THE INTERFACE BETWEEN ENVIRONMENTAL ASSESSMENT AND CORPORATE RESPONSIBILITY: THE VICTOR DIAMOND PROJECT

by

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ABSTRACT

The environmental assessment and sustainable development literature recognizes that the environmental assessment (EA), EA follow-up and voluntary corporate responsibility aspects of natural resource project management—referred to as the project management continuum, or PMC—are prone to problems of process inefficiency and ineffectiveness. Timeliness, consistency and sustainable development capacity are of particular concern.

This research examines the efficiency and effectiveness of the PMC for the Victor Diamond Project (Victor) in Ontario. Results indicate that the effectiveness and efficiency of Victor's PMC was compromised due to: (1) omission of non-biophysical socioeconomic impact assessment; (2) low trust within First Nations toward governments and industry; (3) insufficient baseline information, and (4) the absence of formalized regional planning to identify and integrate regional development needs prior to the EA.

To overcome these obstacles, federal and provincial governments should engage in targeted regional land-use planning and sustainability assessment, including the assessment of non-biophysical socioeconomic impacts.

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ACRONYMS

CEAA	*Canadian Environmental Assessment Act*
CEA Agency	The Canadian Environmental Assessment Agency
CSR	Corporate Social Responsibility or Comprehensive Study Report (some respondents use CSR to mean the latter)
DFO	Department of Fisheries and Oceans
E3	Environmental Excellence in Exploration
EA/ EIA	Environmental (Impact) Assessment
EC	Environment Canada
EACSR	External Advisory Committee on Smart Regulation
EMP	Environmental Management Plans
EMS	Environmental Management Systems
FA	*Fisheries Act*
IBA	Impact-Benefit Agreement
IISD	International Institute for Sustainable Development
INAC	Indian and Northern Affairs Canada
ISO	International Standards Organization
LUP	Land Use Planning or Plans
MAC	Mining Association of Canada
MPMO	Major Projects Management Office
MMSD	Mining, Minerals and Sustainable Development Project
MNDM	Ontario Ministry of Northern Development and Mines
MPMO	Major Projects Management Office
NRCan	Natural Resources Canada
PDAC	Prospector's and Developer's Association of Canada
PMC	Project Management Continuum
SA	Sustainability Assessment
SD	Sustainable Development
SIA	Social Impact Assessment
TSM	Toward Sustainable Mining
VCR	Voluntary Corporate Responsibility (programs, practices, initiatives)
VBNC	Voisey's Bay Nickel Company
VDP	Victor Diamond Project

CHAPTER 1: INTRODUCTION

1.1 Rationale for Research

Since the early 1970s, environmental impact assessment (EA) has been a "planning tool" in Canada to assess and mitigate the adverse biophysical environmental impacts, and in some cases social impacts, of proposed development undertakings prior to their approval (Gibson 2001; 2002). Although the mid-1990s saw the enshrinement of EA in Canadian federal law with the promulgation of the *Canadian Environmental Assessment Act* (CEAA), formalization of the federal EA process under CEAA brought with it a host of concerns over the efficiency and effectiveness of EA in practice. Some of these concerns relate to the duplication of process, administrative complexity and time required to complete EAs (Gartner Lee 2000; MAC 2002; Johnstone 2005), while others relate to the *ad hoc* nature of decisions governing on-site environmental management in EA follow-up programs (Couch 2002). Critics have also disparaged the absence of sustainable social, economic and environmental development decision criteria in conventional EA policy and management (Nikiforuk 1997; Hazell 1999; Arts 2001; Gibson 2002; Sanchez and Hacking 2002; Watson and Agnolin 2001).

In an effort to both address the gaps and assess the effectiveness of the EA process, various EA follow-up measures are implemented at projects pursuant to EA and regulatory approval. While follow-up to assess the effectiveness of environmental impact mitigation is mandatory, other follow-up arrangements and agreements may be implemented at projects to

address ongoing social, cultural and economic (all captured under the term "socioeconomic") issues and impacts.

Further still, many private sector project proponents are instituting their own, self-directed initiatives to ensure their activities are in keeping with company or industry-association protocols, or to reflect local environmental and social conditions and interests. Unlike EA and EA follow-up, these self-directed, voluntary initiatives are not required by legislation, nor are they mandatory conditions of project approval. Such activities are referred to in this study as voluntary corporate responsibility (VCR) initiatives, practices or programs.

1.1.1 The Project Management Continuum (PMC)

As policy instruments designed to elicit sustainable development, EA, EA follow-up and VCR can be viewed as a continuum of instruments which are sequentially, and in some cases simultaneously, applied to a project over time. Instruments range from command-and-control approaches that focus on reduction of the effects of an individual project, to voluntary approaches that target continual improvement in all activities. Each of these instruments is distinct, but each possesses considerable overlaps and potential linkages with the others. This paper refers to these instruments collectively as the "project management continuum", or PMC. Although regional planning is excluded from this PMC definition, regional and other land-use planning play a critical role in helping to shape and control the rate and conditions of development. The use of such planning is particularly important in remote or rural areas where less is normally known about the environment or communities. Brief definitions for regional planning, EA, EA follow-up and VCR follow (Table 1.1).

