found that social impacts are underemphasized and that public participation was typically limited to document review (Zhu & Ru, 2008).

Iranian social impact assessments have been described as disappointing and infrequent (Ahmadvand et al., 2009). In Iran, environmental impact assessment is required under law and despite a lack of specific mention, social and economic impacts must also be assessed (Ahmadvand & Karami, 2009; Ahmadvand et al., 2009). Yet, Ahmadvand and Karami (2009) found that a lack of capacity had limited the quality of social impact assessment, as did a lack of enforcement of the requirements to conduct social impact assessment.

Değirmencia and Evcimen (2013) found that although social impact assessment is compulsory under Turkish legislation, the process of identifying, predicting, mitigating and monitoring impacts was essentially nonexistent and public consultation was very limited. The results showed that the assessments prepared by international development agencies were far superior to those prepared under the national legislation (Değirmencia & Evcimen, 2013).

In 2005, Momtaz reported that social impact assessment did not have statutory status in Bangladesh. Because a great deal of the development in Bangladesh was linked to external donor agencies, social impact assessment had been established as part of the development project planning cycle. The dearth of legislation requiring that social impacts be addressed often resulted in social impacts being overlooked if there were no biophysical environmental impacts associated with a project. Other challenges for social impact assessment in Bangladesh included a lack of coordination amongst donor agencies, no strategic or policy level social impact assessment, ineffective public engagement, a lack of guidelines outlining both approaches, and a code of conduct for consultants carrying out social impact assessments (Momtaz, 2005).

2.4 Social Impact Assessment in British Columbia and Canada

While social impacts are assessed to varying degrees, through regional land use plans, land and resource management plans, and sustainable resource management plans,⁶ in 1995, through the legislation of the BC EAA, environmental assessment of major projects became the domain of what is currently the provincial Ministry of Environment. With the BC EAA, BC is currently the only Canadian province with a single integrated environmental assessment process supported by a dedicated regulatory body: the BC EAO.

The BC EAA (2002) requires that all major projects undergo environmental assessments to identify significant negative impacts. Based on the BC *Reviewable Projects Regulation* (2012),⁷ major projects are categorized into one of nine categories: industrial projects, mine projects, energy projects, water management projects, waste management projects, waste disposal projects, food processing projects, transportation projects, and tourist destination resort projects. Each category includes an extensive list of triggers or criteria that will ultimately result in a project being designated as a reviewable major project (e.g., production capacity, length of track or road, volume of water diverted). Interestingly, none of the triggers involve social or cultural criteria. The BC Minister of Environment may also deem projects reviewable, even if they do not trigger any of the reviewable projects criteria. However, due to 2002 changes to the BC EAA, the executive director of the EAO may also determine, without assessment, that a project will not have “significant adverse” effects and grant the proponent the right to proceed (BC Environmental Assessment Act, 2002). The BC EAA also “allows” the

⁶ Forest harvesting activities are not assessed under the *BCEAA*. Under the Forest Act RSBC 1996, c 157, the provincial Chief Forester conducts social impact assessments in conjunction with the review of timber supply. Local governments may also request an assessment of any activity that requires their permission or permitting to proceed (British Columbia Environmental Assessment Office 2003).

⁷ The previous version of this regulation was enacted in 2002.

strategic environmental assessment⁸ of policies, plans, practices, and procedures, but this provision has not been enacted since the 1997 Salmon Aquaculture Review conducted under the previous BC EAA and the government of the day (Haddock, 2010; Noble, 2009).

Importantly, BC Environmental Assessments (including social impact assessments) are not carried out by the regulatory body (EAO). Instead, they are led by proponents or by practitioners acting on behalf of proponents. The EAO coordinates the assessment process, guides proponents through the structured BC Environmental Assessment process (see Figure 1.1) and ensures that assessments address all potential environmental, economic, social, heritage, or health effects (referred to as the five pillars). With support from other provincial ministries and outside consultants, the EAO is also responsible for reviewing project applications and making recommendations to the deciding provincial ministers regarding project approval. In some cases, the EAO also acts as an “expert assessment body” (Haddock, 2010, p. 45), overruling concerns raised by line ministries. Specifically, the BC EAO (2011) is responsible for the following:

1. determining if a major project requires an environmental assessment;
2. specifying the assessment process to follow;
3. ensuring the information required for a proper environmental assessment is provided;
4. ensuring access to information;
5. providing opportunities for government agencies, First Nations, local governments, stakeholders, and the public to comment on the proposed project;
6. managing issues and balancing interests;

⁸ Strategic environmental assessment refers to the environmental assessment of the impacts of policy, plans and programs (N. Lee & Walsh, 1992).

7. carrying out the Province's legal duty to consult and accommodate First Nations' rights and title; and
8. ensuring assessments are, in fact, conducted by project proponents or consultants acting on a proponent's behalf (p. 11).

The EAO process (see Figure 2.1) and five-pillared approach to assessment both guide the assessment approach (i.e., procedural framework) and the content found in assessments. The assessment process has three main stages: the pre-application stage, the application review stage, and the decision stage. During the pre-application stage, the proponent submits a project description to the EAO, and the EAO executive director (or a delegate) determines whether an environmental assessment is required and subsequently, makes a number of key decisions regarding the scope and methods of the assessment. These key decisions are described in orders made under Section 11 of the BC EAA and include the timing and duration of consultation and identification of the First Nations to be consulted.

At this stage, application information requirements⁹ (AIRs) are defined for the project. The AIRs outline, in detail, what will be required in the environmental assessment. The information captured in an AIR document includes the valued components that will be addressed and the type of information that will be presented.

The second stage, the application review stage, is initiated when the proponent submits a complete project application. After reviewing the application for completeness, it is either rejected or accepted by the EAO. The project application contains the comprehensive environmental assessment, of which the social impact assessment is a component. At the end of a 180-day period, the EAO generates an assessment report and recommendations regarding project approval to the deciding ministers. If a project is approved, monitoring, compliance, and enforcement may be part of the set conditions.

⁹ AIRs were previously referred to as the project terms of reference.

During the pre-application stage and the review stage, a working group of representatives from provincial and federal government agencies, First Nations, local governments, and neighbouring jurisdictions advises the EAO on assessment and mitigation issues. Typically, two official public comment periods are hosted: one during the pre-application stage and the other during the application review stage. These periods include opportunities for the general public to attend open houses and submit comments through various means including the internet and mail.

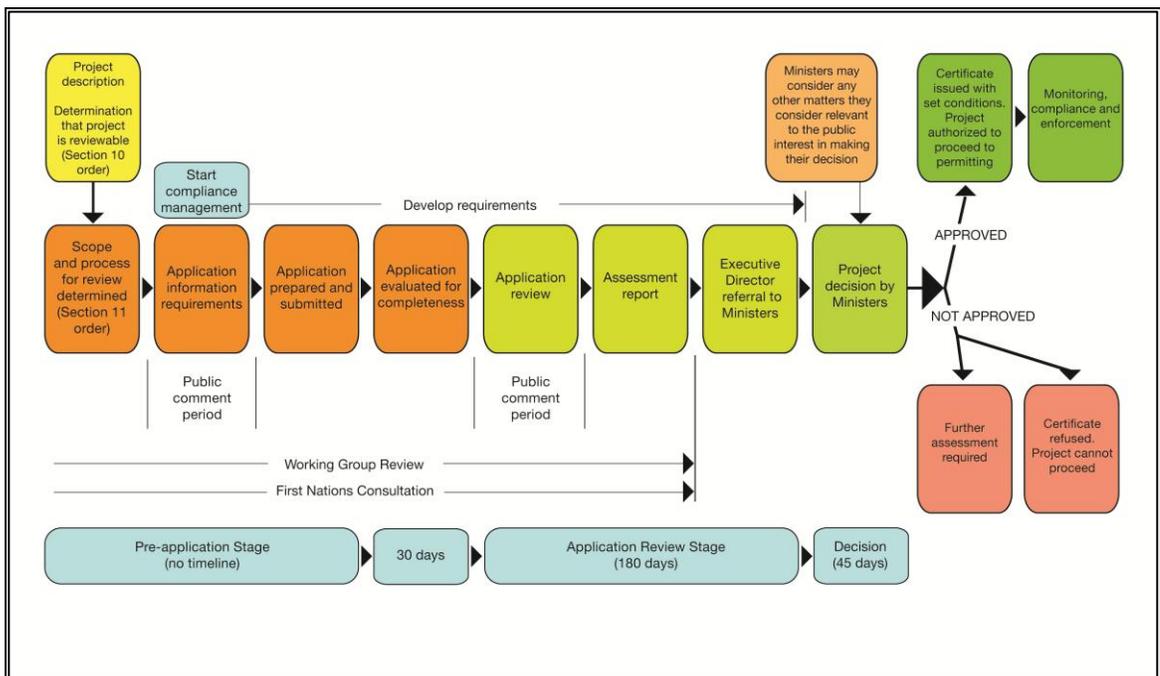


Figure 2.1 BC Environmental Assessment Process

Note. Adapted from “Environmental Assessment Process,” by the BC EAO, 2011, Victoria, BC, Canada

Unlike the assessment of biophysical impacts, there is little in the way of additional legislation or law directly addressing social impacts. Various provincial and federal acts and programs address hiring, safety and human rights practices (e.g., Employment Standards Act [1996], Labour Relations Code [1996], Workers Compensation Act [1996], Industry Training Act Authority [2003], Labour Mobility Act [2009], Trade, Investment and Labour Mobility Agreement Implementation Act [2008], Temporary Foreign Worker

program), but there is no policy or regulation that addresses social impacts on communities or populations within communities. As discussed previously, the BC EAA does not define social impacts, nor has the EAO endorsed any one definition. First Nations' rights and interests are protected through the Constitution Act, 1982, treaties, and/or case law, and the EAO also provides guidance regarding proponent consultation with First Nations (BC EAO, 2013b). The EAO is also in the process of creating general guidelines for consultation. Recently, the EAO also produced guidelines regarding the selection of valued components:

The components of the natural and human environment that are considered by the proponent, public, Aboriginal groups, scientists and other technical specialists, and government agencies involved in the assessment process to have scientific, ecological, economic, social, cultural, archaeological, historical, or other importance. (BC EAO, 2013c, p. 4)

AIRs are drafted by the proponent and must be approved by the EAO prior to a project application being submitted. The AIRs are described in a template document available online (BC EAO, 2013a). The objectives of using a template to produce AIRs include ensuring that documentation for “all proposed projects will be clear, comprehensive, and consistent in terms of structure and content” (BC EAO, 2013a, p. 4). In the examples provided in the template, EAO identified social-valued components as including “activities or sites of social and cultural importance including, but not limited to, land and resource use, First Nation community interests, and other features or indicators of community wellbeing and quality of life” (BC EAO, 2013a, p. 27). Health and Safety, Economic, and Heritage valued components are each addressed separately.

The Fairness and Service Code (BC EAO, 2009) outlined guiding principles and standards. It includes guiding principles, such as the need for fairness, transparency, inclusive participation, and efficiency (BC EAO, 2009). These service standards also

generally address issues around consultation with First Nations and the general public (BC EAO, 2009).

To a limited extent, social impact assessment is also required under federal legislation. A 1999 Canadian Cabinet Directive emphasized the need for assessment of impacts resulting from federal policies, plans, and programs (Canadian Environmental Assessment Agency, 2009; Haddock, 2010; Storey & Noble, 2004). The Canadian Environmental Assessment Act (2012), the National Energy Board Act (1985), and the Canadian Oil and Gas Operations Act (1985) all require impact assessment. The Canadian Environmental Assessment Act requires the assessment of social impacts that are the direct result of changes to the biophysical environment that are caused by a project (Canadian Environmental Assessment Act, 2012).

Approximately 75% of major projects in BC require assessment through the federal environmental assessment process under the CEAA (Pacific and Yukon Region Canadian Environmental Assessment Agency, 2007).¹⁰ Previously, when both processes were required, assessments were typically coordinated under a harmonization agreement. Under the new *Memorandum of Understanding on the Substitution of Environmental Assessments* (2013e), the EAO may now request that the provincial process be substituted for the federal process. The objective is to address the concerns of industry and reduce the time and resources that proponents spend navigating two environmental assessment processes and liaising with separate agencies. Although only a single assessment is conducted, all of the requirements of

¹⁰ The federal assessment triggers most common in British Columbia are

- federal land or funding;
- potential impact on navigation in a water body;
- potential impact on fish-bearing bodies of water;
- hydroelectric development on an international river;
- the manufacture and storage of explosives;
- impact on existing railway lines or the construction of new railway lines or crossings;
- construction of international or inter-provincial oil or gas lines; or
- inter-provincial or international power lines (Pacific and Yukon Region Canadian Environmental Assessment Agency, 2007).

CEAA must be fulfilled and both provincial and federal decisions are made regarding project approval. With regard to social impacts, the implications of substituting the provincial process for the federal process are limited to a requisite higher level of Aboriginal consultation and documentation as required under the federal legislation.

Major projects that require certification from multiple jurisdictional bodies (e.g., the National Energy Board, the federal government, and the provincial government) may be subject to a Joint Panel Review, whereby the project application is evaluated by a panel of independent reviewers that make a recommendation. In some cases (e.g., Kemess North Gold Mine and the Enbridge Northern Gateway Project), the Joint Panel Review process and decision has been substituted for the provincial process. In other cases, both the provincial process and the Joint Panel Review process have proceeded simultaneously. In the case of the Prosperity Gold-Copper Mine Project, this resulted in two contradictory decisions. The provincial government awarded the project an environmental certificate and the federal joint panel did not (Haddock, 2011).

By 2014, 261 projects had entered the BC Environmental Assessment process under either the 1996 or 2002 EAAs.¹¹ To date, two projects have been declined BC Environmental Assessment certificates. The Ashcroft Ranch Landfill project was refused a BC Environmental Assessment certification in 2011. In 2007, the proposed Kemess North Copper-Gold Mine Project unsuccessfully completed a joint panel BC and federal environmental review. The decision of the joint panel was based, at least in part, on the inequitable distribution of social costs and benefits (Kemess North Mine Joint Review Panel, 2007). This is the only example of a major BC project, rural or otherwise, that was refused a BC Environmental Assessment certificate largely on social criteria.

¹¹ Calculations based on publicly available records found at http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_home.html (accessed May 2014).

Twenty-seven projects withdrew from the BC Environmental Assessment process between 1996 and 2014.¹² Although only minimal documentation is provided on the rationale behind most of these withdrawals, they often occurred after a prolonged and iterative review process conducted under the 1996 BC EAA.

¹² Calculations based on publicly available records found at http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_home.html (accessed May 2014).

3 A BASE-CASE DESCRIPTION OF SOCIAL IMPACT ASSESSMENTS IN RURAL AND SMALL-TOWN BRITISH COLUMBIA

In addition to the challenges currently facing the global and national economies, many non-urban areas in BC are faced with a lack of economic diversification, a slow rate of economic growth, a low level of entrepreneurial activity, a low rate of labour-force growth and employment creation, a reduction in government jobs and services, and population declines amongst adults under 30-years old (Rural BC Project, 2014). As of 2010, 86 proposed projects located outside of metropolitan areas had completed the BC Environmental Assessment process,¹³ assessments that are integral in ensuring that proposed projects meet the goals of economic and social sustainability (Auditor General of BC, 2011). Despite their importance, few supporting policies or guidelines and very few reviews have been conducted on these assessments. Thus, we not only lack an evaluation of social impact assessments in rural and small-town BC, we also lack a more fundamental overview of how these assessments are being conducted. With this study, I set out to address this gap.

3.1 Background and Objectives

Although a large body of literature discusses social impact assessment practices in general, and a growing body of literature addresses social impact assessment in specific countries and regions, publications describing social impact assessments in BC are limited. Furthermore, given the lack of provincial guidelines for social impact assessment, there is little, other than the assessments themselves, to help inform understanding of current practices.

¹³ Based on publicly available records at http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_home.html (accessed May 2010).

Based on the policy and guidelines, BC Environmental Assessments address the following five pillars: environment, social, economic, heritage, health, and culture (BC EAO, 2013d). The BC process employs a values-based approach, whereby assessment priorities (valued components) are identified through a combination of research, expert guidance and public, stakeholder, and First Nations input (BC EAO, 2013b). The provincial guidance documents do not contain a comprehensive list of potential valued components, although the combined examples that are provided in the various documents include the following array of potential components:

- employment opportunities,
- contract and business opportunities,
- labour income generated,
- local unemployment rate and trend
- employment,
- economic diversification,
- land and resource use,
- activities or sites of social and cultural importance, but not limited to land and resource use,
- First Nation community interests,
- other features or indicators of community wellbeing,
- other features or indicators of quality of life,
- heritage sites or objects,
- worker safety and health,
- recreational or aesthetic features,
- levels of physical activities in the region,
- other features or indicators of community health and healthy living, and

- effects on aboriginal and treaty rights, and other specific First Nations concerns and interests (Pierce Lefebvre Consulting, 2012).

The only previous research that focused exclusively on social impact assessment in BC, addressed a purposive sample of three BC assessments that were selected because they had been identified as exemplary by the BC EAO (Horsman, 2011).¹⁴ Horsman (2011) reviewed these assessments with the objective of highlighting promising practices. Amongst the promising practices demonstrated by these three assessments were effective engagement with adjacent communities and First Nations, incorporation of intangible social values, and appropriate selection of valued components and indicators. The three assessments also demonstrated a reliance on quantitative information and expert validation rather than qualitative, values-based information validated by communities (Horsman, 2011). While Horsman’s review offered valuable guidance for policy and practice in BC, the findings are not generalizable nor do they provide insight into provincial practices. Thus, the specific objective of this study was to address this gap in the knowledge and define the base-case of the current practices employed in the social impact assessments conducted for major projects proposed in rural and small-town BC.

3.2 Methods

To address the research question—How are social impact assessments conducted?—I reviewed 36 assessments submitted to the EAO as part of project applications for environmental certificates under the BC EAA (1996; 2002) and systematically collected and analysed the following information:

- the extent, range, and balance of social concepts addressed in assessments;

¹⁴ Two of these proposed projects are located in a rural location (Galore Creek Copper-Gold-Silver Project and Ruby Creek Molybdenum) and the third is located (New Fraser River Crossing) is an urban project located near Vancouver, British Columbia.

- the types of information reported and how it was used; and
- the tools and frameworks that were employed.

My content analysis employed a mixed-methods approach that builds on the methods described by Deng (1997), Chadwick (2002), Lockie et al. (2008), and Ahmadvand (2009) in similar, smaller-scale studies. I created two distinct data sets by employing the conducting the following two research activities:

1. Data transformation: For this activity, I quantified the qualitative (Creswell, 2009) or, more specifically, counted the number of occurrences of and/or the amount of content relating to specific concepts (described in detail below).
2. Qualitative analysis: Simultaneously, I coded (categorized) content into emergent themes that were either reoccurring or reflected issues described in the literature.

The qualitative analysis was used to elaborate upon and to interpret the findings from the data transformation. For both activities, I employed an iterative analysis process (Babbie, 2007; Creswell, 2009; Payne & Payne, 2004). My analysis software, NVivo (QSR International Pty Ltd, 2012), also enabled me to tag each impact study (i.e., each project) with specific attributes. Thus, I was also able to explore both data sets based on the year the project application was submitted, the estimated project capital cost, project type, and project location.

3.2.1 Sample and Documents

I identified a random, stratified sample of the completed project applications that were available on the BC government online Project Information Centre (ePIC; http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_home.htm). The site hosts documentation from all post-1995 assessments, ensuring public access.

I excluded project applications if the documentation was incomplete. This eliminated many pre-2002 assessments. To maintain the focus on rural communities, I only

included project applications for projects entirely outside of census metropolitan areas, which are areas that have an urban core of 100,000 people or more (Statistics Canada, 2012).

Of the 188 projects posted on e-PIC on May 10, 2010, 57 projects met the above criteria and also provided adequate documentation. From these 57 project applications, I created a stratified random sample with the intention of including at least 50% of the projects. I elected for 50% as it represented a sizable sample that would allow for some degree of generalization, but was also a workable number of project applications.

The sample was stratified based on the type of project and the location of the proposed project within the BC Economic Development Regions (see Table 3.1). I created an additional regional category for transboundary linear disturbances (e.g., highways and pipelines) and excluded any linear disturbances that extended into census metropolitan areas. I also separated energy projects into hydroelectric, oil and gas, and other. The sample was not stratified based on project size (e.g., total capital cost or estimated number of employees), thus I approached interpretation of the results mindful of the diverse range of projects in the sample.

Table 3.1
Sample Stratification Criteria

Stratification One: Project Type	Stratification Two: BC Economic Development Regions
Energy Hydroelectric	Vancouver Island/Coast
Energy Oil and Gas	Mainland/Southwest
Energy Other	Thompson/Okanagan
Industrial	Kootenay
Transportation	Caribou
Water Management	North Coast
Mining	Nechako
Waste Disposal	Northeast
	Linear (multiple Economic Development regions)

In all stratifications, I aimed for a minimum sample of 50%, rounding up whenever necessary. This resulted in a sample of 36 project applications, accounting for 60% of the total project applications and over 71,000 pages of content. For each region, the

sample represented 50% or more of the viable project applications (see Tables 3.2 and 3.3). All other project types are represented by 50% or more project applications.

Table 3.2
Number and Proportion of Projects in Sample by Region

Project Type	Total Projects	Sample	Percent in Sample
Cariboo	3	2	67%
Kootenay	3	2	67%
Nechako	4	2	50%
North Coast	8	6	75%
Northeast	20	12	60%
Thompson/Okanagan	10	5	50%
Transboundary	2	1	50%
Vancouver Island/Coast	10	6	60%
Total	60	36	60%

Table 3.3
Number and Proportion of Projects in Sample by Industry

Project Type	Total Projects	Sample	Percent in Sample
Energy Hydroelectric	12	7	58%
Energy Oil and Gas	9	5	56%
Energy Other	12	8	67%
Industrial	1	1	100%
Mining	14	8	57%
Transportation	1	1	57%
Waste Disposal	7	4	50%
Water Management	4	2	58%
Total	60	36	56%

Although I did not control for year, I reviewed the sample to ensure it was not heavily skewed. The lack of projects starting in 2009 or 2010 was due to the lengthy application process, meaning that they would not have not been completed before the sample was created (see Table 3.4).

Table 3.4

Number and Proportion of Projects in Sample by Year of Environmental Assessment Process Start and Completion

Year	Assessment Process Start			Assessment Process Completion		
	Total Projects	Sample	Percent	Total Projects	Sample	Percent
1995	4	2	50%	1	0	0%
1996	2	0	0%	0	0	-
1997	3	3	100%	3	0	0%
1998	4	1	25%	4	2	50%
1999	2	3	150%	3	3	100%
2000	3	1	33%	1	0	0%
2001	4	2	50%	2	1	50%
2002	7	5	71%	4	4	100%
2003	9	5	56%	4	2	50%
2004	3	3	100%	5	1	20%
2005	8	4	50%	3	3	100%
2006	4	3	75%	6	4	67%
2007	3	2	67%	7	6	86%
2008	5	2	40%	6	3	50%
2009	0	0	-	5	4	80%
2010	0	0	-	6	3	50%

In addition to project applications, e-PIC houses a range of documentation including AIRs or terms of reference, records of consultation and comments, correspondence, news releases, government comments, compliance reports, concurrent permitting information, certificates and amendments, project applications, and EAO-generated reports including reasons. Project applications contain the environmental assessments (including social impact assessments) submitted by the proponent and were, therefore, the focus of this study.

3.2.2 Content Analysis

As a first step, I reviewed tables of contents and documents to identify the relative number of pages identified as addressing social impacts relative to the total number of

pages in the assessments (Chadwick, 2002). I then manually identified and extracted content relating, in any way, to social impacts (approximately 9,000 pages). This content was loaded into the analysis software: NVivo (QSR International Pty Ltd, 2012).

3.2.2.1 Transformative Analysis: Quantifying the Qualitative

The lack of provincial guidelines and policy pertaining directly to social impact assessment made it necessary to identify a classification system to facilitate the analysis. A pilot study of the social impact assessments included in 10 project applications revealed an incredible amount of variation amongst the assessments (e.g., size, form, content, level of detail). I found that the application of a pre-established classification system to this large-scale analysis was unworkable as the analysis required repeated, nuanced, subjective judgement calls regarding the appropriate category into which a measure should be placed. This jeopardized the consistency and reliability of the analysis. I also attempted to apply Slootweg et al.'s (2001, 2003) function evaluation framework in a manner similar to that employed in a study of coal mine impacts in Bowen Basin, Australia (Lockie et al., 2008). The function evaluation model provides a conceptualization of how impacts result from physical interventions (Slootweg et al. 2003). The model clearly distinguishes between processes of social change and the resulting impacts (Slootweg et al. 2001, 2003; Vanclay 2003). By applying this framework as a classification system, I hoped to identify the social change processes and the impacts that were identified in the reports. I found that this construct was not functional in the analysis. This is explored in further detail in the discussion section of this chapter. Thus, based on the pilot study and other existing classification systems, I developed a classification system and process. The initial classification system differed from those I pilot-tested in that it relied on broad categories of

information and on a more detailed categorization of information that emerged through an iterative coding process described below.

The uploaded content was reviewed and categorized into one of four *assessment components*: (a) Project and Proponent, (b) Baseline and Context, (c) Changes and Impacts, and (d) Mitigation. At this stage, I put content in the appropriate assessment component, regardless of where it was reported in the assessment (e.g., certain project description information may have been located in Changes and Impacts, but it was nonetheless coded to Project and Proponent). First Nations-specific content in any of these project components was also identified as such.

I then further reviewed content in three of the assessment components: Baseline and Context, Changes and Impacts, and Mitigation. This content was coded using a set of six major *categories of information*: (a) Economic and Material, (b) Family and Community, (c) Governance, Rights, Tenure, and Land and Water Use, (d) Health and Safety, (e) Heritage, Culture, and Archaeology, and (f) Livability (see Table 3.5). To assign information into the appropriate categories, I assessed how the data were framed (i.e., whether the data was presented as a land use issue or as a livability issue). I used the same six categories of information for these three assessment components to facilitate broad-stroke comparisons between the two sets of information and to address the balance of coverage.

The six categories of information are not entirely mutually exclusive. This was due, in part, to the realities of working with such vast amounts of text and to the inefficiencies of coding content word by word. In some cases, content clearly belonging in one category was inextricably linked with content belonging in another (e.g., forestry land use and forestry as an important local sector). To minimize cross-coding and to ensure that no content was erroneously coded to multiple categories, all overlapping content was reviewed and errors were corrected.

Two components, Baseline and Context and Changes and Impacts, form the predictive core of the assessment. Thus, for these two assessment components, each of the six categories of information was further analyzed to identify specific Measures and Data. I did not use *a priori* Measures and Data codes for the reasons described above. The resulting Measures and Data themes were grouped into clusters or Types of Measures and Data (see Table 3.5). Content was included regardless of whether or not a change or impact was predicted.

Table 3.5
Coding Framework Employed in Content Analysis

A Priori Codes word count		Emerging Codes presence/absence	
Assessment Components	Step Two: Categories of Information	Step Three: Specific Measures and Data and Types of Measures	
Project and Proponent			
Baseline and Context	<ol style="list-style-type: none"> 1. Economic and Material 2. Family and Community 3. Governance, Rights, Tenure, and Land and Water Use 4. Health and Safety 5. Heritage, Culture, and Archaeology 6. Livability 	General types of measures and data	Specific measures and data
Changes and Impacts	<ol style="list-style-type: none"> 1. Economic and Material 2. Family and Community 3. Governance, Rights, Tenure, and Land and Water Use 4. Health and Safety 5. Heritage, Culture, and Archaeology 6. Livability 	General types of measures and data	Specific measures and data
Mitigation	<ol style="list-style-type: none"> 1. Economic and Material 2. Family and Community 3. Governance, Rights, Tenure, and Land and Water Use 4. Health and Safety 5. Heritage, Culture, and Archaeology 6. Livability 		

During each subsequent coding phase, previous coding was reviewed for consistency and errors. I also conducted individual text searches based on many of the

Measures and Data to confirm that I had thoroughly coded relevant content. This iterative, cross-checked process ensured that content was accurately and meaningfully coded while minimizing systemic biases.

I relied on word counts to describe the balance of coverage in the assessment components and in the six categories of information. These counts provided a window into the data, but should be viewed with three caveats. Firstly, the categories are subjective, and simply moving a type of information from one category to another can change the relative extent of coverage. I did conduct sensitivity analyses to ensure that I understood the full effect of these decisions. Secondly, despite the accepted principle in content analysis that the amount of information correlates directly with the attached importance (Krippendorff, 2004), some concepts simply require more words than others to convey. One final shortcoming of the word counts is that they did not capture information included in figures, images, and maps. This, most likely, would result in an undercount of the content in Baseline and Context, where these graphical devices were most common.

For the many Types of Measures and Data and for the Specific Measures and Data, I relied on a count of presence and absence within each assessment in the sample. In other words, I reported the number and percentage of assessments that addressed each of the Types of Measures and Data to gain insight into how widely employed these measures were. In interpreting the results, I was mindful that each proposed project and each community context are unique and suited to a unique set of measures and data. Thus, the absence of specific information from an assessment does not necessarily imply a shortcoming in the assessment. Nor does the presence of a broad array of impacts suggest an exemplary assessment. What is more telling is the relative emphasis on specific types of information. Where necessary, I looked more closely at the data, for example, after disaggregating them by estimated number of employees.

3.3 Results

3.3.1 Relative Extent of Coverage of Social Impact Issues

The relative number of application pages addressing social impacts provides some limited insight into the overall form of the project applications and into the extent of coverage of social issues (Chadwick, 2002). A review of the tables of contents of the project applications in the sample found that less than 13% of the approximately 71,000 pages of contents addressed social impacts.

3.3.2 Balance of Coverage

Of the coded content, approximately 28% (235,000 words) addressed First Nations directly. Of the four assessment components (Project and Proponent Description, Context and Baseline Information, Changes and Impacts, and Mitigation), Context and Baseline information was covered far more extensively, accounting for more than 64% (525,000 words) of the total coded content and 2.5 times more than the content addressing Changes and Impacts (see Table 3.6). Mitigation was the least addressed of the four assessment components. In fact, less than 8% of the coded content addressed Mitigation (see Table 3.6).

Table 3.6

Total Number of Words Coded to Assessment Components

	Number of Words (x1,000)
Project and Proponent Description	90
Context and Baseline Information	535
Changes and Impacts	196
Mitigation	58

Of the six categories of information (Economic and Material; Governance, Rights, Tenure, and Land and Water Use; Health and Safety; Heritage, Culture, and

Archaeology; Livability; and Family and Community), Livability; Governance, Rights, Tenure, and Land and Water Use; and Economic and Material were the most extensively addressed (see Table 3.7). Health and Safety was the least addressed, followed by Family and Community.

All six categories of information shared a similar pattern, in that they contained more Context and Baseline information than Changes and Impacts content or Mitigation content. Likewise, each category also contained more Changes and Impacts content than Mitigation content. Although the categories shared similar patterns, there were some noticeable differences. Heritage, Culture, and Archaeology and Family and Community contained 86% and 79% Context and Baseline information. In contrast, Health and Safety contained only 45% Context and Baseline information, compensating with proportionally more Changes and Impacts content than the other categories.

Changes and Impacts—the predictive component of the assessments—constituted between 11% (Heritage, Culture, and Archaeology) and 37% (Health and Safety) of the content in the six categories of information. Health and Safety (37%) and Livability (34%) had the most content in Changes and Impacts. Family and Community (16%) and Heritage, Culture, and Archaeology (11%) contained the least predictive content. The low relative level of reporting impacts in Heritage, Culture, and Archaeology is, at least in part, due to the practice of avoiding significant archaeological sites identified during baseline studies.

I found that Family and Community and Heritage, Culture, and Archaeology were the categories least addressed by Mitigation efforts. In fact, only 2% of the content in Family and Community addressed Mitigation. In contrast, 11% of the content Economic and Material addressed Mitigation, and 19% of Health and Safety addressed Mitigation.

Table 3.7*Extent and Proportion of Coverage Categories of Information Components*

Categories	Context and Baseline		Change Processes and Impacts (x1000)		Mitigation (x1000)		Total (x1000)
	Word Count (x1,000)	Percentage of Category	Word Count (x1,000)	Percentage of Category	Word Count (x1,000)	Percentage of Category	Word count (x1,000)
Economic and Material	120	69%	43	25%	19	11%	175
Family and Community	75	79%	15	16%	2	2%	95
Governance, Rights, Tenure, and Land and Water Use	127	72%	43	24%	8	4%	178
Health and Safety	31	45%	26	37%	13	19%	70
Heritage, Culture, and Archaeology	114	86%	14	11%	6	5%	133
Livability	112	58%	65	34%	18	9%	194

Note: Due to the nature of the data in the assessments, the six categories of information are not mutually exclusive.

3.3.2.1 Types of Information and Issues Addressed: Baseline and Context

Within each of the six categories of information in Context and Baseline, I identified 34 emerging types of information (see Figure 3.1) and multiple associated measures and indicators. I found that some types of measures and data were very frequently addressed (i.e., many of the assessments in the sample addressed them), whereas others appeared in only a limited number of assessments. A closer examination of the data found that, to some extent, this pattern was causally associated with project size (capital cost or number of employees), location, and context, yet this was not a universal pattern and generally only appeared to come into play with the smallest, most remote projects. These projects were, of course, also more likely to include far less socio-economic content and fewer types of information overall, with the smallest projects containing almost no socio-economic content.

Generally, regulated and/or easily quantified types of measures and data were more frequently addressed than qualitative and complex concepts. For example, each of the following were addressed in over 90% of the assessments in the sample: industrial sectors; population demographic; tenure, land use and water use; community services; and physical infrastructure. In contrast, measures such as community attributes and quality of life, community stability, social fabric, religion, cultural wellbeing, were addressed in less than 15% of the assessments in the sample.

My review of Family and Community reinforced the marked differences in representation between qualitative and quantitative measures. Population demographics were presented in 94% of assessments, and general characteristics, location and size, education levels, and participation were each addressed in over 50% of the assessments I reviewed. Community wellbeing, community attributes and quality of life, community stability, social fabric, and religion were each addressed in less than 15% of the assessments.

In total, I identified over 100 individual measures of Economic and Material Baseline and Context information and over 50 measures of Family and Community information. A more precise count of measures was inhibited by a lack of specificity within the reports. For example, for First Nations populations, it was often unclear if a report was enumerating registered band members (both on and off reserve), band members living on reserve, or total reserve population (including non-First Nations residents).

Some common measures—such as the availability of education, policing and health services—were consistently reported. Other widely understood and integral measures were not commonplace, for example, labour force participation rate (the unemployed and employed members of the workforce) and seasonally adjusted unemployment (unemployment rates that have been adjusted to account for annual seasonal changes).

In most of the assessments that were reviewed, there was a marked lack of rationale or explanation for the choice of Baseline and Context measures and indicators. This was particularly puzzling in light of the large number of measures that were used in a small number of assessments.

Whereas Economic and Material measures were often disaggregated based on gender and age, they were seldom used to identify at-risk groups within the population. Thus, these same groups were not addressed in Changes and Impacts or in Mitigation. Income share of the poorest residents, incidences of low income and poverty, bracketed income distribution, and single-parent families receiving employment insurance benefits were amongst the equity-oriented measures found in less than three assessments. In fact, income disparity was only consistently addressed relative to First Nations.

Community values and planning were discussed in three of the information categories: Economic and Material (56%), Family and Community (28%), and Livability (19%).

3.3.2.2 Types of Information and Issues Addressed: Changes and Impacts

Within each of the six categories of information in Changes and Impacts, I identified 38 emerging types of information (see Figure 3.2) and multiple associated measures and indicators. As with Baseline and Context, some types of measures and data were very frequently addressed (i.e., many of the assessments in the sample addressed them), while others appeared in a very limited number of assessments. A closer examination of the data found that, in some cases, this pattern was associated with project size (capital cost or number of employees), location, and context.

The most widely addressed types of information were job creation (addressed in 81% of the assessments in the sample), government revenue (64%), safety (61%), community services (75%), noise (69%), and physical infrastructure and traffic (69%).

The types of information in Heritage, Culture, and Archaeology were infrequently addressed; however, this was largely associated with project size.

Not surprisingly, only a limited number of assessments addressed the more challenging concepts of Changes and Impacts for Family and Community; these assessments, however, were not limited to the biggest projects or largest assessments. For example, only 17% of assessments addressed community sustainability and stability, 6% of assessments addressed community identity, and only one assessment addressed social opportunities, quality of life, and community stratification and balance of power.

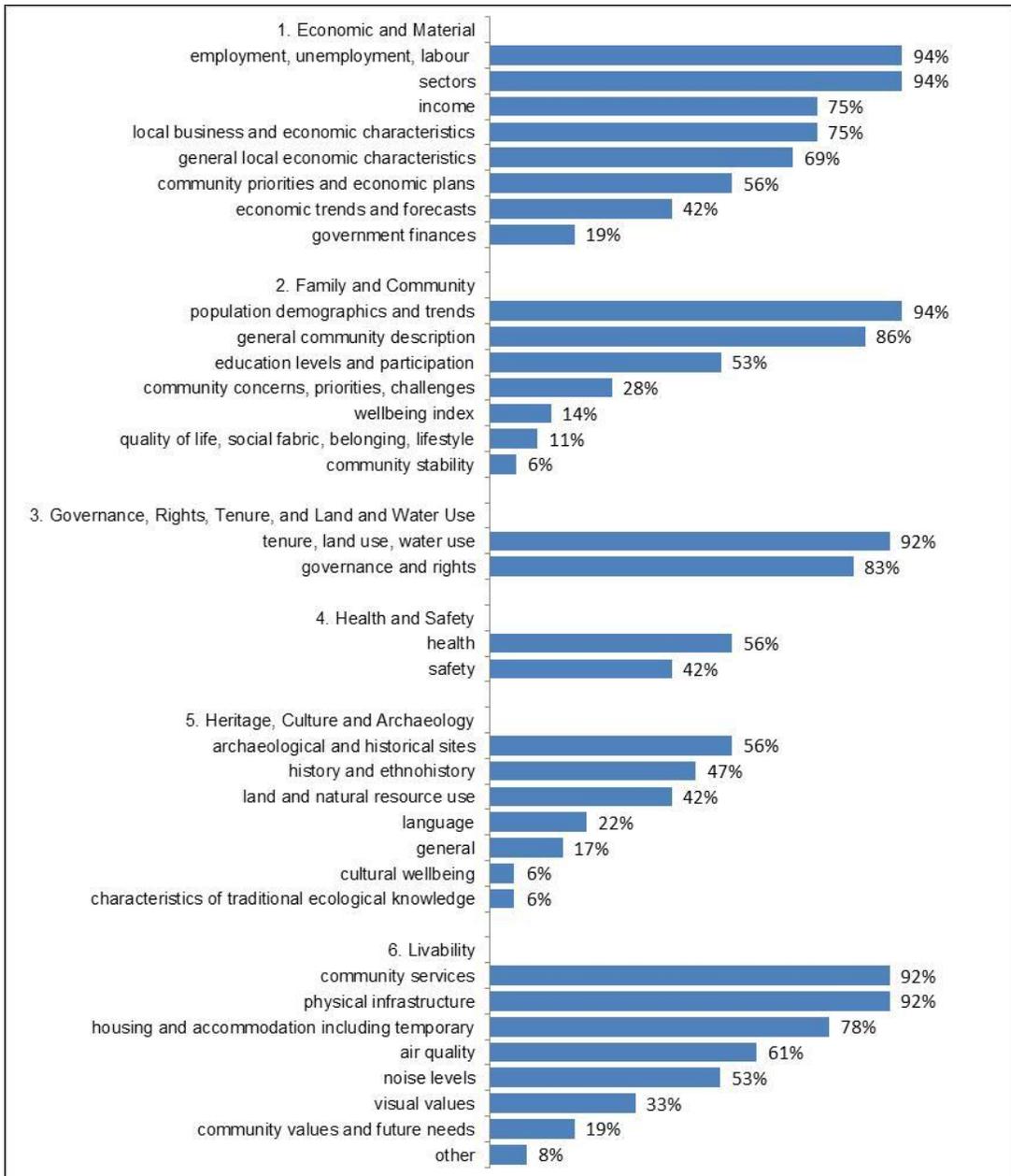


Figure 3.1 Proportion of assessments addressing types of Baseline and Context information

Although there were exceptions, many of the predicted community level Changes and Impacts were not explicitly framed from the perspective of a person, group, or organization. This made it difficult to distinguish between social change processes and impacts. Equity issues facing First Nations were addressed in many assessments, as were mitigation or project description measures aimed at helping First Nations people

gain access to economic opportunities. Multiple references to confidential benefit and impact agreements¹⁵ between First Nations and proponents suggest that additional resources were dedicated to issues of equity and First Nations.

I found only minimal discussion of equity beyond First Nations' rights and interests. This includes a failure to identify and address vulnerable subgroups within First Nations communities. Just as the Economic and Material data in Context and Baseline were underutilized in terms of identifying marginalized and at-risk groups in the population, there was minimal prediction of Economic and Material Changes and Impacts for these groups. Again, following the patterns observed in Context and Baseline, I identified very little direct discussion of gender-based impacts. Only one assessment in the sample directly addressed the potential impact of the proposed project on the gender-based distribution of household work. And while five assessments addressed family stress and/or domestic violence, these were not framed from a gender perspective. Furthermore, discussions of intergenerational equity were entirely absent from the assessments in the sample.

¹⁵ Benefit and impact agreements are privately negotiated contracts between impacted Aboriginal communities and resource developers. Typically, they identify project impacts and the commitments made by the Aboriginal community and the developer, including economic resources that will flow to the community.

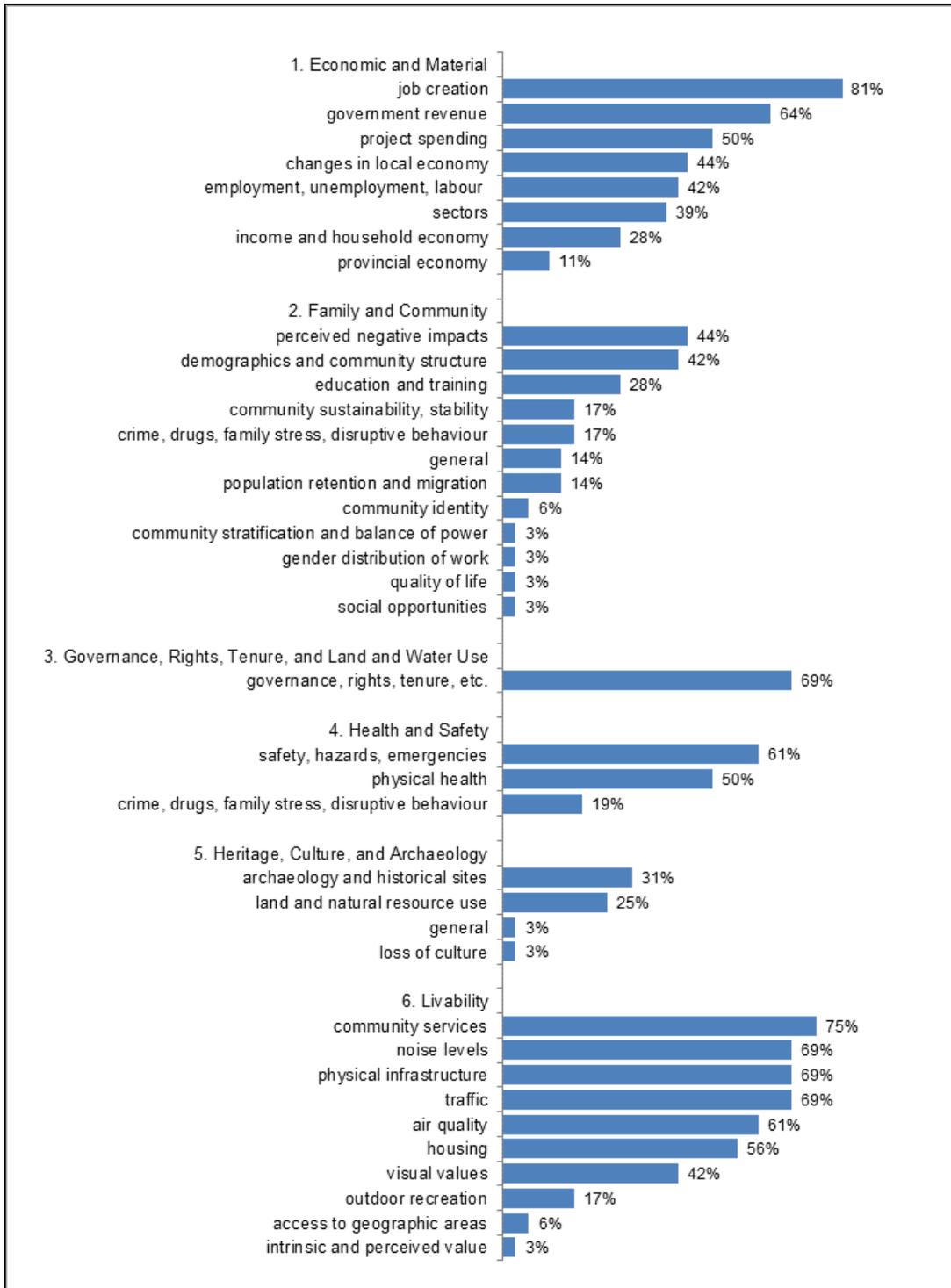


Figure 3.2 Proportion of assessments addressing types of Changes and Impacts information

3.3.3 Tools and Data Sources

The assessments relied heavily on data made available through provincial and federal government sources: Statistics Canada and BC Stats. Data gaps and lack of access to information were addressed in 53% of the assessments in the sample. Within the assessments in the sample, frequently described challenges include Statistics Canada's practice of suppressing data describing smaller communities and First Nations due to confidentiality challenges. The 5-year cycle of the national census and the delays associated with obtaining data create additional challenges.

To make economic and employment predictions, practitioners relied unquestioningly on BC government input-output models and provincial multipliers. Few of the assessments included assumptions or limitations associated with this approach.

Many of the predicted social impacts were unsupported. Less than 25% of the assessments incorporated any examples of similar developments' impacts on communities and few did so with any consistency. Likewise, only a small number of the assessments utilized and referenced known theories of community change. In fact, much of the language surrounding predicted changes and impacts was noncommittal and vague.

Only two of the assessments in the sample clearly explored the social impacts of alternative development scenarios. Beyond the EAO's five-pillared approach to impact assessment, only one of the assessments in the sample described the use of an overarching social impact assessment framework.

3.3.4 General Observations

I found that 44% of the reports were unclear on the distinction between the Proponent and Project Description and the Changes and Impacts. For example, predicted job opportunities were often described as project impacts or presented in a

manner that was unclear. This was frequently accompanied by other structural problems such as unnecessary repetition of perceived positive project attributes and confusion between Mitigation and the Proponent and Project Description. The four assessments without any structural inconsistencies were conducted more recently (post-2003 application initiation and post-2005 application completion).

I also found that throughout a number of the assessment reports (67%), project attributes and associated changes and impacts were reported within the assessment and were positioned as rationale for the project to proceed. In other words, the portion of the assessment that is intended to identify impacts appeared to lobby for the project.

Sixty-one percent of the assessments in the sample mentioned cumulative social impacts. The amount of coverage and approach varied greatly amongst the assessments, ranging from less than 250 words in many assessments to over 5,000 words in two assessments. Although general methods for assessing cumulative impacts were often outlined, there were no detailed examples of methods specific to the assessment of cumulative social impacts. The assessments in the sample contained no discussion of mitigation of cumulative social impacts.