Table 1.1: Regional Planning, EA, EA Follow-Up and VCR

1) Regional Planning	Involves the development of a land-use or regional plan which "contains a description of the geographic area being studied, identification of issues to be addressed, description of environmental, social and economic goals for the area, and identification of measures to realize the goals" (Brown 1996: 164). Regional planning is relevant to EA, EA follow-up and VCR because of its ability to make, or facilitate, decisions about appropriate uses of land, water and environmental resources in the context of regional social, economic and environmental objectives. While regional plans are not always present in areas containing proposed projects subject to EA, they are intended to provide a management context. These may include the identification of allowable limits, prohibitions on certain substances, or areas of environmental or social sensitivity within which project-specific EA processes are applied.
2) EA (under CEAA)	Is a planning tool to assess and mitigate the adverse biophysical environmental impacts, and in many cases the associated social impacts, of proposed developments prior to their approval (Gibson 2001; 2002). Under CEAA, EA is a process to predict the environmental effects of proposed initiatives before they are carried out. Specifically, an EA: ▪ identifies possible environmental effects ▪ proposes measures to mitigate adverse effects ▪ predicts whether there will be significant adverse environmental effects, even after mitigation is implemented.
3) EA Follow-Up	Includes the management of "events that occur once a project decision/approval has been granted" (Arts and Morrison-Saunders 2002). The principal aim of EA follow-up is to improve project implementation with respect to environmental protection outcomes by ensuring accountability to mitigation/monitoring measures, and to provide feedback on [the conduct of] EA processes. EA follow-up includes, but is not limited to, the "EA follow-up program"—a term defined in CEAA as a program to verify the accuracy of the EA and to determine the effectiveness of EA-mitigation measures (CEAA 1992).
4) Voluntary Corporate Responsibility Practices, Programs, Initiatives (VCR):	Embodies the voluntary commitment of businesses to contribute to sustainable development by working with, and being accountable to, stakeholders including employees, families and the local community. The purpose of VCRs is to improve business relationships and capacity while at the same time improving quality of life of people, and while working to minimize the impacts of those businesses' activities on the environment and society (Gibson 1999). Environmental management systems (EMS), such as those established through the Canadian Standards Association (CSA) or International Standards Organization (ISO), are viewed a component of VCR in this paper. In addition, certain commitments included in the impact-benefit agreement (IBA) negotiated between the proponent and the First Nation also includes VCR practices.

VCR has similar overall goals to EA and EA follow-up in the context of environmental protection. However, the increasingly important role of VCR in supporting sustainable development is often not sufficiently acknowledged or analyzed during EA and EA follow-up. While corporate accountability should not be compromised on the assumption that voluntarism can, or should, be a surrogate for otherwise mandatory EA follow-up or project management in support of regulatory compliance, VCR plays an increasingly important management and sustainable development function. This paper investigates the potential for better linkages and integration between the PMC elements in support of process efficiency and sustainable development.

Many scholars have concluded that the administrative and management gaps between the various PMC components are too large given the otherwise complementary objectives and interactions among them in practice. For example, while Eccleston and Smyth (2002: 8) remark that "questions have been raised as to whether EA and environmental management systems (EMS) are complementary or redundant," they argue that "there is no reason why EIA/EMS should not proceed in tandem [and] EIA-EMS integration is especially appropriate where government decisions are required." Indeed, there is general agreement among experts that when managed separately, or undertaken in a manner that is administratively decoupled, the effectiveness and efficiency of both EA and VCR-based activities can be compromised (Eccleston and Smyth 2002).

1.2 Study Rationale and Design

Many in-depth studies have critically evaluated both efficiency and effectiveness aspects of EA, relative to supporting and fostering sustainable development (such as Gartner Lee 2000 and Gibson 2002). There is general agreement in this research that EA processes

for large-scale development undertakings suffer from efficiency and effectiveness problems (Armour 1991; Nikiforuk 1997; Berkes 1998; Gibson 2000; Mulvihill and Baker 2001; EACSR 2003-2004). Proponents and stakeholders complain about duplication of science or management requirements, timeliness problems, process uncertainty, information and data gaps, and unforeseen costs (Hazell 1999; Pasho 2003; EACSR 2003-2004). While administrative and logistical issues may be symptomatic of failures within project-specific EA itself, some critics (Abraham 1998; Hegmann et al. 1999; Kennett 2001; Eccleston and Smyth 2002) suggest that many of these inefficiencies are a consequence of poor integration between EA and other sustainable development-based policy instruments, rather than regulatory or statutory flaws, per se. These authors highlight the poor information transfer and weak organizational and administrative linkages that exist between EA, EA follow-up and VCR initiatives.

The above sources yield sound and well-referenced analysis, but tend to discuss the administrative linkages between EA, EA follow-up and voluntarism either quite broadly or very specifically. This pertains to the relationship between EA and EMS when applied to production processes such as the International Standards Organization's (ISO) 14001 series. Inasmuch as EMSs, like ISO 14001, do address a portion of a resource development proponent's VCR activities, many other non-EMS voluntary practices are often undertaken at resource development undertakings as well (Fowler 2005). Little research has examined the actual policy and planning interface between i) an EA, ii) EA follow-up and iii) VCR initiatives undertaken once a resource project has begun. Given the voluntary nature of many impact benefit agreements (IBA), and other tools implemented post-EA and post-approval, a

better understanding of these linkages is needed due to the widespread scientific and policy debate that surrounds these issues (Lapalme 2006).