3.4 Discussion

My objective was to provide a base-case description of the practices employed in social impact assessment for major projects in rural and small-town BC. More specifically, I reported on the range and balance of issues addressed, and identified the measures, variables, and tools employed in these assessments. With regard to balance, the finding that content in fewer than 13% of project applications addressed social issues suggests that social impacts may be secondary to biophysical impacts in BC Environmental Assessments. Although this is a rudimentary metric at best, the finding is in keeping with the literature on impact assessment (Burdge, 2002; Chadwick, 2002;

Ross & McGee, 2006; Esteves et al., 2011; du Pisani & Sandham, 2006) and with sustainable development literature, in general (Lehtonen, 2004). A number of potential explanations have been proposed for this imbalance: a lack of consensus regarding the definition and scope of social impact assessment, confusion regarding the relationship between social and biophysical impact assessment, a lack of an applicable body of research to guide assessments, and a lack of examples in which social impact assessment has affected the outcome of the project appraisal process (Burdge, 2002).

In the sample, there was an emphasis on easily measured quantitative issues. This emphasis persisted through Baseline and Context, Changes and Impacts, and Mitigation. Whereas quantitative measures are certainly expected in a social impact assessment, there was an underrepresentation of complex measures and indices and a near absence of substantiated qualitative measures. Suopajarvi (2013) summarized the current literature well by stating that there is a concern that “statistical reports cannot capture the complexity of localities, communities, people's different ways of life and their diverse cultures” (p. 29). Despite this recognition that social impact assessment needs to move beyond statistical reports, there is also a lack of accepted tools to incorporate qualitative issues (Horsman, 2011; Suopajarvi, 2013).

My ability to further characterize the measures, variables, and tools employed in these social impact assessments was hindered by the remarkable and unexplained inconsistency between assessments; inconsistency that persisted regardless of project size (number of employees). In fact, this variation itself is one of the key characteristics of social impact assessment in BC. There are two sides to this issue of variation and inconsistency. On one hand, every project and development context is unique. The latitude to innovate and to employ a range of measures and data is integral to quality social impact assessment (Vanclay, 2002); it enables practitioners to be responsive and to meaningfully address the attributes that make individual communities and projects

unique. The creation of prescriptive guidelines may, ultimately, result in practitioners overlooking concerns that are highly prioritized by the impacted communities (Yap, 2003) or using checklists in lieu of proper scoping (Vanclay, 2002, p. 184).

Yet, the other side of the issue of variation and inconsistency is that when working with widely available national census data and provincially produced statistics, as is often the case with assessments in rural and small-town BC, a degree of uniformity in demographic and economic measures seems likely and makes this finding unexpected. The depth of the inconsistency and the frequent absence of rationale and interpretation, characterize what appears to be an “open season” on the selection of measures and data. In theory, this creates the opportunity for reporting bias, omissions, and interest-based lobbying within these social impact assessments. It also undermines potential cross-project comparison, ongoing monitoring, and much-needed longitudinal studies. Importantly, it puts the onus entirely on the EAO and its working groups to ensure the quality of assessments.

Many of the assessments contained vast amounts of Context and Baseline data relative to the amount of discussion and content that describe Changes and Impacts. The intended purpose of this abundance of data was unclear. Furthermore, in many assessments this information was largely unanalyzed (e.g., interpreted, meaningfully disaggregated, linked or compared to other measures, or explored within the context of relevant theories), and the way in which it supported the predictive component of the assessment was not clear (e.g., by identifying vulnerable subpopulations, forming a baseline for future trends). Although the applied literature is clear that assessments should contain background information, the rationale for this is vague (Burdge, 2004c; Eccleston, 2011). Furthermore, for some Aboriginal groups, current conditions are not in fact a baseline; they are a problem (O'Faircheallaigh, 2009). The lack of interpretation of data could possibly be explained by a lack of practitioner familiarity with theories of

community change and dynamics, the limited use of theory and conceptual frameworks, the mechanized fulfillment of application terms of reference accompanied by disregard for the more nuanced aspects of social impact assessment, or a combination of these factors and others.

Only one of the assessments in the analysis described the use of a conceptual framework for the collection and interpretation of information. Given the structured nature of the BC Environmental Assessment process, practitioners are likely relying largely on the provincial government's five-pillared approach and three-phased process to guide assessments. Yet, these tools were designed to guide comprehensive environmental assessments, are not specific to social impact assessment, and are certainly not well suited to replace conceptual frameworks. As tools, the process and the five pillars only provide a process framework and a general guide for the structuring of information; they are not grounded in theory and they do not provide guidance in terms of the interpretations of findings, which makes the exclusive use of these tools problematic. The lack of conceptual underpinnings in social impact assessment in BC is either a major shortcoming in the policy and practice or a huge disjoint between the literature advocating the use of frameworks (e.g., Parkins, 2012; Ross & McGee, 2006) and the realities of the applied practice.

Although all of the assessments were based on a roughly similar structure, in more than half of the assessments, there was considerable confusion between three key concepts: Project and Proponent Attributes, Changes and Impacts, and Mitigation. The framing of project attributes and mitigation measures as positive community impacts (e.g., projected number/value of direct employment jobs or the construction of a new tourist attraction) belies either a lack of practitioner understanding or, equally as problematic, an unclear distinction between proponent-generated content and practitioner-generated content as observed by Haddock (2010).

Most of the assessments in the sample relied unquestioningly on the BC input-output model (BC Stats, 2010), the Canadian interprovincial input-output models,¹⁶ and the resulting multipliers. A number of limitations and shortcomings are associated with these models, few of which were outlined in the assessments. For example, these models do not address the time required for stimulated effects to manifest, fail to account for potentially limited supplies, and assume that any increase in industry output will require a proportional increase in labour services (Horne, 2008). This overreliance on input-output modelling and multipliers is not unique to BC and was reported in a study of assessments conducted in Bowen Basin, Australia (Lockie et al., 2008).

I attempted to employ the environmental function evaluation framework to facilitate the analysis and to provide initial *a priori* coding categories (Slootweg et al., 2005; Van Schooten et al., 2003; Vanclay, 2002). I found that the framework proved inappropriate in this research context and in so doing, highlighted an interesting and problematic practice in the assessments in the sample. The function evaluation framework relies on a clear distinction between forces of change and resulting impacts (Vanclay, 2002). And although I identified that some ambiguities in the description of the framework made it difficult to distinguish between impacts and outcomes as they were described by the authors, the bigger challenge was that most of the assessments in the sample did not clearly identify who or what (person, people, or organization) would be impacted by changes. This lack of a social lens or framing made it impossible to identify changes and impacts and to apply the framework.

The limited address of equity issues was related to the failure to apply social lenses to the assessment of changes and the identification of impacts. The International Association of Impact Assessment asserted that equity issues, including

¹⁶ The Canadian interprovincial input-output models are for simulating economic impact on business as noted by Statistics Canada <http://www5.statcan.gc.ca/olc-cel/olc.action?objId=15F0009X&objType=2&lang=en&limit=0> (accessed December 2, 2014).

intergenerational equity, should be a fundamental element of social impact assessment (Vanclay, 2003b). Many of the assessments in the sample addressed inequities faced by First Nations as a single group; other equity issues, such as gender equity and intergenerational equity issues, were underrepresented or entirely absent from the sample. Whereas this research does not support the unequivocal conclusion that equity issues that arose as a result of some the projects in this sample were erroneously excluded from the assessments, it is unlikely that 36 major industrial projects catalyzed so few equity-related impacts.

3.5 Conclusion

This content analysis of 36 assessments helped define the base-case for social impact assessment practices in rural and small-town BC. A key finding was that these assessments placed a larger emphasis on biophysical impacts than on social impacts. The social components were characterized by a wide and puzzling variation in approaches, an emphasis on quantitative, easily measured data, an absence of conceptual frameworks, and infrequent considerations of equity. While these findings do raise issues and questions with regard to the quality and potential effectiveness of assessments, in general, at minimum, the variation suggests that some practitioners and proponents are conducting assessments that reflect the suggested best practices such as those described in *The International Principles for Social Impact Assessment* (Vanclay, 2003b; Table 2.2).

This research did not explore the quality of individual assessments, nor did it address the factors that contributed to the findings. It does, however, suggest a discord between the academic literature and the practice of social impact assessment in BC.

4 THE PRACTICE OF SOCIAL IMPACT ASSESSMENT IN RURAL AND SMALL-TOWN BRITISH COLUMBIA

The ongoing viability of rural and small-town BC depends on the flow of economic benefits from major projects. While provincial land use planning addresses sustainable development on a large scale, social impact assessment is the primary *ex-ante* planning tool employed on a project-by-project basis to address the distribution of social benefits and burdens. Yet, despite a 20-year history and the purportedly important role that social impact assessment plays in provincial resource management, there is little documentation of the quality of these mandatory assessments, nor is there a charted course forward for social impact assessment. Identifying the means to improve BC social impact assessment—if indeed it is in need of improvement—requires practicable solutions that are grounded in the realities of applied assessment. Thus, for this study, I furthered my evaluation of BC social impact assessments by describing the quality of these assessments from the perspective of interested parties who have been involved directly in BC social impact assessments and hold technical and regulatory knowledge.

4.1 Background and Objectives

Since the initial legislation of BC's EAA in 1995,¹⁷ the province has required that social impact assessments be conducted as a component of comprehensive environmental assessments for all proposed major developments. To date, nearly 300 social impact assessments have been conducted for proposed major projects that require environmental assessment under the BC EAA; assessments that are important for ensuring that proposed projects meet the goals of economic and social sustainability (Auditor General of BC, 2011).¹⁸ Despite the important role that social impact

¹⁷ The Environmental Assessment Act, S.B.C.1994, c.35. was not adopted until 1995.

¹⁸ Calculations based on publicly available records found at http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_home.html (accessed June 2013).

assessment plays, there are only three past evaluations that address the quality of social impact assessment in BC. Furthermore, only one of these studies—a review of the entire BC Environmental Assessment process—incorporated expert input (Haddock, 2010). Although Haddock (2010) addressed the comprehensive Environmental Assessment process, a number of the included recommendations are germane to social impact assessment. These include the following:

- improved opportunities for public engagement, participation, and access to information,
- development of a professional practice directive and accountability measures,
- improved scoping practices,
- establishment of decision-making rules that incorporate the purpose of BC Environmental Assessment and sustainability criteria,
- improved follow-up and monitoring,
- better oversight of the BC Environmental Assessment process from government, and
- introduction of accountability mechanisms and dispute resolution processes (Haddock, 2010).

Concurring with Haddock's (2010) findings, Horseman (2011) suggested that social impact assessment in BC would benefit from a process that provided more integration of participatory methods and locally held knowledge and improved post-assessment monitoring and evaluation.

Although not an evaluation of social impact assessment, Booth and Skelton (2011) interviewed proponents, First Nations, and government representatives to explore the perspectives of Canadian Aboriginal people on environmental assessment. They reported that First Nation's concerns and rights are not taken seriously in the BC

Environmental Assessment process, that there is a lack of mutual cultural awareness and understanding between First Nations and government agencies, and that First Nations lack the capacity to participate in assessments and meet the government-dictated timelines (Booth and Skelton, 2011).

With this study, I set out to advance my objectives of evaluating the practice of BC social impact assessment in rural and small-town BC, and recommending practicable changes to social impact assessment practice and policy by addressing the following questions: How do practitioners, governments, proponents, and other interested parties with technical and regulatory knowledge perceive the quality of the current practices and policies? And, how do these interested parties believe that current practices and policies can be improved?

4.2 Methods

To address the research questions I conducted semistructured one-on-one interviews and group interviews that addressed social impact assessment and the associated BC provincial government legislation and policy. I interviewed individuals and with applied technical knowledge of social impact assessment of major projects in rural and small-town BC.

Rather than identifying potential participants through a theoretical sampling technique such as saturation, I identified individuals and organisations that were involved with a random stratified sample of social impact assessments available online at the ePIC (http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_home.html). This is the sampling framework that was also used for the preceding document analysis and is described in more detail in Chapter 3. Employment of the same project sample framework facilitated the integration of the results from these two studies (see Chapters 3 and 4) and equipped the interviewer to conduct more meaningful interviews. This study

was limited to assessments conducted for projects proposed in rural and small-town BC and for which adequate documentation existed to support the earlier components of this research. I stratified the assessment sample to be representative of the diversity of project types conducted throughout the study area (e.g., mining, oil and gas, hydroelectric, etc.), and I also stratified the sample by project location. In each of the stratifications, I randomly selected 50% of the projects to be included in the sample (rounding up when necessary).

To varying degrees, assessments submitted to the BC EAO identify the individuals and organizations who contributed to the assessment process (e.g., proponents, proponents' representatives, community and regional representatives, provincial and federal government representatives, First Nations' representatives, experts, and practitioners). From the sample of 36 assessments, I identified individuals and organizations who contributed to the social component of the assessment. Identifying and locating potential participants was a significant challenge. Many older assessments lacked adequate detail regarding the identity of specific contributors. Additionally, some of these assessments were as old as 15 years and, since completion of the project application, the companies involved had closed, employees had moved to other jobs, or contact information had simply become out of date. In many cases, additional research (internet and telephone) was required to identify appropriate participants and to find contact information. Recruitment was further limited by individuals' willingness to participate and organizations' reticence to have their employees participate. Recruitment was stopped when of these avenues had been exhausted.

Originally, I intended to conduct only one-on-one interviews either in person or by telephone. But, during the course of recruitment, potential participants from two different organizations expressed that their time would be better served by participating in group interviews. As their input was invaluable, and as it was not possible to conduct all of the

interviews in group settings, I hosted a combination of group interviews and one-on-one interviews. In total, I interviewed 30 participants who had applied technical knowledge of assessments: three group interviews and 16 one-on-one interviews.

Participants included representatives from municipal (1) and provincial governments (11), First Nations' representatives (three), proponents and representatives of proponents (eight), and practitioners of social impact assessment (seven). The distinction between participant groups was not absolute. Many of the participants had been involved in social impact assessment in more than one capacity (e.g., several practitioners were former government employees, two proponent representatives were also practitioners, one former First Nations' representative was a practitioner). While three participants had over 20 years of experience with social impact assessment in BC, most participants had less than ten years of experience.

Both one-on-one interviews and group interviews are suitable for generating qualitative information regarding a specific topic. Whereas one-on-one interviews are well suited to gaining in-depth insights (Kvale & Brinkman, 2009), group interviews facilitate the collection of a large quantity of information on opinions and thoughts about a specific phenomenon (Frey & Fontana, 1991). The group approach, as a result of group dynamics and 'snowballing', offers insight that is only possible with more than one participant (Chambers, 1997; Frey & Fontana, 1991; Schensul, 1999). Participants also tend to verify information with others (Chambers, 1997). Unfortunately, participants in group situations may also self-censor and, due to time limitations, a group setting can limit discussion to a narrow range of issues (Chambers, 1997).

This research does not frame and compare findings from the perspective of the various participant groups. Although this would likely have proven insightful, several organizations and individuals had confidentiality concerns regarding extensive disaggregation of data by participant group. Due to this limitation, the considerable

overlap amongst participant groups, and the need to ensure that I did not erroneously compare group interview data with one-on-one interview data, I approached data disaggregation with extreme caution. Participants' roles in social impact assessment are only identified when relevant, when there is no risk of breaching confidentiality, and when I can account for interview type and participant group overlap.

The need to aggregate collected data using slightly different methods (group interviews and one-on-one interviews) influenced the design of the interview tools. The interviews (group and one-on-one) were semistructured and guided by a predetermined set of interview questions (see Appendix II). My interview questions—which varied slightly based on the participant's role(s) in social impact assessment—flowed from a general discussion of social impact assessment policy and process in BC to a more specific discussion of the tools and methods that are currently employed.

As the BC legislation and policy lack criteria for measuring the quality of assessments and the success of the program, the interviews drew heavily on the *International Principles for Social Impact Assessment* (Vanclay, 2003b). These principles (see Table 2.2) emphasize equity, mitigation, and local capacity development—themes that emerged in the preceding analysis of assessments (see Chapter 3).

The guides for the one-on-one interviews contained 23 questions addressing the following main themes:

- perceptions regarding the current government process,
- perceptions regarding current practice including tools and methods,
- ways in which process and practice could be improved, and
- examples of best practice.

Views on equity and professional reliance were also solicited.

In the group interviews, I prioritized 12 key questions to ensure that the sessions covered the scope of themes and issues in a limited amount of time (see Appendix II). However, the interviewer did have the complete list of 23 questions and relied on these for prompts to guide the discussion.

Because participants had a disparate range of knowledge and experience, few were able to discuss every point in the questionnaire. Participants were encouraged to share any insights and experiences and to explore new ideas. Thus, while some interviews followed the questionnaire in order and detail, other interviews were far less structured. This semistructured approach ensured that all of my research objectives were addressed, yet also allowed for new themes and ideas to emerge (Kvale & Brinkman, 2009).

Although the interviews did collect some “factual” information, they were primarily conceptual (Kvale & Brinkman, 2009). Conceptual interviews “explore the meaning and the conceptual dimensions of central terms, as well as their positions and links within a conceptual network” (Kvale & Brinkman, 2009, p. 151). Despite my intent to not conduct discursive interviews, conceptual interviews often uncover a participant’s “taken-for-granted assumptions about what is typical, normal and appropriate” (Kvale & Brinkman, 2009, p. 151).

Generally, the one-on-one interviews ranged from 40 to 60 minutes in length. The group interviews were approximately 3 hours long. All interviews were recorded and transcribed. After I checked the transcriptions for accuracy, participants were given the option to review and edit them. In the case of group interviews, participants were not permitted to alter comments made by others although they were encouraged to add additional insights. In several cases, I also sought further clarification on specific points at this time.

Data analysis was conducted using NVivo10 (QSR International, 2010) software that enables the researcher to code or tag pieces of text (or other data) with themes or labels. These themes can be organized hierarchically and used to search the data and to create matrices based on multiple themes, or themes and interview attributes.

Rather than a case-based analysis (analyzing the data by participant or participant group), I employed a theme-, issue- or cross-case analysis of the data and followed the “spiral of data analysis” (Boeije, 2010, p. 90). This iterative analysis process is based on the methods described by Strauss and Corbin (1990) and it emphasizes rigour and constant comparison, but is not exclusively designed for grounded-theory research.

After the data were prepared (transcribed, checked for content that would violate confidentiality, and loaded into the analysis software), they were segmented into the main categories or questions that guided the interviews. I then reviewed the content relevant to each of my research questions and identified emerging ideas or themes, essentially reassembling the data into describing categories or axial codes (Boeije, 2010). At this stage, I reviewed the coding for consistency and addressed any cases where coding was not mutually exclusive. The final analysis stage, described by Boeije (2010), is selective coding. In this stage, I looked for connections between the previously coded categories and arranged the data into theories or ideas. I also explored the data for patterns and close proximity in related concepts.

4.3 Results

A number of high-level themes quickly emerged from the interview data. Every participant stated that social impact assessments should, indeed, be conducted for major BC projects. They also supported the inclusion of social impacts in broad-scope environmental assessments. Amongst the interviewees, there was no debate that, relative to social impact assessment, biophysical environmental assessment receives a

disproportionate amount of emphasis in the form of resources and consideration.

Interestingly, many speakers shifted fluidly between discussions of social wellbeing to the importance of the biophysical environment.

Participants with long-term knowledge of social impact assessment reported general improvements in the overall quality of the assessments being conducted for major projects and a positive evolution in the supporting policy:

I think they [social impact assessments] are improving. If you look today at methodology and technical quality . . . these types of assessments are very different than they were 10 years ago. I think they are addressing scope much more effectively. They are becoming much more sophisticated in the technical methodologies that they are employing.

Another participant stated,

The social is sort of a new frontier. Back in the '70s and '80s, it was all about water and air and environment. People struggled to integrate those sorts of values and, yes, the past 5 or 10 years with the social [values], it has been the same thing.

Specific areas of past improvement emerged in the interviews. These include assessment scoping; transparency regarding authorship; consultation approaches; and identification of linkages between causes, outcomes, and mitigations. Improved consultation requirements, increased proponent recognition of social values, and increased community demands have led to considerable improvements in consultation practices:

There really is an emerging practice on consultation with First Nations and the consideration of the unique aspects of a project socially, economically, and culturally as it pertains to First Nations. There is an emerging practice that is becoming very collaborative.

Expanding on this overall improvement, a number of specific strengths and weaknesses in the current policy, process, and practices emerged from the data, as did

barriers and drivers for improvement. These findings are described in the following two subsections.

4.3.1 Consultation

Although consultation was identified as an area that has shown positive progress, it also emerged as a theme in need of further improvement. The importance of this domain was conveyed through the prioritization of well-executed consultation as a key characteristic of an exemplary assessment. Ideally, consultation goes beyond the minimum requirement set out in the environmental assessment process:

We talk about the big “C” consultation, but a lot of the work that I’m a fan of and I profess to and I support is the small “c.” And that’s the small “c” consultation. It’s the engagement from the early stages of the project. It’s providing a consistent voice, providing a consistent message, understanding.

I also found that many—although not all—participants did not clearly distinguish amongst social impact assessment, EAO process-driven consultation, community engagement, relationship development, and information and data collection. A lack of clarity was most common with those participants who did not have experience as social impact assessment practitioners.

4.3.2 Cumulative Effects

While many participants acknowledged that cumulative social impact assessment is of increasing importance to BC, participants were extremely uncertain as to how it should be tackled. Several interviewees expressed frustration in identifying approaches to address cumulative social impacts or dissatisfaction with how cumulative impacts were being addressed in impact assessments. From a practical standpoint, the difficulty of accessing accurate project timeline information for other concurrent projects was also presented as problem. For example, projects that have previously received an

environmental certificate and are proceeding with development may have changed their schedule.

At a governance and policy level, participants questioned whether or not cumulative social impact assessment was the appropriate domain of proponents and BC Environmental Assessments or if it would, in fact, be better addressed by the provincial government:

What is government's larger responsibility and what is the responsibility of a whole industry? You reach the point where it is not fair to put the whole bill on the proponent of that one project. That part always comes into it, too. I guess if government doesn't have as a whole the drive to do this kind of work . . . or bringing multiple industrial players together to fund it, I don't know how you would make it successful.

Another participant expressed a similar idea:

A proponent cannot really deal with that [cumulative impacts] because it is too broad and those are policy issues that cannot be handled at the environmental assessment office.

And another participant stated the following:

I would like to see a more integrated approach to cumulative effects, a regional approach.

4.3.3 Mitigation

Mitigation of social impacts emerged as a particularly vexing challenge for many of the participants. Similar to cumulative impacts, many of the potential mitigation efforts are beyond the proponent's area of legal responsibility and scope of influence. Social impacts also resist the establishment of causal relationships and, therefore, the ability to directly mitigate the number of social impacts:

How do you make a linkage between a social impact and an appropriate compensation or mitigation . . . when often those things cannot be linked?

The nature of qualitatively assessed impacts was also reported as challenging when identifying appropriate mitigation:

The social impact is employment, or the social impact is traffic, we can do things about that. If the social impact is, "I am a member of a community and having a project in my backyard makes me not value my community as much or makes me feel as if I don't want to be a part of this community and I might leave," we cannot really assign a mitigation measure to that.

The following was reported by another participant:

Before you get to the mitigation measure you have to figure out the impacts. Right now we have better tools, proponents have better tools, to identify quantitative impacts than qualitative impacts. So as a result you are getting better mitigation measures for quantitative impacts than for qualitative impacts.

The complexity of social systems and subjectivity of impacts further compounds the issue of mitigation. That which is perceived as a negative impact may in turn be a benefit for someone else in the community:

For example, your eviction issues. You have people being evicted from their homes. But you have landlords making more money and being able to support their family. That is good.

One participant noted that the decision-support framework utilized in the environmental assessment process is not appropriate for the subjective nature of social issues:

It is quite rigid as well, in terms of the social side of things where things are a little less clear cut than "positive or adverse effects" or "high, medium, and low" impacts. The methodologies were established for more the biophysical side of things and they have been applied to the social side . . . where there is more grey area in community issues.