Using the PMC for De Beers Canada's (De Beers) Victor Diamond Project in Ontario as a case study, this paper investigates the potential for better linkages and integration between mandatory and nonmandatory instruments in support of process efficiency and sustainable development. The EA for the Victor project was approved in August 2005 (DeBeers Canada 2006). The project is located on the coast of James Bay in northern Ontario, Canada, near the First Nations community of Attawapiskat (Figure 1). Specifically, the research targets the administrative, policy and management linkages among the three components of the Victor Project's PMC. It primarily focuses on (1) the effectiveness of the EA and the broader PMC in terms of their sustainable development capacity to integrate economic, social and environmental criteria in decision making and (2) stakeholders' confidence in the ability of EA to support other parts of the PMC. But it also focuses on efficiency-based issues related to clarity and duplication in the process, as well as associated administrative linkages between EA, EA follow-up and VCR. By examining linkages *between* the relevant instruments, rather than evaluating the instruments in isolation, the research contributes to the literature on a subject that is largely in its infancy. Note that although Victor underwent a harmonized CEAA-Ontario EA process, the requirements and scope of CEAA are the primary focus of analysis, since this act is the regime that can be triggered in most Canadian jurisdictions.

1.2.1 Objectives of the Study

1) Review the literature on EA effectiveness and efficiency, EA follow-up and VCR (the PMC) to identify issues concerning integration that are salient to practitioners, stakeholders and academics in practice.

2) Use Victor as a case study to examine stakeholders' impressions of the linkages and integration among elements of the PMC in Canada, and to identify potential improvements that would contribute to sustainable development and process efficiency in the study area, and potential future PMCs.

3) Using Victor as a frame of reference, discuss the extent to which an alternative approach to project planning, EA, EA follow-up and VCR could potentially improve the efficiency and effectiveness of both the PMC itself, and its constituent parts in addressing and supporting environmental, economic and social interests and sustainability in remote, resource-dependent communities and regions.

1.2.2 Advancing Research

This project undertakes a more detailed and specific analysis of the PMC in Canada than is currently available. Much of the research that exists outside of Canada is very broad, or focuses on specific instruments such as the relationship between EA and efficiency-based EMSs. By using Victor as a case study, the findings of these other sources are tested in an empirical examination of a large-scale EA process in Canada. This research considers the short- and long-term management context of key issues dealt with at a particular project on the ground over time: from project initiation, to development, to operation, closure and eventual decommissioning.

Canada is undergoing a significant nonrenewable resource commodity boom. Since most large-scale extractive resource projects trigger CEAA or other EA regimes, regulators in many Canadian jurisdictions remain concerned that they may not have the administrative and personnel capacity to manage adequately the flurry of existing and prospective assessments (Calvert 2006). Research into process efficiency and effectiveness issues across and within the PMC may help to alleviate some of these administrative concerns by identifying specific problems and possible opportunities for their amelioration.

VCR is gaining considerable popularity in the natural resource sector, through corporate social responsibility (CSR) strategies, industry association stipulations, international pressures, memoranda of understanding, EMS and other commitments. Despite the popularity of VCR, some observers remain sceptical of the *voluntary* nature of these approaches; they criticize the ad hoc, inconsistent and often profit-dependent nature of voluntarism, questioning its environmental or social effectiveness. This criticism is particularly true if VCR is undertaken as a strategy to deflect, or reduce, existing or prospective regulatory burdens (Gibson 1999; Clausen and McAllister 2001). As the Victor project is recent and large scale, it represents, to a certain extent, the practical and administrative realities of current EA practice at the federal level in Canada. In addition, it also involves the current application and planning of VCR through various instruments in the context of natural resources. An examination of Victor as a base case will establish a precedent such that other EAs, proposed EAs, or PMCs, can be examined with a similar lens of analysis.

1.2.3 Case Study: The Victor Diamond Project

De Beers' EA for the Victor Diamond Project is an ideal case study for the proposed research. As a recent assessment of a major mining project conducted in accordance with CEAA, as well as the Ontario EA process, Victor exemplifies current challenges within large-scale EAs under CEAA. The project's final approval and permitting in 2005 and early 2006, were sufficiently recent that stakeholders' memories of the process were fresh when they were interviewed.

DeBeers is one of the world's largest mining and gemstone companies, with a net worth of over US $40 billion (Newmarch 2006). The company possesses a comprehensive VCR framework through its environmental and social policies and its adherence to various international agreements, such as the UN Global Compact (De Beers 2007). Given De Beers' multinational presence, social and environmental reputation, and the project's capital costs of CAN $982 million, Victor provides a representative and current example of how the PMC operates in Canada.