4.3.4 Equity

Participants were asked directly about the ability of the current process to support equitable resource management. Many participants wrestled with the issue of equity—the distribution of costs and benefits—and the role it plays in social impact assessment of major projects in BC. From the data, I found that in many cases equity issues are addressed outside of the government-coordinated environmental assessment process through the negotiation of Impact Benefit Agreements. Equity is also addressed, to some extent, within the project planning and mitigation stage of assessments, and appears to be largely proponent- and community-driven:

I haven't seen within the environmental assessment an active equity framework being adopted and applied through the environmental assessment process. I think there are aspects to how different clients and different consultants will look at equity.

4.3.5 Government Will, Capacity and Guidance

Participants identified a number of current barriers and drivers of improvement in social impact assessment. For these purposes, drivers are forces that push for improvement in social impact assessment. Barriers are impediments that are currently limiting the potential for improvement.

Some participants discussed a lack of political will to decline projects based on social impacts, thus creating a barrier in the form of a lack of incentive for proponents and regulators to address social impacts:

Knowing that most of it is going to turn on the environmental part, that is where most of the weight of the process gets put. If there was a better idea of what makes a project acceptable or not, socio-economically, and whether or not there would be more political will to say no to projects for social reasons, then I am sure there would be much more rigour there too.

Another participant expressed:

But the chances of that happening [pulling the environmental assessment certificate] because they haven't done something social in the community. That would be a pretty big decision for a minister to make. It would have to be a pretty major problem I would imagine.

Many diverse participants also noted a lack of government capacity and expertise to support social impact assessment and the review of project applications as hurdles to improvement. They suggested that the lack of capacity went beyond the EAO. One participant described that, in order to strengthen assessments, the government needed to establish dedicated resources:

It has to be driven politically . . . there has to be a mandate to say that this is the ministry that has the closest alignment with this [social impact assessment], and we are going to be changing their mandate. Looking at, say, the resource boom we are having in BC, because we need to have an oversight of socio-economic and this is going to be part of your job to participate in the working groups and to work with developing methodologies.

The participants expressed that the EAO offers limited policy and guidelines to help proponents and practitioners understand regulatory expectations and to ensure the quality and thoroughness of assessments. In fact, the flexibility of the current EAO assessment process was one of the most common themes that emerged and, interestingly, was portrayed as both positive and negative. The flexibility allows the latitude to address the individual needs of each unique project and setting. One participant noted that a flexible process enables practitioners and proponents to advance the practice of social impact assessment:

[A flexible process allows you to] tailor things a bit better to the local level or the regional context and really draw out the things that are important to the local communities. It can be more community-driven if you have the right practitioner in the mix.

However, it was also reported that the lack of guidelines around consultation and social impact leaves room for substandard work:

There is more of a risk of it being substandard in certain circumstances. And I have found a lot of substandard work within social impact assessment in reviewing other projects.

When participants were asked specifically whether or not the process would benefit from the development of definitions, guidelines, and principles specific to BC, the responses ranged from this change being “enormously” beneficial to tepid interest that was mitigated by some concerns. The delicate balance between a rigid, prescriptive process and a process that has enough latitude to support innovation was a common concern:

I am always thinking of the tension between overly prescriptive guidelines and leaving room for innovation and how you can create a culture of excellence, which sometimes guidelines can be counterproductive to.

Participants also observed that guidelines must allow for the variability in scope and methods that is required to address the range of project types and settings. For example, consultation processes and assessment methods that are appropriate for a mining project with a predicted 20-year lifespan are not the same as those suited to a small independent run-of-the-river power project.

Participants identified opportunities for producing guidelines that included best practices for the use of economic input-output models and systemization of technical definitions. Guidance for dealing with qualitative and values-based information emerged as both an area in which the general practice needs to improve and an area that the EAO could provide more guidelines:

EAO and practitioners and consultants are less equipped to gather and evaluate values-based information. . . . What is a proxy for my sense of being and my

sense of place and what do you and how do you account for perceived impacts versus real impacts.

In terms of looking elsewhere to find solutions and other workable models, the lack of guidance is not unique to BC, possibly limiting the potential to build on the work of other jurisdictions:

There is a lack, not only at EAO, not only in BC, but just generally in the field, there is a lack of tools and guidance.

4.3.6 Community and First Nations Demands

Community and First Nations' demands for better social impact assessment were identified as current drivers for improving social impact assessment. As communities and First Nations in development-intense areas become more acquainted with the processes and practices associated with social impact assessment, they raise their expectations, develop capacity, and demand more from proponents in regard to both consultation and impact assessment:

Because people are asking for them, because the First Nations are asking for them—the First Nations can hold quite a lot of power—because for a lot of them [proponents], they really do want to do things well.

This empowerment, however, is not province wide. Limited technical capacity to review and interpret project documentation, within given time limits, means that not all First Nations and communities are able to advocate for improved assessment practices:

Government has its goals, the proponents have their goals, and communities have their goals, too. It's hard for lay people to be able to do everything, and you don't also want to have everyone doing everything individually. There needs to be more cohesive resourcing going on.

4.3.7 Proponent Will

The willingness of proponents to address social impacts was identified as the most integral driver required for an exemplary social impact assessment under the current policy regime. Proponents who do prioritize excellence in social impact assessment are currently driving advancements in the process by embracing new approaches and dedicating sufficient time and financial resources to social impact assessment.

Proponents who participated in this study reported being motivated by the need for a positive ongoing relationship with local communities and stakeholders and by the desire to avoid future costly delays caused by unforeseen social and cultural impacts. The economic value of good working relationships with First Nations and communities, and the need for a “social license to operate”¹⁹ were also frequently raised issues. Without these, proponents run the risk of unexpected costs and delays:

Companies that worked in BC for years, they know if we are not going into these communities and understanding their social and economic issues adequately, [they] are going to have a hell of a time doing anything here. That is based on experience and also based on good practice, good community relationships. We use the term “social license to operate.”

A practitioner elaborated:

A lot of the proponents are getting a lot more on board with it; we [social impact assessment practitioners] were definitely sort of seen as fluff when I started years ago, but they were often issues that were going to stop the projects, not so much the SIA [social impact assessment] but the sort of broader practices . . . building relationships and community engagement and Aboriginal issues and that sort of thing. So, in proponent’s interest to do those—well, in BC, especially—if they’re working in rural areas where there is a big Aboriginal population, most of

¹⁹ Social license to operate “can be defined as a set of concepts, values, tools and practices that represent a way of viewing reality for industry and stakeholders. Its purpose is to create a forum for negotiation whereby the parties involved are heard, understood and respected. Social license to operate is a means to earn accountability, credibility, flexibility and capacity for both stakeholders and industry.” (Nelsen, 2006:161)

the projects run into legal issues if the First Nations aren't happy with what they have done.

The financial "bottom line" for proponents was discussed as a driver of exemplary social impact assessments, as well as a barrier. Several participants pointed out that extensive social impact assessment requires considerable financial resources that often exceed the capacity of smaller companies, especially those in the initial stages of project development. And, while few stated that there was sizable sector-based difference in the quality of work being done, it was suggested that lengthy and detailed assessments were particularly onerous for small mining companies as they typically have limited start-up resources.

Participants reported a growing proponent appreciation for addressing values in project planning:

The proponents or clients . . . are understanding socio-economic impact assessment better as it relates to who they are as an entity. Mining companies, for example . . . and some of the government or Crown corporations, they are actively trying to enhance their own internal framework for environmental assessment to better understand socio-economic impact assessment as it links to their large project developments they put forward.

A top-down corporate message that emphasizes and institutionalizes the importance of social and cultural values is a key component. One participant cited the example of proponents developing their own tools and, as a result, stimulating improvements in the practice:

We are working with many clients where they now have their own internal socio-economic tools or toolbox that they have adopted. In that context, the practice is growing; it is improving partly because of that . . . because of what proponents are doing themselves as the regulation.

Local stakeholders, proponents, and the provincial government rely on practitioner skills and integrity to conduct social impact assessments. Many participants voluntarily

raised the issue of reliance on professionals to generate accurate and thorough reports. Those who did not were directly prompted to share their thoughts. Most participants were familiar with the professional reliance model that is used in BC Environmental Assessments. According to participants, the current model of professional reliance, in combination with the associated lack of clarity around professional qualifications and the lack of accreditation in the field of social impact assessment, represent significant barriers to improvement in social impact assessment.

4.3.7 Professional Reliance

Although nobody was confident that the current model of professional reliance is effective, few workable solutions were offered. Several participants pointed out that professional reliance, regardless of the field, can be challenging and, thus, the problem is not unique to social impact assessment. Another participant said that when you have multiple professionals, you may have multiple perspectives on the same issue, regardless of the field:

You can have three different professionals with three different opinions and they can line up on different sides. For example, you can have a company's professionals and they are all accredited, and then you can have government agency's professionals on the same topic and they will have another [opinion], and EAO can contract a third party. . . . And the public has hired one . . . or the community . . . or interest groups.

Several participants stated that professional reliance in the absence of professional accreditation was problematic:

Because there is no regulatory body . . . for social impact assessment, so we don't have any standards or accountability between members of the same body.

The notion of moving toward a professional accreditation program and governing association was supported by some participants, for example:

I definitely think we could benefit [from a professional association]. I have tried to get practitioners to talk to one another at the very least. I know accreditation and having a professional organization is well beyond that, but at least having some sort of dialogue between practitioners and sharing of experiences and knowledge.

The interdisciplinary nature of socio-economic impact assessment and the difficulty in pinpointing the necessary experience, skills, and education to support an accreditation program were repeatedly identified as impediments to the establishment of a professional association.

Several participants pointed out that, without the right practitioner, exemplary social impacts could not be conducted. Yet, when prompted to describe the skills and training ideally held by social impact assessment practitioners, most participants were unable to do so.

Participants also raised the importance of local knowledge and the ability to truly understand the local context, whether that is a resource-dependent community or a First Nation. It was suggested that this skill goes beyond education and training and is difficult to qualify:

I believe professional affiliation is important, but I don't believe it's the be-all, end-all . . . When you get into social issues, it's not always that easy and it can change from town to town or community to community or whatever the case may be. I mean, what people want in [the town of] Fernie isn't the same as what people want in Vancouver. I guess that's where, to me, the common sense part of it comes in and experience.

Another participant said:

What is a qualified professional for social impact assessment? We have talked about that at IAIA [International Association of Impact Assessment], right, should IAIA create a course or a training program or something to accredit social impact assessors, but it is really multidisciplinary and so what does that mean? An economist is going to take control? They have the background but they are

obviously into different impacts and evaluate them in different ways than somebody like me who is more interested in consultation. . . . So that is the biggest thing for me around professional reliance. First of all, who is an expert?

As social impact assessment is an unaccredited interdisciplinary field, there is no entity ensuring practitioners keep their practice current and participate in professional development. The value of opportunities for group learning—such as International Association of Impact Assessment events—was mentioned by several participants. One participant described the informal professional development process that they have observed:

It seems to be informal and ad hoc mainly based on personal initiative of whoever has the time. And that is unfortunate. It is because there are so few of us doing what we are doing, and there is such a great demand on us that we rarely have time to think about and eke out space for that dialogue. So, whenever there are workshops or seminars like the IAIA, we all gravitate toward those as a way to get together.

Practitioners in larger organizations also described benefitting from corporate emphasis on professional development:

Our company promotes professional development so we participate in numerous workshops and conferences put on by different organizations like the International Association of Impact Assessment.

Two participants discussed advancing their practice by reviewing the work of their professional peers, yet only one participant identified the peer-reviewed literature as a means of advancing their practice.

4.3.8 Observations

Through the efforts to identify practitioners who would participate in interviews, three problematic practices arose. Firstly, clear identification of the practitioner responsible for producing the assessment is rarely offered. Secondly, if the author or signing authority is

identified, his or her credentials, with regard to social impact assessment, are not consistently present. And lastly, many of those identified as having led the social impact assessment did not possess any relevant qualifications.

4.4 Discussion

With this study, I set out to understand the current state of the quality of social impact assessment practices in rural and small-town BC, as seen through the perceptions of individuals directly involved in assessments and to identify means by which it could be improved. Although the literature contains some lingering debate regarding whether or not social impacts should be addressed as part of broad-scope impact assessment (du Pisani & Sandham, 2006), the findings unequivocally support the common perspective that these types of impacts are interconnected (Burdge, 2003) and that acknowledgment of this fact is integral to good practice (Vanclay, 2003a).

In Chapter 3 of this dissertation, I reported that only 13% of the content in 36 BC Environmental Assessment applications addressed social issues. Although this metric is not absolutely conclusive, it may demonstrate that social impacts are considered secondary to biophysical impacts in BC Environmental Assessments. The findings from these interviews not only support this view but also illuminate possible explanations. Participants reported that, relative to social impact assessment, biophysical environmental assessment receives a disproportionate amount of emphasis, both in the forms of resources and consideration. One possible explanation that emerged from the interviews is a lack of political will to decline or terminate projects based on social criteria. If, indeed, environmental assessment methods emerged from political imperative (Cashmore, 2004; Rosenberg et al., 1981) and BC Environmental Assessments are conducted to support decision makers (BC EAA, 2002), it follows that a lack of political will to regard social impacts as a deciding factor would result in unbalanced reporting.

The challenge, however, remains: How ought practitioners meld these two dissimilar inquiries? The difficulty in reconciling social and biophysical impact assessment may stem from the drive to fit social impact assessment into the same boxes created for biophysical impact assessment. If one views environmental assessment as a research problem, biophysical impact assessment and social impact assessment are rooted in very different paradigms. Although biophysical impact assessment conducted in a highly regulated environment, is frequently well suited to a positivist approach to science, many—although not all—aspects of social impact assessment require a constructivist approach. Clearly, the foundation for environmental assessments remains an “uneven mix” (Lawrence, 1997, p. 81) of theory from multiple disciplines including planning, traditional science, evaluation, policy, and other fields.

Only one of the participants reported accessing the peer-reviewed literature. Integrating theory into social impact assessment, and building a strong foundation for the integration of social impacts into environmental assessment, will be made all the more challenging if this finding holds true throughout the general population of practitioners and regulators involved in BC Environmental Assessment. Yet, the potential for social impact assessments is greatly limited by the continued and unquestioning application of positivist and reductionist tools and decision-making processes, as well as the ongoing failure to address the fundamental theoretical foundation of many social questions.

My findings suggest that under the current system, communities and First Nations are primarily responsible for driving improvements in social impact assessment, yet the lynchpin for improvements and excellence is a willingness on the part of proponents. This differs from the findings Hildebrandt & Sandham (2014) who found that in South Africa, the quality of assessment is practitioner-driven. And, whereas provincial policy in BC is likely not stymieing good-quality assessment, it is certainly not supporting it either. This mode, in which improvement is not in part driven by government policy, represents

a critical weakness in the system as most proponents in BC are guided by business interests and not the interests of those who will be impacted by a proposed project. Under this model, there is a risk that the interests of communities and First Nations will only be adequately addressed in project planning when conflicts and unforeseen challenges threaten the financial bottom line and corporate social license.

I found that exemplary assessments ideally involve additional consultation above and beyond that which is outlined in the BC Environmental Assessment process and that, for many participants, the distinctions between consultation, engagement, and social impact assessment were unclear. According to the BC EAA (2002), the intent of environmental assessment and the associated social impact assessments, is to determine if a project will have adverse effects and support the ministers' decisions. This is distinct from the intent of the associated consultation, which is to provide opportunities for public input (BC EAO, 2012) and to ensure the Crown fulfills its duties of consultation and accommodation with regard to First Nations (BC EAO, 2013b). And finally, engagement is not addressed in EAO policy or guidelines, but implies a larger set of activities of which, consultation is one.

Of course, some participants could possibly be unclear about the distinctions between consultation, engagement, and social impact assessment. Another possible explanation is an approach to social impact assessment that is moving toward a more participatory or integrated assessment process and, thus, the integration of social impact assessment, consultation, and engagement was intentional on the part of the participants. This latter explanation was not, however, supported by Horsman's (2011) findings. In fact, Horsman advocated that, in keeping with the practice as described in the international literature, social impact assessment in BC would benefit from a move toward a more integrated and participatory process but, at that time, had yet to do so. Achieving clarity on the distinction, if any, between these activities is key and, again,

may require reflection on the foundations of science as it highlights the subjective nature of social impact assessment (Horsman, 2011).

Yet a third possible explanation for the lack of distinction between these three integral concepts is the increase of proponent interest in social license to operate and the role that social impact assessment plays in that process. Social license, as Nelsen (2006) described it, has become “‘the language of choice’ of stakeholders and industry” (p. 161) and, as the findings reflect, is of increasing importance to proponents (Michell & McManus, 2013; Nelsen, 2006; Prno & Scott Slocombe, 2012). Widely accepted as having originated from the concepts of social contracts in industrial development (Shocker & Sethi, 1973), *social license to operate* has a number of different definitions. Gunningham, Kagan, and Thornton (2004) defined social license as “the demands on and expectations for a business enterprise that emerge from neighborhoods, environmental groups, community members, and other elements of the surrounding civil society” (p. 308). While most commonly discussed in relation to mining, social license to operate has also found its way into other industrial sectors, such as forestry and oil and gas (Nexen, 2012; Tolko Industries, 2010). Importantly, social impact assessment is an important component of achieving social license to operate (Michell & McManus, 2013), as is community engagement. If, in addition to the awarding of a BC Environmental Assessment certificate, proponents are simultaneously working toward a secondary objective of social license to operate, social impact assessment could possibly be becoming enmeshed in the engagement process. There are likely a number of explanations for this and, although the marrying of social impact assessment with the pursuit of social license is not necessarily a shortcoming of social impact assessment in BC, it is certainly an area that would benefit from increased transparency and discussion.

In the current Environmental Assessment process, the working groups—consisting largely of municipal, regional, provincial, and federal government representatives—review applications and provide expert guidance to the EAO. However, no single ministry or agency is responsible for representing the range of social impacts that may be associated with large-scale assessments. Thus, there are few mechanisms to ensure the accuracy and quality of the information contained in the social impact assessments. Placing the responsibility for assessment content on proponents is clearly a conflict of interest. Thus it appears that there is considerable reliance on the practitioners or professionals who are producing social impact assessments on behalf of the proponents. This system differs from professional reliance in its truest definition, as it is not regulated and government retains decision-making authority and is not bound to the decisions of professionals hired by the proponent (Haddock, 2015). Based on interviews with employees of the provincial government, Haddock (2010; 2015) suggested that although professional reliance is not a regulated practice in the Environmental Assessment process, it may have informally become part of the system.

Even in more established and regulated contexts, the efficacy of professional reliance in BC is increasingly being questioned. Recently, the Forest Practices Board (2014) concluded that where management objectives are unclear, professional reliance in forest resources management is not meeting its stated intent. Of specific relevance to social impact assessment, the Board concluded that “where competing interests are at play, it is unrealistic to expect professionals working for licensees to define public interests.” (Forest Practices Board, 2014, p. 4). Haddock (2015) identified a number of criteria that may indicate professional reliance is inappropriate, including: “risks to third party interests” (p. 33) such as Aboriginal rights and title, “decisions involving trade-offs” (p. 33), “values versus technical expertise” (p. 33), and “conflicts of interest” (p. 44), all which are very relevant to social impact assessment.

This ad hoc system of professional reliance in social impact assessment is further complicated as proponents are not required to hire qualified practitioners to conduct any component of the environmental assessment (Haddock, 2010) and, generally, they are not required to identify the qualifications of those they do hire. Although many of the professionals who commonly contribute to other components of environmental assessments are governed by their respective professional association's charters and codes of ethics (Haddock 2010), there are no associations governing social impact assessment practitioners and their practice. For example, the College of Applied Biology Code of Ethics (2012) requires members to "provide objective, science-based, unfettered, forthright and intellectually-honest opinion, advice and reports" (p. 1) and prohibits members from accepting compensation that is contingent upon the conclusions of their work. The BC Association of Professional Archaeologists (1995) requires its members to fully disclose any potential conflicts of interest that may arise.

Equity refers to the distribution of benefits and costs and, in the context of social impact assessment and sustainable development, generally means that no group within the population should shoulder a disproportionate share of the burden or development. Likewise, the needs of current generations should not be met at the expense of future generations, which is known as intergenerational equity (World Commission on Environment and Development, 1987). The International Association of Impact Assessment's first principle for social impact assessment stated, "Equity considerations should be a fundamental element of impact assessment and of development planning" (Vanclay, 2003b, p. 9); however, many of the participants were unsure of the role played by equity in social impact assessment in BC.

In Chapter 3, I found that few assessments contained a robust analysis of equity issues. I also reported that mitigation efforts were typically limited to easily addressed quantitative and infrastructure-related changes and impacts. From these interviews, I

found that social mitigation efforts—the final arena in which equity can play out—are often limited because they are beyond the proponents’ scope of influence. If equitable mitigation of social impacts of major projects is beyond the scope of BC Environmental Assessment, when and where should it be addressed and by whom?

4.5 Conclusion

In this chapter, I set out to gain a better understanding of the current state of social impact assessment practice and process in rural and small-town BC and to identify areas and means of improvement. By interviewing 30 individuals closely involved with social impact assessment, I found that social impact assessment practice and the supporting policy have been improving over time. Yet, a number of areas are in need of further improvement, including mitigation, consultation, and the integration of qualitative data.

Currently, the system relies on community drive, proponent willingness, and, to a lesser degree, practitioner skill to achieve excellence in assessments and to advance the practice. Unfortunately, government policy and guidelines do not support excellence in assessments, and a perception exists that there is a lack of political will to decline environmental certificates based on social impacts. These two factors undermine the drive to ensure quality and improve the practice.

In terms of ensuring the accuracy of impact assessments, the current model of relying almost exclusively on non-accredited assessment professionals is conceptually flawed, yet a workable solution is not immediately obvious. That said, short of creating a professional association or a dedicated provincial ministry, there are some basic preliminary steps that could be taken. One such step is a collaborative effort to identify the minimal qualifications of a social impact assessment practitioner. A second step is the development of a clear EAO policy regarding the identification of proponent-

generated content in social impact assessments versus content developed by independent consultants.

Lastly, perhaps the most problematic aspect of these findings was the lack of regard for equity. Prioritized internationally (Vanclay, 2003b), it is troubling that equity is not driving social impact assessment of major projects in rural and small-town BC.

5 A MULTIPLE CASE STUDY OF THREE METAL MINES IN NORTHWEST BRITISH COLUMBIA

5.1 Introduction

Rural BC has been described as the lifeblood of the province (Ministry of Forests, Lands and Natural Resource Operations, 2014). Although home to only 25% of the provincial population (Statistics Canada, 2011), the region hosts numerous large-scale resource-based projects (BC Ministry of Jobs, Tourism and Skills Training, 2013). The Provincial government has acknowledged the need to ensure that these areas share equitably in such projects (Ministry of Forests, Lands and Natural Resource Operations, 2014), but it is questionable if the mechanisms are in place to do so. Regulated under the BC EAA and conducted as a component of comprehensive environmental assessments, social impact assessment is the primary *ex-ante* tool employed in weighing and balancing the distribution of social benefits and burdens of proposed major developments and also in supporting sustainable development. Yet, to date, there is no evidence that social impact assessment in BC is meeting its potential.

In the third and final study of this research project, I brought together the findings from my previous two studies (see Chapters 3 and 4) in an evaluation of the quality of assessments conducted for mining projects in the Northwest region of BC.

5.2 Background and Objectives

Based on a review of three assessments identified by the EAO as containing exemplary examples of social impact assessment,²⁰ Horsman (2011) identified a number of promising practices that included effective engagement with neighbouring communities and First Nations, incorporation of intangible social values and appropriate

²⁰ Two of these proposed projects are located in a rural location (Galore Creek Copper-Gold-Silver Project and Ruby Creek Molybdenum) and the third is located (New Fraser River Crossing) is an urban project located near Vancouver, British Columbia.

selection of valued components²¹ and indicators. Horseman (2010) also reported a need for greater emphasis on monitoring and evaluation activities and that the assessments relied heavily on quantitative information that emphasized expert validation rather than qualitative, values-based information validated by communities (Horsman, 2011).