The study is also relevant for Aboriginal peoples and local, regional, provincial and territorial governments. Victor will be the dominant employer of Aboriginal (including First Nations) peoples in the region. Over 190 members of the Attawapiskat First Nation will be employed in the 400 permanent jobs offered at the project (De Beers 2007). As highlighted below, First Nations and other local people in the project region are concerned about potential project impacts, including the detrimental effects of pollution on fish and wildlife, water quality and the impacts of noise on the human and natural environments, among others (Canada 2005). Although Victor is not yet operating—its follow-up program is not in place and many of its voluntary instruments will not be operational until construction is

complete—it is a useful case study. Project stakeholders were engaged both during and immediately after key stages of the PMC, such as in the EA (complete) and implementation of the EA follow-up program (ongoing).

1.2.4 Brief Overview of Study Methods and Evaluative Framework

To select an appropriate case study for analysis of the PMC, a series of comprehensive study-level EAs were examined on the Canadian Environmental Assessment Agency's website. The Victor Project was selected because (1) its EA is recent, enabling fresh stakeholders' perspectives to be articulated, (2) it is a large-scale undertaking which presents a wide range of environmental, social, economic and sustainable development issues and challenges, and (3) VCR initiatives are already being planned, thereby creating a suitable context in which to assess this final component of the PMC. Another key reason for examining Victor is that it was assessed as a comprehensive study under CEAA, and was therefore devoid of many of the broader social and sustainable development impacts and considerations to which public panel review assessments may be subject.

Drawing on an extensive literature review of published and unpublished sources pertaining to the improvement or integration of EA, EA follow-up and VCR, an evaluative framework was developed to A) evaluate and critique the current approach to EA, EA-follow-up and VCR along the PMC, and B) identify the effectiveness, efficiency and integration of these instruments. This framework formed the basis for an interview questionnaire that was used to conduct semistructured interviews of key informants involved with the project (chapter 3).

The four main themes, or categories, of the evaluative framework explore a number of questions related to environmental, social and economic issue identification. These include key aspects of stakeholders' relations including trust and confidence; the ability and capacity of EA follow-up and VCR to provide ongoing management functions; and overall integration, effectiveness and efficiency of the PMC and its component parts. A summary of the framework's key questions and components follows:

Issue Identification (Social, Economic, Environmental): Did the Victor EA effectively identify both compliance requirements and key environmental, social and economic issues and impacts in support of EA follow-up and VCR?

Stakeholder Relations: Do stakeholders trust each other to meet their EA obligations? Are stakeholders confident in the proponent's ability and intent to undertake effective environmental and socioeconomic management measures in EA follow-up and VCR?

EA Follow-up and VCR Providing Ongoing Management Functions: Did the EA gather and identify all the necessary baseline data, performance and other mechanisms necessary to effectively design and implement EA follow-up and VCR in support of sustainable development?

Overall Integration, Effectiveness and Efficiency of the PMC: Were the different elements of the Victor PMC efficiently and effectively integrated, and what sustainable development benefits will these elements of the PMC have, based on the manner in which they were undertaken?

The rationale for the framework's themes is explained in chapter 2. Methods used to design and apply this framework consist of (1) reviewing key documents and literature such as government reports, discussion papers, academic journal articles, speeches and proceedings, and (2) interview questionnaires with key informants who were directly involved with the Victor EA and EA follow-up processes. These informants include representatives of participants in the EA: an anonymous participant; the consultant to the First Nation, representatives of three government agencies and two representatives of the proponent.

1.3 Structure of the Report

The report is divided into four chapters. Chapter 1 is the introduction to the study, which provides an overview of the study rationale and purpose. Chapter 2 covers the background, including information on the efficiency and effectiveness of EA, EA follow-up and VCR, as well as the literature on the existing and proposed integration among some, or all, of the PMC elements. The last part of chapter 2 overviews the study methods, including the interview questionnaire and the evaluative framework used to design and evaluate the responses by key informants. Chapter 3 demonstrates the results of the primary research, including (1) the degree to which respondents agree or disagree with the questions under each of the four themes in the evaluative framework (Likert scores), (2) the reasons the respondents feel the way they feel, and (3) respondents' recommendations for improvement. Finally, chapter 4 covers the conclusions and recommendations. In this final chapter, the results are synthesized and compared with some of the broader conclusions and observations in the literature about EA, EA follow-up and VCR. Recommendations are made on both a

policy and management level, to help improve the efficiency and effectiveness of future PMCs, in support of long-term regional sustainability.

CHAPTER 2: BACKGROUND

This section covers both the literature overview and the study methods. The background literature review includes the following topics.

1) **Federal EA in Canada: Process Effectiveness** explains that sustainable development is the fundamental purpose of the *Canadian Environmental Assessment Act* (CEAA 1992). Accordingly, various sources of literature on sustainability-based EA are reviewed and discussed, together with critiques that question the capacity of CEAA to meet its goal of sustainable development. The objective of this section is to assist in the critical analysis and evaluation of both the status quo and alternative assessment models.

2) **Federal EA in Canada: Process Efficiency:** discusses previous evaluations of the efficiency of the EA process for large-scale, federally administered EAs under CEAA in Canada.