While Horsman's (2011) work constitutes the extent of past research that directly addresses social impact assessment in BC, past evaluations of the BC Environmental Assessment process found that it lacks adequate public and First Nations consultation, it lacks clarity surrounding professional reliance (Haddock, 2010) and is weak in terms of follow-up compliance monitoring (Auditor General of British Columbia, 2011; Haddock, 2010).

A considerable amount of research has been done to address First Nations and BC Environmental Assessment and mining. Based on research focusing on two First Nations in Northeast BC, Booth and Skelton (2011) found that First Nations' concerns and rights are not taken seriously in the BC Environmental Assessment process, that there is a lack of mutual cultural awareness and understanding between First Nations and government agencies, and that First Nations lack the capacity to participate in assessments and meet the government-dictated timelines. Fidler (2008) conducted a case study of how the Tahltan Nation's involvement occurred in the environmental assessment process and impact benefit agreement development for the Galore Creek Copper-Gold-Silver Project (one of the cases in this study) and suggested that the proponent's early engagement with First Nations was integral to the success of the process.

²¹ "For the purpose of environmental assessment in BC, Valued Components (VCs) are components of the natural and human environment that are considered by the proponent, public, Aboriginal groups, scientists and other technical specialists, and government agencies involved in the assessment process to have scientific, ecological, economic, social, cultural, archaeological, historical, or other importance" (BC EAO, 2013, p. 4).

A study by the Harvard Law School (2010) examined how the Takla First Nation is experiencing the provincial resource management process and how the First Nation is sharing in the costs and benefits of local mining development. The researchers reported that community members are overwhelmed by mining projects in their traditional territories and that they have borne witness to the negative impacts that have resulted from a number of exploration sites, operational mines, and abandoned mine sites. Furthermore, they found that even the community members who accept mining in their traditional territories have not reaped the anticipated benefits, such as employment opportunities and revenue sharing. The result of this is that the Takla are ambivalent or hostile toward new projects (Harvard Law School, 2010).

Although a number of studies have indirectly touched on the quality of social impact assessment in BC, few have directly addressed it. With this study, I fill this gap by setting out to address the question: What is the quality of the social impact assessments that are conducted for proposed major projects in rural and small-town BC?

5.3 Methods

I set out to evaluate the quality of social impact assessments of major projects in rural and small-town BC. Given the number of proposed projects that have passed through the BC assessment process and the volume of many of the written assessments (many containing over 500 pages addressing social impacts or containing related content), it was impractical—if not entirely infeasible—to conduct a province-wide evaluation of quality. Thus, I conducted a mixed-method, cross-case analysis of the social impact assessments carried out for three proposed mineral mining developments in Northwest BC (see Figure 5.1). The rationale for studying this region, in particular, is provided in the following sub-section.

I chose the case study method because case studies provide an opportunity to account for contextual information, and they support an in-depth analysis of multiple types of data including mixed quantitative and qualitative (Yin, 2003). My mixed methods involved a simultaneous qualitative and quantitative phase followed by a second qualitative phase. Firstly, for each case, I systematically rated the quality of the social impact assessment based on the write-up included in the application for a BC Environmental Assessment certificate; simultaneously, I made notes and collected information and quotes that contributed to my understanding. Secondly, I conducted interviews with individuals who had represented local, community, and First Nations' interests during one or more of the project cases. I describe the methods in greater detail in the following subsections.

Case studies are widely understood to present limitations in terms of external validity or the degree to which findings can be generalized beyond the studied cases themselves (Yin, 2003). Although universally applicable laws cannot be based on case study research, over the past 30 years, qualitative researchers have convincingly argued that translatability and comparability outside of the specific case study context is possible (Schofield, 2000). In other words, if adequate background information is provided, lessons learned from case study research may be judiciously applied to similar contexts (Schofield, 2000).

5.3.1 Context: Northwest British Columbia

My study area was the northwest of BC, which is generally considered to be the Nechako and the North Coast Economic Development Regions (see Figure 5.1). Together, these two regions comprise approximately 34.3% of BC's land mass (316,267 km²). The study area extends from the BC-Yukon border in the north to Fraser Lake, more than 600 km to the south, and from the Alaska border and the islands of

Haida Gwaii in the west to Vanderhoof, more than 500 km to the east. The closest sizable city is Prince George, with a population of approximately 84,000. The City of Vancouver and the provincial capital, the City of Victoria, are over 500 km to the south.

Compared to southern BC, the northwest region is sparsely populated. Although comprising more than one-third of the area the province, the Northwest is home to only 3% of the provincial population—approximately 97,015 people (Stats BC, 2012a, 2012b). Nearly 44% of northwest residents reside in the five largest communities in the region: Prince Rupert (estimated population 12,815), Terrace (estimated population 11,320), Kitimat (estimated population 8,987), Smithers (estimated population 5,454), and Vanderhoof (estimated population 4,565), all of which are located in the southernmost reaches of the region (Stats BC, 2012a, 2012b).

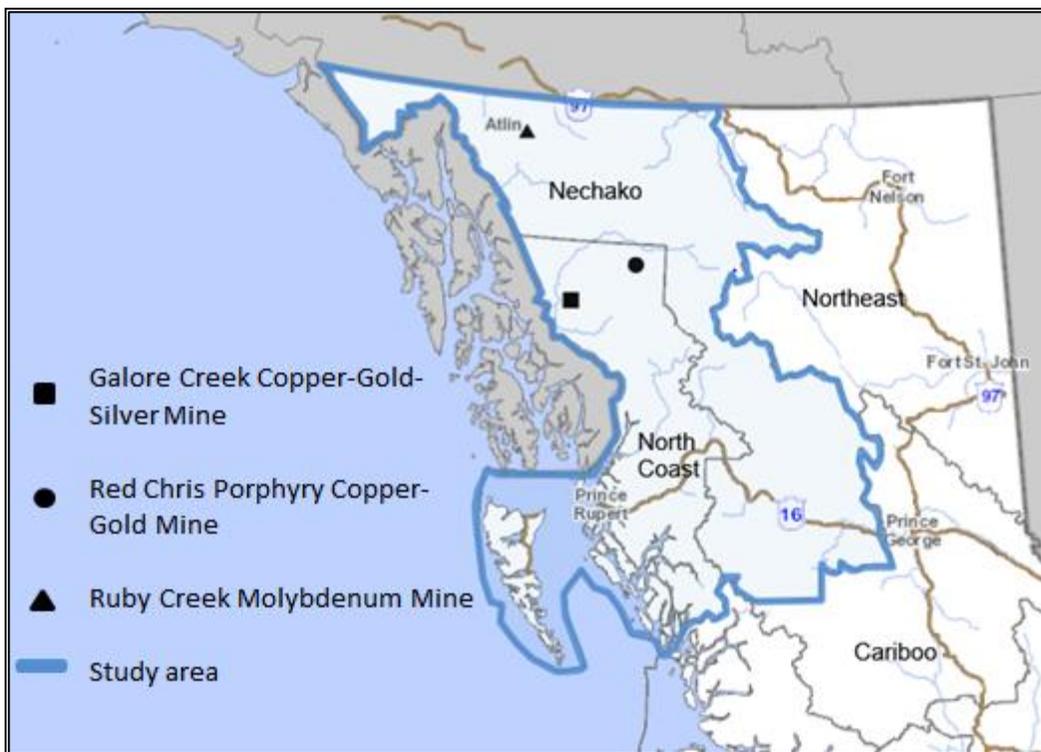


Figure 5.1 Location of proposed projects included in case study

Approximately 29% of the region's population is Aboriginal (Stats BC, 2012a, 2012b). This is much higher than the provincial average of 4.5%. This region has numerous

distinct First Nations cultures, including the Tagish, Tlingit, Kaska, Tahltan, Nisga'a, Gixsan, Sekani, Haida, Tsimshian, Haisla, and Wet'sewet'en (Province of British Columbia, 2013). Based on the long-term occupancy and use of land by their ancestors, First Nations have constitutionally protected treaty and Aboriginal rights that are unique from the rights held by other Canadians (Constitution Act, s 35, 1982). Constitutional rights, however, are not defined by the Constitution Act (1982) and have become the ongoing subject of litigation (e.g., *R. v. Sparrow*, 1990) and treaty negotiations. Most of BC was settled without treaty and, as a result, First Nations title is also a topic of ongoing debate (e.g., *Calder v. British Columbia [Attorney General]*, 1973; *Tsilhqot'in Nation v. British Columbia*, 2014) In 1999, the Nisga'a Nation entered into the first modern-day treaty with the Crown ("Nisga'a Final Agreement," 1999). Under the treaty, the Nisga'a gained fee simple title to nearly 2,000 km² of land and mineral rights and clarification of their aboriginal rights ("Nisga'a Final Agreement," 1999).

As a result of the Crown's fiduciary responsibility to First Nations (Constitution Act, s 35, 1982), the provincial government has a duty to consult with First Nations and to adequately address their concerns regarding impacts from land- and resource-use on their rights (*R. v. Sparrow*, 1990). The EAO may delegate some of the procedural aspects of consultation to the proponent, but the onus remains on the EAO to ensure that adequate consultation has been conducted (BC EAO, 2013).

Historically, forestry was the primary economic driver in the Northwest. Recently, however, there has also been considerable activity in other resource extraction-based industries, including liquid natural gas and, to a lesser extent, mining (Institute of Chartered Accountants of British Columbia, 2012, 2013). The construction of the Northwest Transmission Line—a 344 km power line—has increased the potential for further industrial development in the region north of the City of Terrace (BC Hydro, 2014). Although the Northwest has higher unemployment and lower labour participation

rates than the rest of BC, a shortage of skilled labour is projected if development proceeds as predicted (Northwest Regional Workforce Table, 2013). The current state of the regional economy has been described by some as a “boom” (Northwest Regional Workforce Table, 2013).

BC’s mining sector has been a world leader since the mid-1800s when the Hudson’s Bay Company started exporting coal and gold from deposits that were discovered along the Fraser River. Today, BC has the second largest mining sector in Canada (“Bennett Promoting BC”, 2014) and produces copper, gold, silver, lead, zinc, molybdenum, coal, and industrial minerals (Ministry of Energy and Mines and Responsible for Core Review, n.d.). Over 10,000 people were directly employed by BC’s mining sector (Price Waterhouse Cooper, 2014) and in 2012, the mining sector had a production value of \$8.3 billion (“Bennett Promoting BC”, 2014),

Between 2004 and 2007, when the case sites in this study were applying for BC Environmental Assessment certificates, there was considerable interest in mining in the Northwest (Wilson, McMahon, & Minardi, 2013) and the sector accounted directly for 8% of the income in Northwest BC (BC Stats, 2012). Although 2013 was a record year for mineral exploration in the Northwest, with estimated expenditures increasing 30% from the previous year, over the past 10 years, mineral exploration and mining development in the region has fluctuated (Ministry of Energy, Mines and Petroleum Resources, 2013). Following the drop in gold prices in the last decade, there was a marked decline in the development of mining in the region. The past record of investment in exploration demonstrates the mining industry is highly cyclical (Wilson et al., 2013). This fluctuation, combined with the large-scale employment and finite lifespan of mining activities, has the potential to drive communities into a “boom-bust” cycle.

Currently, there are two operational metal mines in Northwest BC: Huckleberry Copper-Molybdenum Mine, operated by Imperial Metals Corporation, and Endako

Molybdenum Mine, operated by Thompson Creek Metals Company.²² Eskay Creek mine (Barrick Gold Corporation) closed in 2008, and Kemess South Gold-Copper mine (Northgate Minerals Corporation), located in north-central BC, but largely impacting the Northwest, ceased operations in 2012.

5.3.2 Sample

My previous content analysis of 36 BC social impact assessment reports identified considerable variation in assessment approach and content (see Chapter 3). Although this variation likely exceeded that which can be explained by project type and location, I strove to minimize the effects of these variables on this phase of the research. To achieve this, case studies were limited to a discrete geographic area (Northwest BC) and industrial sector (metal mines). I studied cases in Northwest BC because the region is heavily resource dependent and far removed from the economic, social, and cultural influence of metropolitan centres. I targeted the mineral mining sector because, at the time this study was planned, mining played a very prominent role in the economy of the Northwest and considerable industry expansion was projected. Relative to other industrial projects—such as power transmission lines, independent power projects, and oil and gas pipelines—long-term, post-construction, *in situ* employment opportunities in mining are numerous. Likewise, the potential for ongoing social costs and benefits is substantial. Furthermore, mines have a finite lifespan. Their closure and decommissioning create additional changes and potential for large-scale community impacts (Lockie et al., 2009).

Lastly, I also limited the evaluation to projects reviewed under the current BC EAA (2002). This ensured that the findings were not irrelevant as a result of being conducted under out-moded legislation.

²² Both of these projects were reviewed under the BC EAA prior to its re-legislation in 2002.

In January 2013, when the case study was designed, three metal mining project applications met the criteria (sector, region, and guiding legislation) and had sufficient documentation that could be accessed: Galore Creek Copper-Gold-Silver Project, Red Chris Porphyry Copper-Gold Mine Project, and Ruby Creek Molybdenum (see Table 5.1).

Table 5.1
Case Study Start Dates, End Dates, Employment Opportunities, and Capital Costs

	EA* Start Year	EA End Year	EA Outcome	Predicted Construction Phase Jobs**	Predicted Operational Phase Jobs**	Estimated Capital Cost (\$million) ***
Galore Creek Copper-Gold-Silver Project	2004	2007	Issued	1,000	500	\$1,600
Red Chris Porphyry Copper-Gold Mine Project	2003	2005	Issued	500	250	\$228
Ruby Creek Molybdenum	2005	2007	Issued	550	250	\$414

* BC EAO Environmental Assessment process

** Unit of measurement for jobs was not specified (e.g. person years, fulltime equivalent)

*** Type of dollars (real versus nominal) was not specified

Note: Adapted from "Project Detail Report" by EAO (2014). Retrieved from http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_project_detail_report.html

5.3.3 Evaluation of Social Impact Assessments

Through the BC EAO website ePIC (http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_home.html), I accessed the social impact assessments for the three cases included in the proponents' applications for BC Environmental Assessment certificates. I also reviewed supporting information including the government orders issued under Section 11 of the BC EAA that describe the scope and content of the assessment, the terms of reference for the applications, public and First Nations' comments, and the assessment reports that were prepared by the EAO.

While I focused primarily on the social impact assessment included in the proponents' applications for BC Environmental Assessment certificates, I also reviewed, analyzed, and reported on the supporting information.

To date, no widely accepted framework exists to evaluate the quality of social impact assessments. To support an evaluation of social impact assessments in Iran, Ahmadvand et al. (2009) worked with an environmental assessment evaluation framework based on Androulidakis and Karakassis's (2006) modifications of Glasson et al.'s (1999) framework. Lee et al. (1999) produced an evaluation framework to facilitate the systematic quality assessment of environmental statements prepared for planning regulations in the United Kingdom. It was tailored to a specific regulatory context and to the evaluation of comprehensive environmental assessments, rather than social impact assessment (Lee et al., 1999). Twice, this framework has been adapted for evaluations of social impact assessment. For an evaluation of social impact assessments in South Africa, Hildebrandt (2012) developed a modified version of Lee et al.'s (1999) evaluation framework and process. And, for an evaluation in the United Kingdom, Fisher (2011) employed a framework modelled after Glasson et al. (1999) and Lee et al.'s (1999) approach.

Yet, neither Lee et al.'s (1999) evaluation framework nor the modified versions employed in the projects above were ideally suited to my objectives and the BC Environmental Assessment context. That said, Lee et al.'s (1999) framework and approach has been previously tested, and it and Hildebrandt's (2012) revised version of Lee et al.'s (1999) framework provided a practical and proven starting point for the development of an alternate framework. From these, I retained the three-tiered framework that consisted of review areas, broken down into categories, and subsequent subcategories. However, I made multiple changes to the specific rating criteria.

Combining both of these tools, I deleted irrelevant criteria that were specific to comprehensive environmental assessment. I refined the existing criteria and developed new criteria that specifically addressed social impact assessment and the issues raised in the preceding two research chapters (e.g., identification of vulnerable subpopulations, innovation, clarity in report writing, incorporation of conceptual frameworks). By refining the frameworks, I was also able to address some of the more lofty ideals emerging in the practice of social impact assessment that are described in the literature and in the International Association of Impact Assessment's principles for social impact assessment (Vanclay, 2003), such as the need to incorporate equity and concepts related to sustainable development. I also clarified the language in the framework to reduce the ubiquitous use of the term *impacts*, which appeared in different contexts to be referring to valued components, forces of change, and/or impacts themselves. I also simplified or split some of the very complex, multi-issued subcategories. I ultimately ended up with the following 5 review areas: (1) Description of the Development and the Proponent; (2) Consultation and Engagement; (3) Prediction and Interpretation of Impacts; (4) Alternatives, Mitigation, and Monitoring; and (5) Presentation and Communication. Additionally, I addressed 11 categories and 42 subcategories (see Table 5.3 and Appendix IV).

As previously mentioned, I retained the hierarchical rating process developed by Lee et al. (1999); in other words, I rated the subcategories in a review area prior to rating the parent category. Likewise, a review area was not rated until I had rated all of the contained categories. Importantly, however, the ratings for higher tiers were not based on an average of the lower rating tiers. The lower tiered ratings were considered, but notes and observations were also taken into consideration (following Lee et al., 1999). In fact, throughout the rating process, I took detailed notes and identified and coded relevant content in the application and the supporting documentation. In addition, to

justifying the ratings, these data were reviewed in the qualitative, cross-case analysis and contribute to the findings below.

Lee et al.'s (1999) package did not use numbers but relied on six "symbols" (letters A through F). I simplified the system from six to four levels because I found that I could not accurately and consistently assign such a precise rating. I used checkmarks as symbols because this four-tiered rating system did not lend itself to the use of letters as symbols (see Figure 5.2). I also employed N/A to indicate when the topic was "not applicable" or was irrelevant.

Table 5.2
Rating System for Evaluation of Social Impact Assessments

Symbol	Description
✓✓✓✓	Relevant tasks well performed, no important tasks left incomplete.
✓✓✓	Can be considered just satisfactory despite omissions and/or inadequacies.
✓✓	Parts are well attempted but must, as a whole, be considered unsatisfactory because of omissions or inadequacies.
✓	Unsatisfactory, significant omissions or inadequacies.
N/A	Not applicable. The Review Topic is not applicable or it is irrelevant in the context of this assessment.

Note. Adapted from "Reviewing the Quality of Environmental Statements and Environmental Appraisals," by L. Lee, R. Colley, J. Bonde, & J. Simpson. (1999). *Reviewing the Quality of Environmental Statements and Environmental Appraisals*, Occasional Paper Number 55.

5.3.4 Interviews

To deepen my understanding of the case studies, I conducted semistructured interviews with residents of Northwest BC who had participated in the assessments in question. These interviews were conducted in July and August of 2014.

The BC Environmental Assessment process typically includes two public comment periods.²³ Unless otherwise requested, participants' comments and contact information

²³ The BC EAA Public Consultation Policy Regulation (2002) requires at least one formal public comment period. However, the process as described in the Environmental Assessment User

is made publicly available on the EAO ePIC website (http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_home.html). The assessment process also involves the establishment of EAO-appointed working groups who review environmental assessments and provide technical guidance on assessments. These working groups include representation from local communities and First Nations. To identify potential participants, I reviewed the assessments and available supporting information to identify individuals who submitted original and substantive (e.g., not form letters; Haddock, 2010) social impact-focused comments or who actively participated in relevant meetings and working groups. Of the 24 people I identified, I was able to find contact information for 18 individuals. Of the 18 individuals I contacted, seven people agreed to participate in the study.

Sampling for these interviews was problematic as many BC Environmental Assessment processes have a relatively low public participation rate, and the general public is not equipped to discuss assessments at length. Those who chose to participate likely had a keen value- or interest-based motivation to do so. Although most (but not all) of the participants expressed a general dissatisfaction with the BC Environmental Assessment process, this cannot be assumed to be representative of either the general population of the region or the majority of assessment participants.

The interviews followed a semistructured format that was guided by a list of 21 questions (see Appendix III). The questions addressed the following themes:

- past experience with social impact assessment,
- satisfaction with outcomes,
- perceptions regarding the current government policy and processes,
- perceptions regarding current practice including tools and methods, and

Guide (BC EAO, 2011) includes two public comment periods. The timing and duration of the public comment periods are set out in the Section 11 orders for each project (BC EAO, 2011).

- ways in which social impact assessment could be improved.

One-on-one semistructured interviews are well suited to gaining in-depth understanding (Kvale & Brinkman, 2009). With one exception, interviews were conducted on the telephone and lasted from 25 to 60 minutes. One participant lived in a remote area and did not have access to a telephone. This participant responded to questions in writing. Due to participant interest and knowledge, interviews focused largely on satisfaction with the assessment outcomes and consultation and with proponent engagement with communities. Not surprisingly, participants did not address the more technical aspects of social impact assessment and, in most cases, participants were not able to speak to a specific case study in detail. Rather, they related their experiences of the BC Environmental Assessment process in more general terms. That said, I made every effort to focus the interviews on the quality of the three assessments under study.

Interviews were recorded, transcribed, checked, and returned to participants, who were given the opportunity to edit the transcript and provide additional feedback if they chose. Given the limited number of interviews, I did not use software to analyze the transcripts. I identified or manually coded passages relating to the seven research areas in the evaluation framework (see Table 5.3). I primarily focused on the meaning of interviewee responses. However, as Kvale and Brinkman (2009) described, meaning and language are often intertwined; thus, I did give regard to analysis of the language used in the interviews.

Confidentiality was a considerable concern for most participants—more so than in the earlier interviews that contributed to this dissertation. It became clear that, in a region with such a limited population, any personal information, including area of residence or profession, could potentially identify the participants. For this reason, quotes and potentially identifying information are shared with great discretion.

In keeping with a multiple case study design described by Yin (2003), and similar to that used by Suopajärvi (2013), I present only a brief individual overview of each case. In-depth exploration is presented thematically in the cross-case analysis that follows the overviews.

5.3.5 Limitations

A key limitation of this research design was that I was not able to assess the predictive accuracy of the assessments because only one of the three cases I reviewed is still in development. Had the three projects been developed, assessing accuracy would also have required access to proprietary proponent-held information.

5.4 Overview of Cases

5.4.1 Galore Creek Copper-Gold-Silver Project

The Galore Creek Copper-Gold-Silver Project BC Environmental Assessment process started in 2004 and ended in 2007 (BC EAO, 2014). The proposal described an open pit copper, gold, and silver mine and filter plant to be located in the far west of the region, approximately 50 km from the Alaska panhandle border in the traditional territory of the Tahltan Nation (Rescan™ Environmental Services Ltd., 2006). The nearest communities to the proposed site are Stewart (150 km from mine site), Iskut (200 km from the mine site), Dease Lake (280 km from the mine site), and Telegraph Creek (380 km from the mine site) with respective populations of approximately 700, 310, 384, and 350 in 2003 (Rescan™ Environmental Services Ltd., 2006). The residents of Iskut, Dease Lake, and Telegraph Creek are predominantly members of the Tahltan Nation. The proposal identified a secondary impact area that included the larger communities of Smithers and Terrace.

The proponent estimated the cost of the Galore Creek mine to be of US \$1.4 billion. The mine was projected to create between 900 and 1,000 jobs during construction and approximately 500 direct employment opportunities during its 20-year operational lifespan. During operations, workers were to be housed in a 280-person air-access camp. The proponent at the time of submission—NovaGold Canada Inc.—was owned by publicly held NovaGold Resources Inc. (Rescan™ Environmental Services Ltd., 2006). The Galore Creek Copper-Gold-Silver Project (Galore Creek) was issued an environmental certificate in 2007, but development ceased shortly thereafter. The closure was attributed to factors such as a stronger Canadian dollar, increasing construction and material costs, and higher costs associated with the mine tailings dam and waterways (Simpson, 2007).