3) **Federal EA in Canada: EA Follow-Up:** describes the theory and practice of EA follow-up in Canada, discusses some examples and highlights key barriers to follow-up and some recommendations in the literature in support of more effective follow-up.

4) **Voluntary Corporate Responsibility (VCR):** covers the origins and applications of VCR, with specific reference to the Victor project and natural resource development.

5) **The relationship between EA, EA Follow-up and VCR along the Project Management Continuum (PMC):** explores how each policy instrument operates

individually and how they operate collectively as the PMC, citing the Diavik Diamonds Project case study as an example.

6) **Rationale for Stronger PMC Integration: Studies from Australia and Canada:** draws on examples of studies in Canada and Australia to explore why greater integration along the PMC could result in environmental, social, economic and administrative benefits in support of the sustainable development goals identified as a fundamental purpose of CEAA, and in 1) and 2) above.

7) **The Victor Project Description:** explains the Victor Project and its regulatory regime, and sets the stage to develop a framework for semistructured interviews. This section identifies the relevance of these key themes with respect to the case for more efficient and effective PMC integration.

8) **Methods:** gives an overview of the primary and secondary research methods used in the study.

2.1 Federal Environmental Assessment in Canada: Process Effectiveness

2.1.1 Criticisms of Project-Specific EA in Canada

The *Canadian Environmental Assessment Act* (CEAA) states that federal EA is a "planning tool" to "achieve sustainable development by conserving and enhancing environmental quality and by encouraging and promoting economic development that conserves and enhances environmental quality" (CEAA 1992). It is therefore logical to conclude that the "effectiveness" of an EA process should be gauged on its ability to foster sustainable development through the protection of environmental and social systems and the advancement of inter and intragenerational equity and well being. Yet, no description of

what constitutes sustainable development or sustainability is provided in CEAA, nor does the act explain how its focus on environmental protection contributes to the already well-established social and economic drivers of sustainable development.

Often, EA is "conceived narrowly as the identification and evaluation of actual or anticipated biophysical effects resulting from a project or other undertakings" (Watson and Agnolin 2001: 4). Although Lapalme (2005) and others argue that such narrowness is by design so as to limit administrative and legal complications, others suggest that many of the legal and administrative complications associated with EA approvals could be reduced if broader consideration of socioeconomic, cultural and sustainability issues were to accompany biophysical considerations (Gibson 2002).

Before focusing on specific issues of EA design and inclusiveness, however, it is important to identify some common criticisms of project-specific EA at the federal level in Canada. These criticisms are not discussed exhaustively here due to their adequate coverage elsewhere (Nikiforuk 1997; Hazell 1999; Gibson 2002). Criticisms include:

- *Exclusive focus on biophysical impacts* through a limited definition of "environment"—to the exclusion of social, socioeconomic, cultural and political impacts—except to the extent that they arise from environmental impacts. Thus, important issues that are critical to regional well being can be ignored in project decisions (Hazell 1999; Gibson 2002)
- *Limited guidance provided by the Canadian Environmental Assessment Agency* with respect to how to conduct EAs when responsible authorities (RAs) are ill equipped in resources and general process knowledge to conduct and lead reviews.

- *Proponents and RAs are granted too much leeway* to determine the initial scope of a project and its assessment, resulting in limited assessment criteria and exclusion of key impact considerations (Gibson 2002)
- *Central test of the act is not met,* by only minimizing and mitigating impacts rather than contributing to net gains or an improved environment (Gibson 2002 in CELA 2003).
- *CEAA inherently but often erroneously purports to support sustainable development* by a proponent demonstrating compliance through impact mitigation alone. Alternatives, including methods of proceeding with a project and alternatives to the project itself, are supposed to be identified; however, the act usually fails to consider whether the social or economic need for a project can be met through other means (Stiff 2001; Gibson 2005).
- *Duplication of CEAA and provincial regimes remains a problem* vis-à-vis duplication of parallel provincial requirements as certain federal triggers on CEAA's *Law List*. In an opposite vein, sometimes the federal government's responsibilities for a project are more limited than other jurisdictions' responsibilities, yet the act affords the federal government considerable power to modify and change the scope of a project and its assessment to satisfy what might be a narrow statutory requirement. As a consequence, time delays and administrative problems are experienced (MAC 2002).

2.1.2 Project-Specific EA and Sustainability-Based Decision Criteria

In a now-dated but scathing review of CEAA entitled "*The Nasty Game: the Failure of Environmental Assessment in Canada*", Andrew Nikiforuk concluded that "policies and programs whose impacts could be more ruinous than any one project are excluded from the Act" (1997: 13). By default, policy instruments that may be critical to the future of a

proposed project and broader regional development—such as land-use planning—generally play no formal role in the conduct of EA unless specific provisions are made to do so. Much research supports increasing emphasis on the relationship of EA to its broader decision-making and environmental management contexts to increase the usefulness and effectiveness of an assessment. Indeed, for sustainable development to be defined on a regional scale, ". . . objectives and constraints need to be specified for each region" (Noorbakhsh and Ranjan 1999: 284).

The articulation of key sustainability criteria helps to reveal a disconnect between CEAA's policy intent and the impressions of practitioners and scholars about how well the principles of sustainability are actualized on the ground. To develop the rationale in support of a more integrated approach to EA, EA follow-up and VCR, Gibson's work on developing criteria for sustainability in EA is used throughout this paper as a general lens for analysis.