5.4.2 Ruby Creek Molybdenum

The Ruby Creek Molybdenum (Ruby Creek) application for a BC Environmental Assessment certificate described an open pit mine that would have been located in the far northwest corner of the province, 80 km south of the Yukon border (Klohn Crippen Berger, 2006). The mandatory BC Environmental Assessment process lasted from 2005 to 2007 (BC EAO, 2014). The proposed mine site was situated in the traditional territories of the Taku River Tlingit First Nation and 24 km from the nearest community, Atlin, BC (Klohn Crippen Berger, 2006). At the time, the project was proposed, Atlin had a permanent population of 450 with an additional 100 to 200 seasonal residents (Klohn Crippen Berger, 2006).

The project proponent—Adanac Moly Corp—was a smaller mining venture with no additional holdings (Klohn Crippen Berger, 2006). The proposed project had an estimated capital cost of \$414 million and a projected production time of 22 years. Ruby Creek was expected to directly create 550 jobs during construction and 250 jobs during

operation. Most of the workers were to be housed in a camp and flown in and out through Atlin (Klohn Crippen Berger, 2006). Although Ruby Creek Molybdenum was issued a BC Environmental Assessment certificate in 2007, it did not proceed to development and is currently on hold (Adanac Molybdenum Corporation, 2011). While no precise rationale was provided for the closure, it occurred shortly after it was announced that the project would also require a federal environmental assessment and was attributed to financial uncertainties (“Adanac to Hold,” 2008).

5.4.3 Red Chris Porphyry Copper-Gold Mine Project

Red Chris Porphyry Copper-Gold Mine Project (Red Chris) is also located in the western part of the study region (AMEC Earth and Environmental, 2004). The mine site is approximately 150 km east of the Alaskan panhandle border, within the Tahltan Nation Traditional Territory. The closest community is Iskut (18 km from the mine site). Overland, Dease Lake, and Telegraph Creek are approximately 100 km from the mine site, but it is over 200 km by gravel road from the mine site to Telegraph Creek and Stewart is approximately 320 km from the mine site (AMEC Earth and Environmental, 2004).

The proposed project included two open pit mines and a processing plant (AMEC Earth and Environmental, 2004). The projected capital cost of Red Chris at the time of application was \$228 million, with 500 jobs predicted during construction and 250 direct job openings predicted during operations (AMEC Earth and Environmental, 2004).²⁴ Workers were to be housed in a 125- to 175-person road-access camp. The Red Chris application was filed by Red Chris Development Company Ltd., a subsidiary of a Canadian publicly listed company, bcMetals Corporation. Red Chris Porphyry Copper-Gold Mine Project is now owned by Imperial Metals Corporation (Imperial Metals

²⁴ Current project websites now put the capital cost of this project at over \$500 million (“Imperial Metals Corporation - Red Chris - April 30, 2014,” 2014).

Corporation, 2014). The project entered the BC Environmental Assessment process in 2003 and was issued a certificate in 2005 (BC EAO, 2014.); engineering and construction are currently underway (AMEC Earth and Environmental, 2004). Of the three assessments reviewed, Red Chris is the only project currently in development (BC EAO, 2014).

5.5 Results of the Cross-Case Analysis

I evaluated the quality of the social impact assessments for three mining projects in Northwest BC. Using a four-checkmark rating system, the quality ratings in the five research areas ranged from two checkmarks (i.e., parts are well-attempted but must, as a whole, be considered unsatisfactory because of missions or inadequacies) to four checkmarks (i.e., relevant tasks well performed, no important tasks left incomplete; see Table 5.3). While the variation between ratings for the three cases was minimal, Description of the Development and the Proponent, and Prediction and Interpretation Impacts were the two weakest areas reviewed. The two strongest ratings were for Consultation and Engagement and Alternatives, Mitigation, and Monitoring.

In the following section, the ratings are examined for each of the five review areas—Description of the Development and the Proponent, Engagement and Consultation, Prediction and Interpretation of Impacts, Presentation and Communication, and Equity Considerations. In addition to the evaluation framework, I draw on the qualitative data from the associated document review and interviews.

Table 5.3
Case Study Evaluation Ratings for Research Area and Categories

	Galore Creek	Red Chris	Ruby Creek
1. DESCRIPTION OF THE DEVELOPMENT AND THE PROPONENT	✓✓✓	✓✓	✓✓✓
1.1. Description of the Proposed Project: A description of the project’s financial, operational, and physical characteristics.	✓✓	✓✓	✓✓
1.2. Description of the Proponent: A description of the proponent’s history, capability, practices, and policies.	✓✓✓	✓✓	✓✓✓
2. CONSULTATION AND ENGAGEMENT	✓✓✓✓	✓✓	✓✓✓✓
2.1. First Nations, Public, and Stakeholder Engagement and Consultation: A description of the consultation methods, findings, and incorporation into the assessment and project.	✓✓✓✓	✓✓	✓✓✓✓
3. PREDICTION AND INTERPRETATION OF IMPACTS	✓✓✓	✓✓	✓✓✓
3.1. Description of the Context and Baseline: A description of the current socio-economic environment as it is and as it is expected to develop should the project not proceed.	✓✓✓✓	✓✓	✓✓✓
3.2. Issue Scoping: A description of the identified valued social components or issues.	✓✓✓✓	✓✓	✓✓✓
3.3. Identification of Changes and Impacts: Potential social changes and impacts resulting from the development are defined, investigated and described. Resulting impacts are described and those who may experience the impacts are defined.	✓✓✓	✓	✓✓
4. ALTERNATIVES, MITIGATION, AND MONITORING	✓✓✓	✓✓✓	✓✓✓✓
4.1. Consideration of Alternatives: Feasible alternatives to the proposed project are considered and outlined in the assessment, and the reasons for their rejection briefly discussed.	✓✓✓	✓✓✓	✓✓✓✓
4.2. Scope and Effectiveness of Mitigation Measures: All significant adverse impacts are considered for mitigation. Evidence should be presented to show that proposed mitigation measures will be effective when implemented.	✓✓✓✓	✓✓✓	✓✓✓
4.3. Monitoring and Commitment to Mitigation: Proponents are committed to, and capable of, carrying out the mitigation measures and present plans of how they propose to do so. If mitigation falls outside of a proponent's area of influence, appropriate parties are to be identified.	✓✓✓	✓✓	✓✓
5. PRESENTATION AND COMMUNICATION	✓✓✓✓	✓✓	✓✓✓
5.1. Format and Structure: Information is presented in a manner that is consistent and facilitates access.	✓✓✓✓	✓✓✓	✓✓
5.2. Methods and Data: All methods and external data sources are identified.	✓✓✓✓	✓✓✓	✓✓✓
5.3. Neutrality: Information is presented without bias and receives the emphasis appropriate to its importance in the context of the assessment.	✓✓✓✓	✓	✓✓✓

Note. Adapted from “Reviewing the quality of environmental statements and environmental appraisals: Occasional Paper Number 55,” by N. Lee, R. Colley, J. Bonde, & J. Simpson. (1999). And from “The significance and status of social impact assessment (SIA) in a South African

context.” By Hildebrandt (2012). Masters of Science Geography and Environmental Studies. North-West University.

5.5.1 Review Area 1: Description of the Development and the Proponent

As reflected in the category ratings, the lack of four-checkmark ratings in this review area—Description of the Development and the Proponent—reflects oversights in the descriptions of the proposed projects and, to a lesser degree, of the proponents. In regard to explaining the viability of the three projects, although Red Chris provided considerable rationale describing the stability of copper prices, none of the write-ups adequately explored the project’s sensitivity to low metal prices. The Ruby Creek proponent overview demonstrated a proven track record and established credentials, but the Red Chris proponent description did not establish if the proponent had a proven track record.

The sensitivity of the projects to low metal prices was ultimately a contributing factor in the cessation of development at the Galore Creek and Ruby Creek sites. Based on the qualitative analysis of the supporting documentation and interviews, the viability of the project and the proponent turned out to be key factors. Ironically, the project with the lowest ratings in this review area is also the only project currently in development.

5.5.2 Review Area 2: Consultation and Engagement

The quality of the Consultation and Engagement, as it was described in the applications and the supporting documentation, varied greatly. Galore Creek and Ruby Creek were at the top end of the rating scale (4 checkmarks), and Red Chris was rated with 2 checkmarks (see Table 4.2). The factors that distinguish the Galore Creek and Ruby Creek applications from the Red Chris application included demonstrated two-way consultation early in the planning stages and innovative consultation approaches.

The assessment contained in the application for Red Chris described a limited consultation process with First Nations that, while it met the requirements of the BC Environmental Assessment process, did not demonstrate two-way communication or innovation. The proposed sites for Red Chris mine and Galore Creek mine are both located in Tahltan traditional territory. The supporting documentation suggested that the relationship between the Red Chris proponents and the neighbouring First Nations was strained and problematic (C. Rattray to G. Alexander, March 16, 2005; C. Rattray, to A. Currie (October 18, 2006); EAO, 2005) thus, Red Chris was rated 2 with checkmarks. The final comments submitted by the Tahltan Central Council in response to the proponent's application for a BC Environmental Assessment certificate, described the consultation as "inadequate" and noted that the proponent's representatives "appeared not to grasp the significant cultural, lifestyle and heritage realities and priorities of the Tahltan society" (C. Rattray to G. Alexander, March 16, 2005). Furthermore, the application stated:

In discussions with individuals during the course of the Open House, one of the most common concerns expressed was the lack of information available to the community and the lack of knowledge about the project. Representatives pointed out that all information such as the Project Description and Draft Terms of Reference are routinely forwarded to the Tahltan Band Council. (AMEC Earth and Environmental, 2004, p. 7)

In contrast, the Galore Creek assessment described an ongoing consultation and engagement process that included innovative tools and clear statements of cultural respect and innovation, which were reflected in the methods employed in the assessment and received four-checkmark ratings (Rescan™ Environmental Services Ltd., 2006). An interviewee reported that a key difference between Red Chris and Galore Creek was the level of knowledge-sharing and respect shown by the Galore Creek proponents. The participant went on to say that the president of Novagold (the

proponent for the Galore Creek project) made direct contact with the Tahltan Central Council President within months of acquiring the rights to develop the Galore Creek mine site. Additionally, major issues were communicated directly from the President of Novagold to the President of the Tahltan Central Council. In the opinion of this participant, this top-level corporate communication initiative set the precedent for the ongoing relationships that persisted throughout the life of the project. The Galore Creek assessment was also accompanied by a letter of support from the Tahltan Central Council which stated the following:

The present leadership of NovaGold is creative and transformative in their approach to the relationship with the Tahltan Nation and in taking mining to the next level of social and environmental responsibility. (C. Rattray to A. Currie. October 18, 2006)

As described in the application and reiterated by the interview participants, the proponents for the Ruby Creek development approached the community of Atlin and the nearest First Nation, the Taku River Tlingit, during the planning stages for the mine (Klohn Crippen Berger, 2006). As a result of this interaction and of local concern regarding the social impacts associated with a large influx of workers, the decision was made to house workers in a camp rather than in town. An interview participant stressed the value of this early engagement.

In contrast, the Taku River Tlingit were not satisfied with the initial social impact assessment submitted by the proponent for Ruby Creek. Ultimately, however, the proponent and the First Nation were able to work together. The First Nation produced a locally specific list of valued components, impacts, and mitigations that was also submitted to the EAO (Taku River Tlingit First Nation, 2006).

With regard to consultation, the interviews and analysis of public comments suggested that the activities (e.g., public comment periods and open houses) described

in the BC EAO public consultation regulation and the project Section 11 Orders are minimal and insufficient. One interview participant shared dissatisfaction and perceptions of procedural injustice:

Currently, it appears that impact assessment is a tool used by industry and government to make the public think that they have been consulted. There's no intent to really address the issues.

While this opinion was not shared by all who participated in the interviews or submitted public comments, it was certainly not an isolated sentiment.

Likewise, open houses were criticized by some—but not all—interview participants and public commenters for the potential bias in the format. Of specific concern was the arrangement wherein project spokespeople present information and are perceived to dominate the dialogue. Interview participants also raised the concern that, in a region with such a small population, social and economic costs can be associated with publicly questioning (or supporting) a project that is widely divisive. The finding that this was not a universally shared sentiment emphasized the need for diverse and contextually appropriate consultation methods.

5.5.3 Review Area 3: Prediction and Interpretation of Impacts

The overall ratings in this review area—Prediction and Interpretation of Impacts—ranged from two to three checkmarks. Overall, the two more highly rated cases in this review area employed innovative means to access, organize, and interpret locally specific data and knowledge. These methods included conceptual frameworks, community relationships, and two-way communication.

Although the Galore Creek application clearly framed the predictive component from the perspective of each of the neighbouring communities (Rescan™ Environmental Services Ltd., 2006), impacts on vulnerable subpopulations were not identified. In fact,

all three cases fell short in the practice of identifying vulnerable groups or impact receptors in the affected communities, and none of the cases were given a four-checkmark rating for this review area or the relevant category (3.3 Identification of Changes and Impacts).

This review area was broken down into three subcategories: 3.1 Description of the Current Context and Baseline, 3.2 Issue Scoping, and 3.3 Identification of Changes and Impacts. Galore Creek and Ruby Creek both received a 3-checkmark rating for Category 3.1 Description of the Current Context and Baseline. While both stood out for innovative practices, only the Galore Creek assessment employed a conceptual framework that guided the collection of baseline information, identified issues and mitigation activities, and determined the overall structure of the assessment (Rescan™ Environmental Services Ltd., 2006). Two frameworks—the Health Canada Determinants of Health Framework (Health Canada, 2004) and the sustainability approach outlined in, “Out of Respect: The Tahltan, Mining and the Seven Questions to Sustainability” (The Tahltan First Nation, 2003)—were innovatively integrated into a single guiding framework (Rescan™ Environmental Services Ltd., 2006). The conceptual frameworks provided a logical organization and structure that permeated the rest of the assessment. The assessment also clearly described the theoretical links between the conceptual frameworks, issues of concern, valued components, and component issues, and cited the source of these issues (e.g., specific local communities, health authority, Tahltan First Nation, and the proponent; (Rescan™ Environmental Services Ltd., 2006).

Uniquely, the Ruby Creek assessment integrated the concept of social fabric into their baseline description of the communities (Klohn Crippen Berger, 2006). However, the assessment provided neither a cited definition of the term nor did it develop a context-specific definition. By parsing together the references to social fabric within the assessment and the terms of reference, the assessment seemed to use the concept to

refer to the integration of formal and informal social networks, reliance of social units on external support, and various other cultural aspects of the environment. Despite the lack of clarity, the application of this undefined concept fortified the assessment by providing a unique and innovative window on the strengths and vulnerabilities of the communities and the region, which resulted in baseline descriptions that went beyond demographic characteristics and contributed to the case's 3-checkmark rating for 3.1 Description of Current Context and Baseline.

The Galore Creek assessment was also the only assessment to receive a four-checkmark rating for Category 3.2 Issue Scoping. The assessment employed a hierarchical approach to identify socially valued components (Rescan™ Environmental Services Ltd., 2006). Categorized by major issues of concern, the assessment listed relevant, valued components and, where appropriate, component issues. Although at first glance, valued components may not have been conceptually unique or mutually exclusive, component issues were all unique and eliminated any potential overlap amongst valued components (Rescan™ Environmental Services Ltd., 2006).

The other two assessments lacked this conceptual clarity. Challenges that I identified here included the following:

- valued components, which were not mutually exclusive, overlapping (e.g., community health, drugs and alcohol, employment and economy, and mixed economy); and
- valued components, which were not conceptually comparable, ranging from forces of social change (e.g., employment opportunities) to measures of social change (e.g., demographic changes) to more vague concepts (e.g., alcohol and drugs).

Each of the assessments in the study cited data gaps as a significant challenge. The difficulty of accessing current data for small communities was also articulated in a letter from the Regional District of Kitimat-Stikine to the EAO regarding the Red Chris

assessment (A. Webber to G. Alexander, February 2, 2005). The primary sources of challenge were that the federal census is only conducted every 5 years and that, in order to protect confidentiality, data from very small communities are withheld and amalgamated into larger regions.

The Galore Creek and Ruby Creek assessments presented innovative solutions to data gaps, both of which were rooted in the development of strong relationships with the impacted communities and First Nations. These innovative approaches were reflected in the 4- and 3-checkmark ratings for Category 3.1 Description of the Current Context and Baseline. The proponents for Galore Creek relied on the Tahltan Central Council's²⁵ Socio-Economic Working Group and their Tahltan Heritage Resource Environmental Assessment Team (THREAT) to provide socio-economic data about local First Nations (RescanTM Environmental Services Ltd., 2006). THREAT was created by the Tahltan Central Council to support the First Nations' decision makers and to ensure that Tahltan interests were represented by community and technical experts. Additional data were also collected through local government and authorities (RescanTM Environmental Services Ltd., 2006).

To overcome considerable data challenges, the proponents for Ruby Creek employed what they termed a "participative approach," whereby local residents were closely involved in defining the baseline socio-economic conditions, identifying valued components, and predicting impacts (Klohn Crippen Berger, 2006). While this approach was innovative in the BC context and certainly strengthened some aspects of the process and assessment, the resulting assessment drew considerable criticism from the Taku River Tlingit First Nation for its limitations (Taku River Tlingit, 2007). Subsequently,

²⁵ The Tahltan Central Council is the central administrative governing body for the Iskut Band and Tahltan Band located in Telegraph Creek. The Council's purposes include defining and protecting Tahltan rights and title, protecting ecosystems and natural resources through pursuit of sustainable economic development and strengthening cultural wellness. Retrieved July 30, 2014, from <http://www.tahltan.org/nation/history>

the First Nation led a process that produced a mutually acceptable assessment of potential impacts and identification of mitigations. The new report was brief, at 20 pages, and while it did not incorporate all of the components of a social impact assessment, it did include a more detailed and conceptually well-organized list of potential general effects and impacts. For the most part, the impacts were, indeed, impacts rather than forces of change. This report also identified barriers that would limit Tlingit First Nation members from accessing benefits and it directly addressed gender equity.

The Red Chris assessment reported a lack of local social and economic data and traditional knowledge (AMEC Earth and Environmental, 2004). It also received considerable criticism from the Tahltan First Nation for the following:

- a lack of background data,
- biased (overly positive) and limited valued components,
- inadequate discussion of Tahltan cultural impacts and lost opportunities,
- inadequate scoping,
- lack of local input regarding significance of impacts, and
- overreliance on professional opinion (C. Rattray to G. Alexander, March 16, 2005).

In the three case studies, the discussion of social cumulative impacts is minimal and negatively impacted the rating for Category 3.3 Identification of Changes and Impacts and the related subcomponent (3.3.1). Although not explicitly identified as a cumulative impact assessment, the Galore Creek assessment used a scenario-based approach to predict the social changes in the unpredictable development context of the time (Rescan™ Environmental Services Ltd., 2006). The assessment predicted local and nonlocal employment opportunities based on a number of regional development scenarios. Subcategory 3.3.1 emphasized the need for assessments to address positive

and negative effects however; the BC EAA specifically states that environmental assessments are intended to identify adverse effects.

5.5.4 Review Area 4: Alternatives, Mitigation, and Monitoring

The ratings for this review area—Alternatives, Mitigation, and Monitoring—ranged from three to four checkmarks. The review area consists of three categories: 4.1 Consideration of Alternatives, 4.2 Scope and Effectiveness of Mitigation Measures, and 4.3 Monitoring and Commitment to Mitigation. To varying degrees, all three of the assessments considered alternative development plans, although greater emphasis was placed on biophysical impacts, project fiscal impacts, and large-scale economic impacts when alternatives were considered. Ruby Creek was the only assessment rated with four checkmarks for Category 4.1 Consideration of Alternatives. The Ruby Creek process stood out in that the neighbouring communities were engaged in choosing between alternatives; their input was integral to the decision to locate the worker camp outside of town, and this design process was clearly explained (Klohn Crippen Berger, 2006).

In regard to impact mitigation (Category 4.2), all of the projects addressed the need to ensure impacted communities were able to access project benefits, such as employment and contract opportunities. The two projects that had a higher level of local involvement in the planning process (Galore Creek and Ruby Creek) set out specific mitigation plans, clearly identified the need for an adaptive approach to mitigation, and articulated a strategy to actualize such an approach (Klohn Crippen Berger, 2006; Rescan™ Environmental Services Ltd., 2006).

The social impact assessments contained in the proponents' applications for the three case studies contained only minimal planning for ongoing monitoring of project impacts (Subcomponent 4.3 Monitoring and Commitment to Mitigation) and the ratings

ranged from two to three checkmarks. The Ruby Creek assessment, with the most robust approach, combined the need for an adaptive approach to monitoring and mitigation with ongoing monitoring through the suggested development of a socio-economic adaptive management plan for the town of Atlin (Klohn Crippen Berger, 2006).

5.5.5 Review Area 5: Presentation and Communication

The review area Presentation and Communication is conceptually different than the four other review areas, and the evaluation is based exclusively on the written social impact assessments that were submitted by the proponents as part of their applications for BC Environmental Assessment certificates. The ratings for this review area ranged from two checkmarks to four checkmarks.

The socio-economic content in the three assessments ranged from 150 pages (Red Chris) to approximately 950 pages (Galore Creek). When dealing with such large documents, a clear reporting structure is integral to access and analyze the information provided. The cases used a similar and conventional reporting structure that included a description of the proposed project, valued components, methods, background information, and predictions regarding impacts and means of mitigation. The degree to which each of the assessments adhered to the stated structure varied and was reflected in the ratings for Category 5.1 Format and Structure and the related subcategories. Of the three assessments, the Galore Creek assessment most closely followed the stated structure (Rescan™ Environmental Services Ltd., 2006). The report distinguished clearly between project description, predicted changes and impacts, corporate policies, design decisions, and mitigation of impacts. In contrast, the content in the Ruby Creek assessment was not consistently categorized in the appropriate subsections of the report (Klohn Crippen Berger, 2006). For example, project description information was located in the portion of the document that outlined impacts.

The assessments all included a methods section, yet each varied in the level of detail that they provided. The assessment for Ruby Creek adhered most closely to a standard scientific practice and, at the outset, identified the data sources it would use and cited references throughout the report (Klohn Crippen Berger, 2006). All three of the assessments used the terms *methods* and *methodology* interchangeably. The term *methods* should describe “a particular procedure for accomplishing or approaching something, especially a systematic or established one,” while *methodology* involves a justification of the methods and an exploration of the underlying assumptions and epistemologies (Kinash, n.d.).

Category 5.3 Neutrality addressed the need for unbiased reporting in social impact assessments. I found that identifying bias in the assessments presented a unique challenge given the highly subjective nature of social impacts. Still, both Galore Creek and Ruby Creek clearly addressed the subjective nature of social impacts and the challenge that it presents for social impact assessment (Rescan™ Environmental Services Ltd., 2006; Klohn Crippen Berger, 2006).

The Galore Creek assessment consistently distinguished between project benefits and the prediction of impacts—both positive and negative (Rescan™ Environmental Services Ltd., 2006). Whether intentional or not, this distinction implied an unbiased separation between the proponent’s voice and that of the assessment practitioners.

In contrast, the Red Chris assessment stated that the only way that the local communities were going to recognize the benefits they sought was through the loss of land and resources that the proponent deems “negligible”:

The primary socio-economic concerns of the LSA [local study area] residents deal with improvements to their quality of life through the creation of jobs, long-term employment, training and educational opportunities, business opportunities and improved community well-being. These improvements must come with

negligible loss to the land and resources that have sustained the communities over time. (AMEC Earth and Environmental, 2004, p. 5–77)

5.5.6 General Observations

All of the assessments addressed the three required project phases: construction, operation, and decommissioning, and this was reflected in the four-checkmark ratings assigned to the relevant subcategory (3.3.4.). However, the examination of the supporting documentation and the interviews highlighted the impacts associated with the planning stage; an issue that was not captured in the evaluation framework. These impacts are not addressed in any of the cases, nor are they called for under the Section 11 Orders that define the scope of the assessments. In a letter to the EAO, the Tahltan Central Council commented, “The fact that the assessment fails to note the current and ongoing Socio-Economic Impacts related to Red Chris project development makes this Socio-Economic Impact Analysis highly suspect” (C. Rattray to G. Alexander, March 16, 2005). According to interview participants, project planning for Ruby Creek and Galore Creek resulted in a short-term “boom-bust” cycle not unlike that associated with the finite lifespan of mines and the fluctuating metal markets. Interviewees described participant burnout from involvement in the assessment process and reported that the mere mention of a new potential mining venture had a divisive impact on the community.