EA is not a proactive planning tool. According to Gibson, EA processes should be

> anticipatory and forward looking, integrative, often flexible, and generally intended to force attention to otherwise neglected considerations, [but] few EA processes are designed to address human and ecological effects within complex systems . . . and few emphasize attention to maximizing long term improvements (Gibson 2001: 2).

In other words, "assessment requirements must encourage positive steps—towards greater community and ecological sustainability, towards a future that is more viable, pleasant and secure" (Gibson 2001: 1). Gibson and his colleagues argue that the use of sustainability-based "decision criteria" in EA is critical to enable a proposed project to contribute toward such a future, especially in resource-dependent regions that may be prone to boom-bust economic cycles.

Myriad interpretations of sustainability and sustainable development exist, but most acknowledge, or build on, the Brundtland Commission's *Our Common Future*. This is the landmark report of the World Commission on Environment and Development (WCED 1987). It defined sustainable development as an approach to development that is socioeconomically equitable within and between generations, and does not detract from environmental wellbeing. Building on a host of sources and primary research, Gibson and his colleagues established seven key principles for sustainability, chosen to advance the use of sustainability-based decision criteria in EA (figure 1.2) (Gibson 2001). These principles are used in this paper to assess *effectiveness* considerations with respect to the Victor EA. Efficiency considerations, which build on process efficiency and certainty case studies, are included in the following section prior to the more focused discussion about EA, EA follow-up and VCR.

Table 2.1: Gibson's Seven Principles of Sustainability

Integrity	Build human-ecological relations to maintain the integrity of biophysical systems: 1) Understand complex systemic implications of human activities 2) Reduce human threats to system integrity and life-support viability
Sufficiency & Opportunity	Ensure that people have opportunities to seek improvements to their lives in ways that do not compromise future generations' possibilities for sufficiency and opportunity
Equity	Ensure that peoples' choices are pursued in ways that reduce gaps in sufficiency and opportunity between the rich and the poor
Efficiency	Reduce overall material and energy demands and other stresses on socioecological systems: doing more with less, fostering employment and wealth generation in ways that reduce demands on resource stocks, and pressure on ecosystems

Democracy and Civility	Build capacity to apply sustainability through a more robust package of market, administrative and policy instruments: 1) Build capacity to mobilize societal actors to be effectively involved in decision making. 2) Enable governance that can respond to complex, intertwined conditions.
Precaution	Respect uncertainty, avoid risks of serious or irreversible damage to ecosystems, societies and economies and manage for adaptation.
Immediate and long-term integration	Apply all principles of sustainability in a manner that seeks mutually supportive benefits.

Adapted from Gibson 2001: 16

Gibson (2001) further stated that incorporating sustainability principles on a practical and applied basis requires key improvements and adjusted roles for EA and its associated tools and instruments, including:

- Using strategic-level assessments to clarify sector and area-specific sustainability principles, objectives and criteria.
- Developing generic guidance documents on methodologies for sustainability assessment that consider industrial and local economic, social and ecological particularities and pressures.
- Providing case-specific guidance to proponents prior to, and during, project deliberations.
- Ensuring transparency and public involvement when sustainability principles for a region or community are developed.
- Clarifying all rules for the evaluation of effects, alternatives, mitigation, and enhancement measures.

- Developing approaches to monitor the implementation of approved undertakings to ensure accuracy of sustainability changes, and to focus attention on adaptive mitigation and enhancement measures.

Complementing Gibson's seven principles are the "seven questions to sustainability", identified by the International Mining, Minerals and Sustainable Development (MMSD) initiative of 2001 – 2003 (IISD 2002). These principles were developed as a sustainability assessment guideline with which to ask important questions of mining or other nonrenewable resource projects prior to their assessment and approval.

Table 2.2: The MMSD's Seven Questions to Sustainability

1. Engagement
• Are processes of engagement committed to, designed and implemented that:
  • Ensure all affected communities of interest (including vulnerable or disadvantaged sub-populations by reason of, for example, minority status, gender, ethnicity or poverty) have the opportunity to participate in decisions that influence their own future; and
  • Are understood, agreed upon by implicated communities of interest, and consistent with the legal, institutional and cultural characteristics of the community and country where the project or operation is located?

2. People
• Will the project/operation lead directly or indirectly to maintenance of people's well-being (preferably an improvement):
  • During the life of the project/operation; and
  • In post-closure?

3. Environment • Will the project or operation lead directly or indirectly to the maintenance or strengthening of the integrity of biophysical systems so that they can continue in post-closure to provide the needed support for the well-being of people and other life forms?
4. Economy • Is the financial health of the project/company assured and will the project or operation contribute to the long-term viability of the local, regional and global economy in ways that will help ensure sufficiency for all and provide specific opportunities for the less advantaged?
5. Traditional and Non-market Activities

- Will the project or operation contribute to the long-term viability of traditional and non-market activities in the implicated community and region?