Similarly, another reality of mining projects that received little attention in the assessment reports, but that came to light through interviews and a review of the public and First Nations’ comments, is the possibility of premature mine closure. In their mitigation strategies, the proponent for Ruby Creek did address the need to plan for early closure, although it appears the project ceased development before any plans were created. Neither Galore Creek nor Red Chris addressed the social impacts of premature closure (AMEC Earth and Environmental, 2004; Rescan™ Environmental

Services Ltd., 2006). Unexpected closure was raised by several interview participants and described in the Tahltan Central Council comments regarding the Red Chris assessment:

The socio-economic impacts associated with premature shutdowns at the mine are very real. Were this to happen, band members who had made financial commitments based on the expectation of steady employment or contracts would be economically impacted. The EA [environmental assessment] document has not assisted us in assessing these risks. (C. Rattray to G. Alexander, March 16, 2005)

As it turned out, both the Ruby Creek project and the Galore Creek mine ceased development before becoming operational. Early project closure can result in profoundly negative impacts for individuals, families, and communities who are economically (or otherwise) dependent on the development. One participant likened the day they learned that Galore Creek had ceased development to “the day John Lennon died.” Interview participants reported that advance notice of project closures mitigates some of the associated stress.

Lastly, it was difficult to discern if EAO was satisfied with the assessments that were provided by the proponents. The reports that are written by EAO at the end of the assessment process, summarize the content in the proponents’ reports, the issues raised during the application review phase, and the proponent’s response. It is based on this compiled information that EAO makes a recommendation to the deciding ministers. The report produced for Red Chris mine described a more complicated and contentious process than the other two assessments (BC EAO, 2005, 2007a, 2007b). During the Red Chris process there were more requests for additional information and what appeared to be, a much more difficult relationship between the proponent and First Nations.

5.6 Discussion

I conducted a multiple case study of the social impact assessments conducted for proposed mining projects in northwest British Columbia. Using mixed methods, I rated the quality of these assessments. Two of the cases in the study—Galore Creek and Ruby Creek—shared a proactive approach to consultation with the communities and First Nations potentially impacted by the projects in question. This approach to consultation was a key factor in forming the leading edge practices, multiple examples of innovation, and best practices that were identified in these two cases and also noted by Horsman (2010). Likewise, Fidler (2008) reported that early and proactive engagement by the proponent for Galore Creek with the Tahltan Nation was key to the success of that assessment.

There is considerable discussion of the importance of conceptual frameworks for guiding the collection and interpretation of information to support social impact assessments (e.g., Parkins, 2012; Ross, 1990; Ross & McGee, 2006; Slootweg, Vanclay, & Van Schooten, 2001). Yet, in the literature,²⁶ I found no examples of this practice within a highly regulated context similar to the assessment of major projects under the BC EAA. Galore Creek's integration of the Health Canada Determinants of Health Framework (Health Canada, 2004) and the sustainability approach outlined in "Out of Respect: The Tahltan, Mining and the Seven Questions to Sustainability" (The Tahltan First Nation, 2003) provided just such an example. The integration of these two frameworks was made possible through collaboration with the Tahltan Central Council (Rescan™ Environmental Services Ltd., 2006). The resulting framework supported the analysis of the range of contextually appropriate issues and measures. Likewise, the holistic concept of community health and wellbeing facilitated the exploration of the

²⁶ This search was limited to peer-reviewed, English language literature.

interconnectedness of the selected key issues and measures. Although the framework applied by the proponent in the assessment of Galore Creek did not play a driving role in the prediction and explanation of potential impacts, as called for by Blishen et al. (1979), it supported the identification of appropriate mitigation measures and provided a stand-out example of a best practice.

In the three cases that were evaluated, the overall lack of methodology (as opposed to methods) highlighted a key challenge for improvement of the quality of assessments. Likely, the lack of methodology is closely linked to the lack of frameworks in two of the cases. A stronger theoretical foundation could illuminate bias in the reports by highlighting assumptions and by clarifying the voice of the practitioner. This observation is not unique to the BC context. Becker (2003) noted that, from the report structure to underlying assumptions and worldviews, assessments of the impacts of major projects would benefit from a stronger theoretical foundation. As there is increasing interest in moving social impact assessment away from a purely quantitative predictive exercise and toward a more value-based participatory process (Becker, et al., 2004; Becker, et al., 2003; Esteves, Franks, & Vanclay, 2012; Horsman, 2011; Suopajärvi, 2013; Vanclay, 2003; Vanclay & Esteves, 2011), there is a need to explore the theoretical foundation of the employed methods.

The highly structured reporting methods employed in the assessments are the same format used in biophysical environmental assessments and are, therefore, rooted in the reductionist scientific tradition. Arguably, this style of reporting is driven by the political and regulatory environment (Cashmore, 2004). If well employed, this application of the scientific method can facilitate transparency, reliability, validity, and reproducibility. The key point, however, is that this mode of reporting must be well employed, and the information presented should, at minimum, adhere to and satisfy the declared structure and requirements of any individual assessment.

This standard scientific tradition and reporting style, however, has its limitations. It implies a level of objectivity that may not be achievable in the highly subjective domain of determining the significance of possible social impacts (Suopajarvi, 2013). This reporting style also infers a chronologically linear assessment process. In other words, it does not easily facilitate the documentation of the evolution of an assessment through the consultation and engagement employed in participatory and integrated approaches. Furthermore, the standard scientific approach, which is steeped in reductionism, may be difficult to reconcile with other cultural worldviews, including those of the many First Nations who have a more holistic epistemology that does not isolate single environmental components (Berkes, 1999).

Based on the evaluation, it is clear that within the current BC Environmental Assessment process, there is the possibility of excellent assessments. Although BC's five-pillared approach and the conventional reporting structure are standard practice, the Galore Creek and Ruby Creek assessments demonstrated that these factors do not have to be constraining. Exemplifying excellence, the Galore Creek assessment incorporated an innovative conceptual framework, whereas Ruby Creek utilized a participatory approach and two-way communication between the proponent and impacted communities and First Nations.

That said, several pivotal shortcomings also emerged from this study. The failure to identify vulnerable groups within the community and impacted region is both a methodological shortcoming and a larger failure to meet the principles set out by the International Association of Impact Assessment in regard to social impact assessment (Vanclay, 2003). Delving further into what is essentially an issue of equity, the assessments also failed to address intergenerational equity and gender equity.

Additionally, a lack of consideration for the impacts of the planning stage and the impacts of premature project shutdown emerged from both the interviews and the cross-

case analysis. Although my objective was to assess the quality of these assessments, this lack of consideration opens the door to a discussion of their effectiveness. BC Environmental Assessments are executed with the intent of identifying significant negative effects and supporting the deciding ministers' decisions (BC EAA, 2002). The disregard for the two scenarios, which ultimately had the greatest potential for impact (positive or negative), suggests that the current process might not be entirely effective in terms of identifying adverse effects and ensuring sustainable development in rural and small-town BC.

While the impacts of premature closure could theoretically be addressed in BC Environmental Assessments, the impacts of the planning stage certainly fall outside of that domain. But the reality is, with the current provincial push for increased development and streamlined regulation, communities and rural areas will continue to experience the effects of this precursor to development. Similar to cumulative impacts, however, this issue may be better suited to land management planning. Reconciling the role of cumulative impacts in environmental assessment and resource management is an ongoing challenge in BC. Haddock (2010) argued that cumulative impact assessment is more suited to regional planning and strategic environmental assessment as the potential impacts extend far beyond the spatial and conceptual jurisdiction of project proponents. Another challenge facing cumulative impact assessment in BC is the unpredictable nature of future development. As the cases demonstrated, even those projects that successfully acquire an environmental certificate are not guaranteed to proceed. Furthermore, those projects that do proceed do not always adhere to the schedules put forward during project planning. The scenario-based methods in the Galore Creek social impact assessment demonstrated a potentially viable tool for predicting and, more importantly, for mitigating cumulative social impacts on a project-by-project basis.

Discussion of scenario-based methods in social impact assessment has been somewhat limited. While these methods are widely used in sustainability planning and Duinker and Greig (2007) have called for the use of scenario planning in environmental assessment, in the literature I could not find evidence of uptake of this method in social impact assessment. Unlike impact assessment, scenario planning relies on identifying key environmental variables and, subsequently, defining the attributes of a number of plausible futures. Scenario planning would move the emphasis of social impact assessment away from the accurate prediction of a single “true” future and would shift the focus to identifying and prioritizing those mitigation measures that would be beneficial given a number of plausible futures. This approach may be particularly effective in the highly variable context of cumulative social impact assessments conducted on a project-by-project basis.

This study was limited by the number of interviews that were conducted and participants’ ability to recall the specifics of individual assessment processes. These limitations were a result of the time that had elapsed since the assessments were conducted and the high number of environmental assessments that occur in the northwest. While this limitation doesn’t undermine the accuracy of the findings, it does reduce the insight gained.

5.7 Conclusion

I evaluated the quality of three social impact assessments for mining projects in Northwest BC and explored the findings through interviews and a cross-case analysis of the assessments and supporting documentation. In general, two of the cases—Galore Creek and Ruby Creek—were of high quality and strong examples of social impact assessment. For the Ruby Creek assessment, this finding was particularly evident when

the assessment report was regarded within the context of the entire assessment process.

My cases demonstrated that, regardless of the structure dictated (and limited) by BC's five pillars and structured reporting process, it is possible to achieve high quality assessments and to incorporate innovative practices. Most importantly, the use of a guiding social impact assessment framework is possible within this context. This finding begets the question: Why do the two other assessments evaluated in this chapter and most of the assessments reviewed in Chapter 3 not incorporate conceptual frameworks?

I also found that some of the strongest components of the overall assessment process were those that arose from two-way communication with impacted communities. For example, the Taku River Tlingit First Nation found the Ruby Creek assessment lacking. However, as the proponent was responsive, the First Nation and proponent were able to collaborate and produce a short, context-specific document that identified a range of potential impacts and mitigation strategies.

In order to move the assessment practice forward and improve the overall quality of the assessments, I identified three key factors in the cases. Firstly, a high degree of local input played a key role in the quality of the assessment. Secondly, the quality of the assessment appears to be correlated with the thoroughness of the terms of reference. And finally, there is a need for greater reflection on methodology and the underlying assumptions with regard to worldview and subjectivity.

6 CONCLUSION

The scale of proposed development in the province of BC is increasing (BC EAO, 2014) and social impact assessment is an integral tool—taken up by government and industry—for ensuring the equitable distribution of the costs and benefits associated with major projects proposed in rural and small-town settings. Yet, despite the fact that social impact assessment is a widely employed practice and one that is entrenched in BC legislation (BC EAA, 2002), both the literature and this research suggest the potential effectiveness may be undermined by the quality of these assessments (Haddock, 2010). In recognition of this gap in knowledge, I addressed the following research objectives:

- to evaluate the social impact assessments that are conducted as part of the BC Environmental Assessment process for proposed major projects in rural and small-town BC, and
- to recommend practicable changes for improved social impact assessment practice and policy.

With these objectives in mind, I asked the following questions:

- How are social impact assessments conducted?
- How do practitioners, governments, proponents, and other interested parties with technical and regulatory knowledge perceive the quality of the current practices and policies?
- How do interested parties believe that current practices and policies can be improved?
- What is the quality of the social impact assessments that are conducted for proposed major projects?

To address the first research question, the content analysis of 36 assessments (see Chapter 3) revealed that social impacts—in the broadest sense of the concept—

seemingly receive less attention than biophysical impacts. In a similar vein, I found that these assessments, by-and-large, emphasize quantitative, easily accessible information over more complex concepts, such as peoples' reactions, sense of place, and community wellbeing.

The two most striking findings of this first study was the dizzying variation in approach, content, and structural organization amongst social impact assessments and the striking disregard for issues of equity. Although these findings suggest that some assessments are well conducted and use best practices, many of the assessments offered little rationalization to support methods or conclusions by way of frameworks, case studies, or peer-reviewed literature. Not only does this not reflect the best practices in social impact assessment, the lack of documentation calls into question the appropriateness of the varied measures, data, and information. Furthermore, a closer examination of the findings and inclusion of project size and type led to the conclusion that much of this variation could not be explained by project and context differences alone.

Social equity—the distribution of costs and benefits—is a core principle of sustainable development (World Commission on Environment and Development, 1987). Social equity also lies at the foundation of social impact assessment (Vanclay, 2003). Yet, most of the assessments I reviewed did not employ even the most rudimentary approaches to identifying vulnerable subpopulations and estimating the potential negative impacts on these groups. Furthermore, none of the assessments that I reviewed explored intergenerational equity, a concept that was set in the Rio Declaration on Environment and Development (United Nations Environmental Program, 1992) and highlighted in guiding principles for social impact assessment (Vanclay, 2003).

I furthered the evaluation and built on the content analysis by interviewing social impact assessment practitioners, government representatives, proponents, and other

interested parties with relevant technical and regulatory knowledge. My goal was to characterize how these individuals perceive the current practices and policies and to identify means by which social impact assessment can be improved. The interview participants stated that social impact assessments should indeed be conducted as part of comprehensive environmental assessment and that practices have improved in recent years. Further improvement, however, may be stymied by systemic reliance on an entirely unregulated group of practitioners and a regulatory environment that leaves the onus for the quality of assessment in the hands of the proponent. Mirroring the findings in the previous chapter, most of the interview participants were either not prepared to discuss the role that BC social impact assessment plays in the equitable distribution of the benefits and burdens associated with impact assessment or they did not feel equity played role in social impact assessment.

Informed by the themes that are prevalent in the literature and those identified in the preceding studies (content analysis and interviews), I tackled the third research question (see Chapter 4): What is the quality of social impact assessments conducted for proposed major projects in BC? Again, I also sought to identify means by which social impact assessment can be improved. To these ends, I carried out a multiple case study of the assessments conducted for three proposed metal mines in northwest BC. I focused on mineral mining because, at the time this study was planned, mining played a very prominent role in the economy of the Northwest and considerable industry expansion was projected and *in situ* employment opportunities in mining are numerous but mine closure and decommissioning can create additional changes and potential for large-scale community impacts (Lockie et al., 2009).

Building on previous evaluations conducted elsewhere (Hildebrandt & Sandham, 2014; Lee et al., 1999), I developed and applied an evaluation framework and supplemented this with qualitative information retrieved from the assessments and

supporting documentation, as well as with insights that I heard during interviews with community and First Nations representatives who had participated in these processes.

Enriching the findings of the content analysis of 36 assessments, I observed that, not only does the content in the assessments vary considerably, so too does the quality. According to the evaluation matrix, the three case studies ranged from below acceptable to excellent. The high quality of two of the cases demonstrated that within the structure dictated by the BC EAA, the five pillar approach (environment, economy, heritage, social, and health), and the BC Environmental Assessment process, there is the potential to produce high-quality assessments and incorporate innovative practices.

The strongest components of the case studies arose from substantiated two-way communication with impacted communities and First Nations. This communication resulted in project designs that reflected local concerns and values, and assessment methods that were simultaneously locally appropriate and methodologically robust. Related to this level of engagement, the Galore Creek Mine assessment demonstrated that the use of a guiding conceptual framework is possible within the BC Environmental Assessment process, providing an outstanding example of best practices in social impact assessment.

The case studies also shed some light on the effectiveness of these social impact assessments. Both the supporting documentation (First Nation and public comments) and the interviews highlighted that the unintended adverse effects of the project planning phases, project cancellation, and early closure go largely unaddressed. Considering that the two assessments with the greater local support and engagement (and the better social impact assessments) are not currently in development or operation, this omission suggests that social impact assessments are failing to identify potentially significant negative effects.

6.1 Recommendations: Policy, Practitioners, and Theory

As stated in the introduction of this research, over 30 years have passed since the landmark Berger Inquiry, and it is, therefore, not inconceivable to expect that Canada and its provincial governments would be world-leaders in the assessment of the social impacts of industrial development. Comparing the findings to the most recent research it seems that BC shares many of the challenges reportedly occurring elsewhere in the world while also providing some examples of leading edge practices. According to Suopajärvi (2013), in Finland, social impact assessments rely largely on survey data collected for the purposes of the assessment. Based on the methods described in this Finnish study, it would appear that, generally, the assessments in the content analysis (see Chapter 3) and the three assessments in the case study (see Chapter 4) demonstrated superior methods including the transparent identification of data gaps and the employment of comparatively robust data sources and flexible consultation and engagement methods. However, this current study shared the Finnish finding that there was a disregard for gender and intergenerational equity, a lack of theoretical grounding, and a lack of incorporation concepts that are integral to sustainable development. On a promising note, the BC cases evaluated in this research demonstrated some assessments are moving beyond the minimal work required by the BC EAA process, while Suopajärvi (2013) reported no such examples.

My findings also bear similarities to those of a recent study conducted in South Africa (Hildebrandt & Sandham, 2014). Hildebrandt and Sandham (2014) reported that social impact assessment in South Africa is second to biophysical impact assessment and they found that there is a lack of regulation addressing the quality of social impact assessments.

Overall, I found that within BC policy and guidelines, there is a lack of clearly stated objectives and definitions guiding social impact assessment. In order for social impact assessment to advance, there is an onus on the provincial government to provide definitions for social impacts and social impact assessment (Horsman, 2011) and to state clear, measurable objectives. In a similar vein, and likely a result of the lack of supporting policy and regulation, there is no single ministry or regulatory agency responsible for overseeing social impact assessments and ensuring these issues are accurately and adequately addressed in environmental assessments. Without a delegated agency overseeing social impacts, the province relies largely on an ad hoc system of professional reliance and proponent integrity to ensure the adequacy and accuracy of social impact assessments. This system requires further examination, refinement, and clarification.

I also found that there is no standard minimum qualification for individuals conducting social impact assessment. And while I recognize that social impact assessment is an interdisciplinary practice, in a model that relies heavily on the work of practitioners, there is a need to identify the minimum training and experience that are required to lead social impact assessments. In so doing, it would be possible to move toward a professional association with a code of ethics and mandatory ongoing professional development.

If social impact assessment operates at three levels—methods, methodology, and as a sub-discipline of applied social science (Vanclay, 2003a, 2003b; Howitt, 2011)—where is the methodology in BC and in the literature? It is largely absent from the 36 assessments and the three case studies that I reviewed and it is not widely discussed in the peer reviewed literature. It would seem that the theoretical foundation of social impact assessment is an area in great need of further exploration (Becker, 2003; Howitt, 2011; Suopajarvi, 2013). Howitt (2011) wrote that social impact assessment “benefits from the contributions of many disciplinary traditions, but has created neither a singularly

dominant discursive community, nor a coherent body of theory” (p. 78). Without this foundation, “social impact assessment risks becoming little more than a set of techniques that are marshalled to excuse poor public decision making” (Howitt, 2011, p. 91). If indeed Howitt (2011) is correct—and I am inclined to agree—that social impact assessments should be judged largely on the “critical consideration of its conceptual foundations” (p. 79), then I must assert that most social impact assessments conducted for major projects in BC are sorely lacking.

The interviews that were conducted as part of this research project (see Chapters 4 and 5) confirmed what I found in the literature—that social impact assessment should be conducted as a component of environmental assessment. Yet, I also found that social impact assessments in BC are impaired by the application of tools and approaches largely designed for biophysical impact assessment and a lack of recognition of the multiple perspectives on costs and benefits. Thus, a starting point for the discussion of theory and social impact assessment is in reconciling the assessment of social impacts with the assessment of biophysical impacts. This is made difficult by fundamentally different research paradigms that sit as the foundations of these two avenues of assessment. While biophysical impact assessment employs methods that, according to Guba and Lincoln (1994), belong to a positivist research paradigm, robust social impact assessment requires a mix of methods and data that are typically linked to both positivism and constructivism paradigms. For example, a social impact assessment may include demographic data, economic predictions, and quantitative models of demands for infrastructure in combination with subjective qualitative interview data describing a sense of place, community values, and oral histories. Furthermore, if social impact assessments become increasingly participatory or integrated, as the literature suggested (Esteves, Franks, & Vanclay, 2012, Horsman, 2011; Suopajarvi, 2013; Vanclay & Esteves, 2012), there may be greater emphasis on constructivism and related methods

to facilitate the inclusion of multiple epistemologies and increasingly qualitative information.

Pragmatism facilitates the use of qualitative and quantitative research methods and acknowledges the role that values play in the interpretation of results (Tashakkori & Teddlie, 1998). Thus, it is an appropriate paradigm in which to seat social impact assessment. However, simply identifying a paradigm does not address the underlying fundamental problems in the practice of social impact assessment. I suggest that practitioners of social impact assessment—in BC and abroad—be called upon to reflect closely upon the logical placement of their activities (i.e., deduction versus induction), axiologies, epistemologies, and ontologies that underlie any given component of an assessment and the tools that they are employing; the objective of this exercise being to ensure that research is properly operationalized and findings are not over-stated.

Suopajärvi (2013) suggested that a failure to address the diversity of local communities is at the root of the shortcomings for social impact assessment in Finland. Similarly, I have found it is the failure to address the diversity within communities that is greatly limiting social impact assessments in BC. The result of this was that equity was insufficiently addressed in the social impact assessments that were reviewed in the content analysis (see Chapter 3) and in the case studies (see Chapter 4). For example, as required by law, First Nations were addressed, but potentially vulnerable populations within First Nations and communities were infrequently addressed in the assessments.

Lahiri-Dutt and Ahmad (2009) stated that, while globally, gender impact assessment is a “craze” (p. 117), women are unfortunately only being addressed in social impact assessments as an “add-on” (p. 117) and without a strong theoretical footing that enables meaningful assessment gender-based impacts. Lahiri-Dutt and Ahmad (2009) also described the major challenges associated with addressing gender equity. Gender impact assessment is not as simple as disaggregating baseline and predictive data by

gender or identifying all women as a single vulnerable component of society. Rather, social impact assessment must address the diversity amongst women, just as it must address the diversity amongst a community and it must become more gender aware in general (Lahiri-Dutt & Ahmad, 2009). Specifically, impact assessors need to apply a “finer lens” (Lahiri-Dutt & Ahmad, 2009, p. 118) to the study of social impacts and gender inequities and address impacts at the “micro-scale” (p. 118) of the gendered individual. Furthermore, practitioners of social impact assessment need to employ the work of feminist scholars as it pertains to the household (Lahiri-Dutt & Ahmad, 2009). Providing an example of a tool that could be applied in social impact assessment in BC, Whiteman & Blacklock (2000) identified the following three categories of gender impacts: gender inequalities in the economic benefits; women’s work and traditional roles; and health and wellbeing. Lahiri-Dutt and Ahmad (2009) later tested and validated these categories in a case study in India. Based on studies of mining impacts on Aboriginal populations in Canada, Hipwell, Mamen, Weitzner, and Whiteman (2002) suggested the addition of fourth category: distribution of power.