6. Institutional Arrangements and Governance

- Are the institutional arrangements and systems of governance in place that can provide certainty and confidence that:
  - The capacity of government, companies, communities and residents to address project or operational consequences is in place or will be built; and
  - This capacity will continue to evolve and exist through the full life-cycle including post-closure?

7. Overall Integrated Assessment and Continuous Learning

- Has an overall evaluation been made, and is a system in place for periodic re-evaluation based on:
  - Consideration of all reasonable alternative configurations at the project level including the no-go option in the initial evaluation;
  - Consideration of all reasonable alternatives at the overarching strategic level for supplying the commodity and the services it provides for meeting society's needs;
  - A synthesis of the factors in this list of questions, leading to an overall judgment that the contribution to people and ecosystems will be net positive over the long term?

Adapted from: IISD 2002: 12

2.1.3 Regional Planning and Knowledge in Sustainability-Based EA

Numerous authorities (Gibson 2001; Kennett 2001; Ross 2004) state that without adequate local and regional knowledge of environmental, economic and social and cultural conditions and sensitivities, it is impossible to determine and shape a project's actual contribution to sustainable development. The assessment and approval processes for two recent diamond-mining projects in remote Canada—the Diavik and Ekati projects in the Northwest Territories—reveal the consequences of inadequate or nonexistent regional planning initiatives in remote areas. Although the Diavik and Ekati assessments can be lauded for their extensive environmental and socioeconomic monitoring and reporting, efforts to hire locally, and commitment to triggering secondary spin-off industries, these accomplishments really came only after their EA processes had concluded and key development deficiencies were flagged. Volumes of material were compiled during the EA

and permitting processes for these mines, covering everything from their immediate and peripheral biophysical environments to community economic, cultural and health concerns. Yet, neither proponent had access to a formal mechanism with which to acquire or exchange their regional baseline information, or other pre-existing data. What makes this lack of integration surprising from an environmental impact perspective is the negligible distance—30 km—between the projects (Werniuk 2006: 16). The EAs for Diavik and Ekati were two of the most expensive, lengthy and complicated assessments in Canadian mining history (Arnott 2000). Indeed, some regulators attribute the lengthy approval period to both the lack of available regional and sub-regional socioeconomic and ecological baseline data and uncertainty in the regulatory process (Donihee 1999: 2).

2.1.4 CEAA: Process Effectiveness and Sustainability-Capacity

As part of its effort to promote best practices in EA and sustainable development, the Canadian Environmental Assessment Agency (CEA Agency) sponsored a workshop in early 2004 on better integrating sustainability considerations into screenings, comprehensive studies, and panel reviews under CEAA. Stephen Hazell, the keynote speaker who led the team that wrote CEAA prior to its promulgation in 1995, made suggestions on how to improve the integration of sustainable development in EA. Whereas Gibson's "principles" are conceptual and goal oriented, Hazell's drivers of sustainability are more practical and applied. For Hazell, EA must:

1) Demonstrate both socioeconomic and environmental benefits of a project
2) Measure and articulate these benefits
3) Demonstrate the value of the EA to proponents and decision makers

4) Engage the public in a meaningful way (Hazell in Stratos 2004: 3)

The above criteria were applied during the CEAA panel review completed in 1998 for the Voisey's Bay Mine and Mill Project in Labrador. Lessons learned from a sustainability perspective include the importance of addressing uncertainty, taking into account sustainable development considerations when a project description is formed, and the need to integrate relevant political, cultural and social factors. These may involve issues such as land claims disputes and their effects on land use allowances in advance of an EA (Torrie in Stratos 2004: 5).

Despite significant political challenges, the Voisey's Bay project was one of the first federal EAs to introduce what Gibson calls a "higher test" for sustainability in EA (Gibson 2003). After concluding the assessment in 1998, the project's approval required evidence of net social, economic and environmental benefits, and the capacity to support well-being among the region's peoples (Gibson 2003: 1). While conventional EAs under CEAA usually focus on the mitigation of adverse *biophysical* effects, the Voisey's Bay Panel understood the significance of the *socioeconomic* sensitivities of the region. The higher test is apparent in the panel's statement that it would consider "the extent to which the undertaking may make a positive overall contribution towards the attainment of ecological and community sustainability, both at the local and regional level" (VBNC 1999: ii in Gibson 2002). There was an inextricable relationship between the project's projected lifespan and people's long-term socioeconomic opportunities. Accordingly, project life-cycle considerations led to the choosing of a more expensive, 6,000 tonne per day operation that would last 30 years and provide more widespread economic benefits than the more cost-efficient alternative, which was a 20,000 tonne operation that would last only 7-10 years (VBNC 1999). That the

Panel's directions were capable of inducing a large mining company to change its preferred option, but still build an economic case for an alternative option, set a precedent for the application of sustainability decision criteria in EA approvals.

The Voisey's Bay Panel Review is unusual. This review was undertaken by a panel of experts appointed by the Minister of the Environment, who demanded that the EA demonstrate the ability of the project to facilitate net gains in the region. The problem, as maintained by the literature (Nikiforuk 1997; Hazell 1999; Gibson 2001; Morrison-Saunders 2004), is that EA practitioners in Canada—including regulators, consultants, proponents, and other communities of interest—are rarely mandated or equipped to practice "sustainability assessment" (SA) as an evaluative planning tool. In addition to significant administrative and logistical rearrangements, substantive policy changes are also necessary to evolve "EA" into "SA" in any coherent manner.