Akin to gender equity, intergenerational equity is a foundational concept in sustainable development (United Nations Environment Program, 1992) and was entirely absent from the practices that were identified in the document analysis (see Chapter 3), interviews (see Chapter 4), and case studies (see Chapter 5). In 2007, the proposed Kemess North Copper-Gold Mine Project in BC, was declined BC and federal environmental assessment certificates based in part on issues of inequity (Kemess North Mine Joint Review Panel, 2007). The review panel concluded that the multigenerational environmental cost of managing the mine site after decommissioning was inequitable as was the lack of economic benefits that would have been accessible to local First Nations. It is worth noting that this landmark recommendation differed from most Environmental Assessments in BC in two key areas. Firstly, it was made by an

independent review panel and not by employees of the provincial and federal governments. Secondly, the panel reached this conclusion by applying the following five sustainability perspectives to their review: environmental stewardship, social and cultural benefits and costs, fair distribution of benefits and costs, and present versus future generations (Haddock, 2010). Although the BC Environmental Assessment process does hinge on a five-pillared approach, this serves largely as means by which to categorize information and does provide and lens on the sustainability of the project. To strengthen BC Environmental Assessment, I suggest that like the Kemess North Mine Joint Review Panel and the Galore Creek Assessment (see Chapter 4), assessments should be grounded in context-appropriate conceptual frameworks.

By definition, social impacts must be “experienced or felt in a corporeal (physical) or cognitive (perceptual) sense, whether at the level of individual, household, or society/community” (Slootweg, Vanclay, & Van Schooten, 2001, p. 25); thus, social impacts are inherently subjective. Yet, if social impact assessment in BC is indeed heavily influenced by a positivist research paradigm as I suggest earlier in this chapter, it follows that equity and the multiple varied perspectives of vulnerable groups would be overlooked. While I found that the concept of perspectives appears in the social impact assessment literature, the discussion is limited. The few examples I did uncover included the function evaluation model that was proposed as a means of incorporating social and biophysical impact assessment. The model briefly touches on the importance of applying lenses to the assessment of biophysical impacts, but goes on to say that this has been resisted by practitioners of social impacts (Van Schooten et al., 2001, 2003). And with the benefit of hindsight, Dixon (1972) elegantly demonstrated how impacts must be viewed from the perspectives of subpopulations within a community. I suggest that it is this lack of perspective that is resulting in assessments that do not clearly distinguish between forces of social change and impacts, and assessments that do not adequately

address the multifaceted issues of equity. While I agree that the diversity of tasks to which social impact assessment is set, reduces the likelihood of identifying a single underlying theory upon which social impact can rest (Howitt, 2011), the need to identify perspectives is very much in line with Goffman's (1972) theory of frame. Frame analysis has been applied extensively as a discursive tool in multiple disciplines including social movement analysis (Benford & Snow, 2000) and media analysis (DeCamp, Koenig, & Chisolm, 1999; Sheufele, 1999) and as an applied tool in public relations (Hallahan, 1999).

6.2 Further Reflection on Methods

I used a mixed-method approach to evaluate social impact assessment in British Columbia. And while the methods were successful, were I to do it over, I would approach some aspects differently. When I was originally planning this research, I wanted to explore the spectrum of assessments and approaches. In retrospect, this added additional complexity to interpreting the results. In Chapter 3 (the content analysis), I would stratify the sample using different criteria. In addition to region, I would use a metric of project size (e.g., construction or operation employees) and based on this, exclude smaller projects. The remaining projects could additionally be stratified by industry.

This evaluation was largely limited to quality. In Chapter 4 (interviews) I believe I could have further explored the efficacy of social impact assessment by specifically asking interview participants if they believe social impact assessments were successfully identifying all potential significant adverse effects. And, by asking participants if and how they believe assessments were contributing to sustainable development. Additionally, it would have been interesting to disaggregate the data by group (e.g., proponent,

practitioner, government) to gain more insight into expectations of social impact assessment.

The evaluation matrix employed in Chapter 5 (multiple case studies) is based on an evaluation framework originally designed by Lee et al. (1999) and later modified by Hildebrandt (2012). Although I reworked it for the BC context, I believe it could be further refined. For example, in BC, assessments specifically focus on adverse effects; this should be reflected in the subcategory. Even at the finest resolution (subcategory) the evaluation matrix contains double-barrelled criteria. Although the matrix itself would grow in length, I believe it would be easier to apply if these subcategories were further refined with the intent of avoiding double-barreled criteria. Additionally, the framework would benefit from further consideration of the unique rights of First Nations in Canada. Lastly, Lee et al. (1999) suggest that two people apply the framework and compare and discuss ratings. While this would take considerably more time, I concur with Lee et al. (1999) and believe that this could increase internal validity (consistency).

6.3 Challenges and Opportunities for Further Research

The specific limitations of the individual components of this research are addressed in Chapters 3, 4, and 5. In this section, I focus on the limitations of this project as a whole; each also presenting an opportunity for future study. The overall project would have benefited from a province-wide study of assessment of quality. While the analysis of assessments described in Chapter 3 was province-wide, it was not designed as an evaluation, nor did I have the resources to fully evaluate 36 assessments. Based on this research, I recommend a province-wide evaluation of the quality of assessments in BC with an eye toward assessments conducted in the past five years. Such a study would require a refined evaluation tool and sampling framework, both of which were developed through this research.

One of the greatest challenges for this research was the ongoing march of industrial development in BC, the associated assessments, and evolving practices at the BC EAO. To their credit, in recent years the EAO responded to the Auditor General's report (Auditor General of British Columbia, 2011) and has produced or revised a number of guidance documents and templates, bringing further clarity to their expectations with regard to proponent-led consultation and of the contents and structure of assessments. In response to the Auditor General Office's (2011) audit of EAO project oversight, the EAO implemented a monitoring and compliance program that includes clear measurable commitments from the proponent, transparency, accountability, and support from provincial ministries (Auditor General of British Columbia, 2012, 2013). As of yet, there is no evidence that the compliance program has tackled social issues. While none of the newly produced or revised documents are specific to social impact assessment, they do speak to some of the seemingly inexplicable inconsistencies I identified in social impact assessments. The inclusion in these documents of valued components (BC EAO, 2013c), the information required in applications (BC EAO, 2013a), consultation with First Nations (BC EAO, 2013b), and project descriptions (BC EAO, 2013d) can only lead to improvements in the quality of social impact assessments that are conducted as part of the BC Environmental Assessment Process. I endeavoured to overcome any gaps in the findings that resulted from a changing regulatory environment by addressing these documents—where appropriate—in discussions. There exists, however, an opportunity for an up-to-the-moment review of the many ongoing changes in BC social impact assessment and the most recent assessments.

This project also left a huge aspect of social impact assessment in rural and small-town BC largely unexplored: First Nations. How First Nations are engaged and addressed in the BC Environmental Assessment process is a domain that warrants considerable focused study. I did not delve into this area in any great depth for multiple

reasons. Firstly, and most importantly, I am a non-indigenous researcher approaching a research question that is of interest to me and meaningful from my perspectives. Imposing this research agenda on First Nations is inappropriate, if not unethical. Secondly, the reality is that research questions in this domain are stand-alone questions, and they cannot be done justice in a higher-level evaluation such as this one. Addressing these questions will require an in-depth exploration of First Nations cultures, histories, and goals; relevant case law; and settler history. It would also require culturally fitting research methods that are grounded in appropriate research paradigms. These are not issues that can be addressed from the ivory tower and tacked on as a chapter in larger thesis, but they do create the opportunity for a much needed, large-scale collaborative study led by or with close involvement from impacted First Nations.

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APPENDIX I: Project Applications Reviewed in Content Analysis

1. Babirk Secure Landfill Project
2. Basal Aquifer Dewatering Project
3. Brilliant Powerplant Expansion Project
4. Cabin Gas Plant Project
5. Cache Creek Landfill Extension
6. Cascade Heritage Power Project
7. Chemainus Wells Water Supply Project
8. Coursier Dam Decommissioning Project
9. Dokie Wind Energy Project
10. East Toba River Montrose Creek Hydroelectric Project
11. Forrest Kerr Hydroelectric Project
12. Galore Creek Copper-Gold-Silver Project
13. Hermann Mine Project
14. Island Cogeneration Project
15. Kitimat LNG Terminal Project
16. Knob Hill Wind Farm Project
17. KSL Pipeline Looping Project
18. Mackenzie Green Energy Centre Project
19. Maxhamish Pipeline Project
20. Mt Milligan Gold Copper Project
21. NaiKun Offshore Wind Energy Project
22. Northern Rockies Secure Landfill Project
23. Orca Sand and Gravel Project
24. Pingston Creek Hydroelectric Project
25. Port Alberni Cogeneration Project

26. Prosperity Gold-Copper Project
27. Red Chris Porphyry Copper-Gold Mine Project
28. Revelstoke Generating Station Unit 5 Project
29. Ring Border Gas Plant Expansion Project
30. Ruby Creek Molybdenum
31. Silverberry Secure Landfill
32. Slocan-LP OSB Project
33. Stewart Bulk Terminals Wharf Expansion Project
34. Thunder Mountain Wind Project
35. Wartenbe Wind Energy Project
36. Wolverine Coal Mine

APPENDIX II: Schedules for Chapter 4 Interviews

One-on-One Interviews

Background Questions

1. Please tell me what your job or professional role is?
2. In what capacity are you currently involved in social or economic impact assessments?
3. Do you have any expertise in socio-economic impact assessment?
If so, what?
4. How do you keep informed of current practices?
5. Roughly, how many British Columbia Environmental Assessment Office social impact assessments have you participated in or contributed to?
6. What assessment(s) were you most recently involved with?
7. Were you satisfied with the outcomes of this/these assessments?

Process, Policy and Regulations

1. What do you consider to be the greatest strengths of the current Process?
Weaknesses?
2. Do you believe that the assessment of socio-economic impacts under the BC Environmental Assessment Act is necessary?
Why or why not?
3. If answered yes to #8:
Does the provincial government dedicate an appropriate level of resources (e.g., funds, personnel, professional development) to the assessment of socio-economic impacts?
4. Are you aware of the changes that occurred in 2002 when the new BC Environmental Assessment Act was introduced?
If yes:

From your standpoint, what effect has this had on socio-economic impact assessment?

5. What can you tell me about other changes to policy and the effect these changes have had on social impact assessment in BC?
6. What do you understand to be the objectives of BC socio-economic impact assessments?
7. In general, do you believe that the current process is or is not meeting these objectives?
8. Why or why not?
9. Who is responsible for ensuring that program does meet these objectives?
10. What do you need or hope to gain from social impact assessment?
(proponents and community)
11. Is the current process, the means by which the most equitable solutions can be reached? How so?
12. Is there anything to be learned from other processes that address social and economic impacts?
13. Would you like to add anything else about the process, legislation or regulations?

Approach, Methods and Tools

1. In your opinion, what are the characteristics of an exemplary SIEA?
2. In your experience, does any one sector out-perform the others in terms of the quality of social impact assessment?
3. Over the course of your involvement in BC EAO assessments, have you noticed any changes in approach to social and economic impact assessment?

If yes: Please describe. If no: Why do you believe the practice has not evolved in this time.

4. How can we ensure the assessment practice in BC reflects leading edge practices?
5. Could EAO contribute to strengthening the practice?
6. Who is responsible for ensuring that an individual assessment is of adequate quality and accuracy?
7. Is this system effective?
8. Is professional a reliance and adequate tool for ensuring the quality and accuracy of assessments?
9. What does the future hold for BC Environmental Assessment social impact assessment?
10. In conclusion, do you think there is anything else I should know about socio-economic impact assessment in BC?

Group Interviews

Background Questions

1. In your opinion, do community members and stakeholders understand the role of the BC EAO? Does the general public?
2. What do you consider to be the greatest strengths of the current assessment Process and framework in terms of its ability to support socio-economic impact assessment?
3. Weaknesses?
4. How could these be improved?
5. Is there a need for definitions of terms and stated principles and guidelines?
6. The literature describes the equitable distribution of impacts and benefits as one of the objectives of socio-economic impact assessment. Is the current Process the means by which the most equitable solutions can be reached? How so?
7. Is there anything we can learn from other processes that address socio-economic impacts? These could be international, national, provincial or other processes that have a socio-economic component.

Practice, Approach, Methods, and Tools

1. In your opinions, what are the characteristics of an exemplary socio-economic impact assessment?
 - a. How common are these characteristics in the assessments you see?
 - b. If appropriate: Why do you believe these practices have not become integrated into BC assessments?
2. Over time, have you noticed any changes in the approach or methods used in social and economic impact assessment? Describe.

3. Is professional reliance an effective means of ensuring an individual assessment of is of adequate quality and accuracy?
 - a) Can you suggest viable alternatives?
4. How can we ensure that assessment practices in BC incorporate the current leading edge practices?
 - a) Could the BC Environmental Assessment Office potentially contribute to strengthening the practice of social impact assessment? If so, how?
5. In your experience, does any one sector excel in terms of the quality of socio-economic impact assessment? Why?

Conclusion

1. What does the future hold for socio-economic impact assessment in BC?

APPENDIX III: Schedule for Chapter 5 Interviews

1. Can you please describe your current and past roles in your community?
2. Do you have any expertise in socio-economic impact assessment? If so, what?
3. Do you believe that the assessment of socio-economic impacts under the BC Environmental Assessment Act is necessary?
 - a) Why or why not?
4. I found you through the [name of BC Environmental Assessment] assessment. What was your role in the assessment?
5. What prompted you to become involved?
6. What were your initial expectations of the impact assessment?
7. Were you satisfied with the outcomes of the process?
8. What parts of the process worked well?
9. Did the process support an equitable or fair distribution of costs and benefits?
10. How could the process be improved?
11. How aware of the assessment were community members?
 - a. Do you believe they understood the process?
12. Has the project proceeded as you anticipated?
13. Have you commented on or been involved with other assessments? In what capacity?
14. Have you been involved with any exemplary social impact assessments?
Any other planning or land use processes?
15. Are you aware of any other past or present processes run under the provincial government that more effectively address social and or economic impacts?

- a) In what ways were they more effective?
 - a) What were the characteristics of this/these assessments that made it/them exemplary?
16. Does the provincial government dedicate an appropriate level of resources to the assessment of socio-economic impacts? Excessive
 17. What do communities need from social impact assessments?
 18. Are there any methods or approaches that you believe should be integrated into assessments in BC?
 19. In your experience, does any one sector outperform the others in terms of the quality of social impact assessment?
 20. What does the future hold for BC Environmental Assessment social impact assessment?
 21. In conclusion, do you think there is anything else I should know about socio-economic impact assessment in BC?

APPENDIX IV: Evaluation Matrix and Ratings for Case Studies

	Galore Creek	Red Chris	Ruby Creek
1. DESCRIPTION OF THE DEVELOPMENT AND THE PROPONENT	✓✓✓	✓✓	✓✓✓
1.1. Description of the Proposed Project: A description of the project that financial, operational, and physical characteristics.	✓✓	✓✓	✓✓
1.1.1. The purpose(s) and objectives of the development are explained.	✓	✓	✓
1.1.2. The financial merits and feasibility of the project are described.	✓✓	✓✓	✓✓
1.1.3. The design, size, and appearance of the development are described. Diagrams, plans, or maps are incorporated if necessary.	✓✓✓✓	✓✓✓✓	✓✓✓✓
1.1.4. The estimated duration of the construction phase, operational phase and, where appropriate, decommissioning phase is given.	✓✓✓✓	✓✓✓✓	✓✓✓
1.1.5. For each phase of the project, there is an estimate of the required number of workers by job type or skill level.	✓✓✓✓	✓✓✓✓	✓✓✓
1.1.6. Project expenditures during construction and operation are estimated.	✓✓✓✓	✓✓✓✓	✓✓✓✓
1.2. Description of the Proponent: A description of the proponent's history, capability, practices, and policies.	✓✓✓	✓✓	✓✓✓
1.2.1. The proponent is described in adequate detail including ownership, history, and capability to complete the development.	✓✓✓	✓✓	✓✓
1.2.2. Relevant corporate practices and policies such as hiring, sustainability, and corporate social responsibility are clearly stated.	✓✓✓✓	✓✓	✓✓✓
1.2.3. The proponent's ability to execute the project is described.	✓✓✓	✓	✓✓
2. CONSULTATION AND ENGAGEMENT	✓✓✓✓	✓✓	✓✓✓✓
2.1. First Nations, Public, and Stakeholder Engagement and Consultation: A description of the consultation methods, findings, and incorporation into the assessment and project.	✓✓✓✓	✓✓	✓✓✓✓
2.1.1. Innovative methods were used to engage with impacted people (e.g., establishment of a local company presence, creation of community liaison groups, etc.)	✓✓✓✓	✓	✓✓✓✓
2.1.2. Engagement and consultation were initiated during the planning stages of the project and continue through the life of the project.	✓✓✓✓	✓✓✓	✓✓✓✓
2.1.3. Input gained through consultation is incorporated into project design and impact mitigation.	✓✓✓✓	✓	✓✓✓✓
3. PREDICTION AND INTERPRETATION OF IMPACTS	✓✓✓	✓✓	✓✓✓

3.1. Description of the Context and Baseline: A description of the current socio-economic environment as it is and as it is expected to develop should the project not proceed.	✓✓✓✓	✓✓	✓✓✓
3.1.1. The key aspects of the current local context are identified and described. This includes social, economic, and cultural criteria and trends, currently at risk or vulnerable subsections of society, and general community vulnerabilities, strengths, and assets are identified.	✓✓✓	✓✓	✓✓✓
3.1.2. There is a description of the socio-economic environment as it is expected to develop should the project not proceed.	✓✓✓✓	✓✓✓	✓✓✓
3.1.3. Preferred and intended community futures are described based on local land and resource use plans, community plans and policies, and/or other data as necessary.	✓✓✓✓	✓✓✓	N/A
3.1.4. Data gaps are identified and efforts to fill these data gaps using alternative, substantiated means. Extraneous data is not included.	✓✓✓✓	✓✓	✓✓✓
3.2. Issue Scoping: A description of the identified valued social components or issues.	✓✓✓✓	✓✓	✓✓✓
3.2.1. Issues of concern and valued components are clearly identified, conceptually consistent, and well-supported.	✓✓✓✓	✓✓	✓✓✓
3.2.2. Rationale is provided for the exclusion of issues and/or valued components that may have been identified.	✓✓✓✓	✓✓	✓✓
3.3. Identification of Changes and Impacts: Potential social changes and impacts resulting from the development are defined, investigated and described. Resulting impacts are described, and those who may experience the impacts are defined.	✓✓✓	✓	✓✓
3.3.1. A clear description is given of the changes and any direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative impacts of the project.	✓✓✓	✓✓	✓✓
3.3.2. Change and resulting impacts are identified using systematic methods such as conceptual frameworks, project specific checklists, matrices, panels of experts, consultations, supported references, etc. Supplementary methods (e.g., cause-effect or network analyses) may be needed to identify secondary impacts.	✓✓✓✓	✓✓	✓✓✓
3.3.3. Where appropriate, index measures and substantiated qualitative criteria are incorporated. Prediction does not rely exclusively on easily accessible quantitative data.	✓✓✓✓	✓	✓✓✓✓
3.3.4. All project phases (construction, operation and, where appropriate, decommissioning) are addressed in the predictive component.	✓✓✓✓	✓✓✓✓	✓✓✓✓
3.3.5. Significance of impacts on effected and vulnerable groups is stated as are the methods for calculating significance.	✓✓	✓✓	✓✓
3.3.6. The impacts are determined as the deviation from baseline conditions, (i.e., the difference between the conditions that would occur if the development were not to proceed and those predicted to prevail as a consequence of it).	✓✓✓✓	✓✓	✓✓
3.3.7. Predicted impacts are expressed in clearly identified units or very well-defined qualitative terms.	✓✓✓✓	✓✓✓	✓✓✓

3.3.8. Qualitative predictions are supported using case studies, theories, and/or peer-reviewed literature.	✓✓✓✓	✓✓✓	✓✓✓✓
3.3.9. Locally held traditional knowledge is integrated into the assessment where appropriate.	✓✓✓✓	✓✓	✓✓✓
3.3.10. The assessment incorporated, explained, and rationalized innovative or context-specific approaches.	✓✓✓✓	✓	✓✓✓
4. ALTERNATIVES, MITIGATION, AND MONITORING	✓✓✓	✓✓✓	✓✓✓✓
4.1. Consideration of Alternatives: Feasible alternatives to the proposed project are considered and outlined in the assessment, and the reasons for their rejection briefly discussed.	✓✓✓	✓✓✓	✓✓✓✓
4.2. Scope and Effectiveness of Mitigation Measures: All significant adverse impacts are considered for mitigation. Evidence should be presented to show that proposed mitigation measures will be effective when implemented.	✓✓✓✓	✓✓✓	✓✓✓
4.2.1. The mitigation of all significant adverse impacts is considered and, where practicable, specific mitigation measures should be put forward. Any residual or unmitigated impacts should be indicated and justification offered as to why these impacts should not be mitigated.	✓✓✓	✓✓✓	✓✓✓
4.2.2. Mitigation methods considered include modification of the project and policies, compensation, capacity development, and the provision of alternative facilities.	✓✓✓✓	✓✓✓	✓✓✓✓
4.2.3. The significance of any impact remaining after mitigation is described.	✓✓✓	✓✓✓	✓✓✓
4.2.4. It is clear to what extent the mitigation methods will be effective when implemented. Where the effectiveness is uncertain or depends on assumptions data should be introduced to justify the acceptance of these assumptions.	✓✓✓	✓✓	✓✓✓
4.2.5. Linkages between project attributes, valued components, changes, impacts, and mitigation should be identified.	✓✓✓✓	✓✓✓	✓✓✓
4.3. Monitoring and Commitment to Mitigation: Proponents should be committed to, and capable of, carrying out the mitigation measures and present plans of how they propose to do so. If mitigation falls outside of a proponent's area of influence, appropriate parties are to be identified.	✓✓✓	✓✓	✓✓
4.3.1. There is a clear record of the commitment of the proponent to the mitigation measures. Details of how the mitigation measures will be implemented and function are also given.	✓✓✓✓	✓✓✓	✓✓✓
4.3.2. Monitoring arrangements are proposed for changes and impacts resulting from the project and their conformity with the predictions within the assessment. Provision is made to adjust mitigating measures where unexpected adverse impacts occur. The scale of these monitoring arrangements corresponds to uncertainty associated with predictions and the significance of potential variations.	✓✓	✓	✓✓

5. PRESENTATION AND COMMUNICATION	✓✓✓✓	✓✓	✓✓✓
5.1. Format and Structure: Information is presented in a manner that is consistent and facilitates access.	✓✓✓✓	✓✓✓	✓✓
5.1.1. The layout of the assessment enables the reader to find and assimilate data easily and quickly.	✓✓✓	✓✓✓	✓✓✓
5.1.2. Information is contained in appropriately labelled sections.	✓✓✓✓	✓✓✓	✓✓
5.2. Methods and Data: All methods and external data sources are identified.	✓✓✓✓	✓✓✓	✓✓✓
5.2.1. When data, conclusions or theories from external sources are introduced, the original source should be acknowledged at that point in the text. A full reference is included either with the acknowledgement, at the bottom of the page, or in a list of references.	✓✓✓✓	✓✓✓✓	✓✓✓
5.2.2. Methods are clearly explained. All units of measurement and relevant concepts are clearly identified and where appropriate, defined.	✓✓✓✓	✓✓	✓✓✓
5.2.3. Relevant data is reported, cited, analyzed, and interpreted.	✓✓✓✓	✓✓	✓✓✓
5.3. Neutrality: Information is presented without bias and receives the emphasis appropriate to its importance in the context of the assessment.	✓✓✓✓	✓	✓✓✓
5.3.1. Prominence and emphasis is given to potentially severe adverse impacts as well as to potentially substantial favourable impacts. The assessment should avoid according space disproportionately to impacts that have been well investigated or are beneficial.	✓✓✓✓	✓✓	✓✓✓✓
5.3.2. The assessment is unbiased; it does not lobby for any particular point of view. Adverse impacts are not disguised by euphemisms or platitudes.	✓✓✓✓	✓	✓✓✓✓

Note. Adapted from “Reviewing the quality of environmental statements and environmental appraisals: Occasional Paper Number 55” by Lee, Colley, Bonde & Simpson (1999). And from “The significance and status of social impact assessment (SIA) in a South African context.” By Hildebrandt (2012). Masters of Science Geography and Environmental Studies. North-West University.