> The focus needs to shift from mitigating negative environmental effects to broader pursuit of net regional gains to people and no net-loss to the environment through the full policy-project cycle – from critical examination of needs and purposes, through selection of the best alternative, to adaptive design and implementation…[thereby bridging] to a more sustainable future. (Gibson 2003: 3)

2.2 Federal Environmental Assessment in Canada: Process Efficiency

Beyond the fundamental design issues concerning the *effectiveness* of the CEAA process as a means to achieve sustainable development, federal EA continues to be the target of extensive criticism from both nongovernmental and industrial sectors over process efficiency failures (Pasho 2003). In a speech delivered after the first Five-Year CEAA review in 2002, the Minister of the Environment acknowledged: "there have been problems with the predictability, consistency and timeliness of the EA process [and] the quality of

some assessments" (Anderson 2002: 3). Although the Government of Canada implemented changes to improve process certainty with its 2003 CEAA amendments, efficiency problems remained. In an effort to create innovative policies, a federal EA coordinator position was introduced, as well as the use of a "single Comprehensive Study track" to help avoid triggering a panel review once a comprehensive study had commenced (CEAA 2004). As outlined by a special External Advisory Committee on Smart Regulation, some of these problems included: 1) poor coordination among various players, 2) insufficient harmonization with other regulatory regimes, 3) lack of clarity over how EA follow-up should be undertaken and the responsibilities of various stakeholders, 4) lengthy and costly project review periods, 5) administrative inconsistencies among jurisdictions regarding the administration of *Law List* triggers such as the *Fisheries Act*, and 6) costly litigation after EA approvals (EACSR 2003-2004).

To help improve federal capacity to manage efficiently the recent onslaught of EAs arising from the commodity boom, the Deputy Minister of Natural Resources Canada (NRCan) was appointed by the Conservative government in late 2006 to "lead an interdepartmental task force of major regulatory and EA departments and agencies to improve the effectiveness and performance of the regulatory system. The task force is advancing comprehensive solutions to enhance efficiency, accountability and predictability of the system, while strengthening the government's ability to address critical social and environmental issues" (Lunn 2007: 1). One of the more notable efforts of this initiative is the development of a Major Projects Management Office (MPMO), in which federal review responsibilities for project EAs, regulatory processes and follow-up arrangements will be coordinated and administered by a central body. The MPMO is intended to reduce

duplication and inefficiencies within the process, while also enhancing process effectiveness by better coordinating Aboriginal engagement and consultation efforts (Doyle 2007).

With respect to efficiency issues, this paper focuses on the relationship of the EA to both EA follow-up and the ongoing practice of environmental management and voluntary corporate responsibility that follow completion of an EA. The parameters that are tested include, for example, the overall relationship of EA to EA follow-up and VCR and vice versa, the availability of baseline data for follow-up, the degree to which the EA supports future EA follow-up, and the extent to which follow-up will be able to provide ongoing management functions for the project in support of regional sustainability.

2.3 Federal Environmental Assessment in Canada: EA Follow-Up

In CEAA, "EA Follow-up" is defined as a means to a) "verify the accuracy of the environmental assessment of the project", and b) "determine the effectiveness of any measures taken to mitigate the adverse environmental effects of the project" (CEAA 1992: s. 38). The role of EA follow-up is to be distinguished from regulatory compliance monitoring, which only works to verify the proper implementation of mitigation measures (CEAA 2002).

For larger comprehensive study and panel reviews under CEAA, "Follow-Up Programs" are the primary means by which the act and its administrators are held accountable to their decisions and stated objectives for projects—through monitoring, reporting and other post-approval management activities. The Canadian Environmental Assessment Agency clearly distinguishes EA follow-up from compliance monitoring:

> . . . a compliance monitoring program verifies the proper implementation of all such measures whereas a follow-up program is used to determine the accuracy of EA conclusions and the efficacy of the required mitigation measures. Compliance

monitoring on its own does not satisfy the requirements of a follow-up program (CEAA 2002).

2.3.1 Definition and Structure of EA Follow-up

In "*Assessing Impact—Handbook of EIA and SEA Follow-up*", Angus Morrison-Saunders and Jos Arts (2004: 3) define EA follow-up as "an umbrella term for various EIA activities, including: monitoring, auditing, ex-post evaluation, post-decision analysis and post-decision management" (2004: 3). They also include:

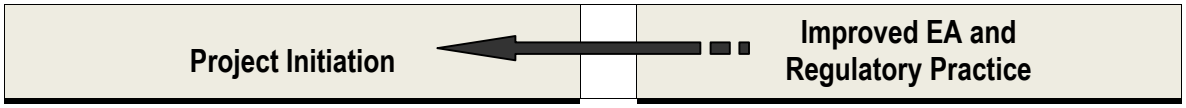
1) *Control of projects and their environmental impacts* by using compliance audits to ensure that project implementation meets approval conditions and environmental standards.

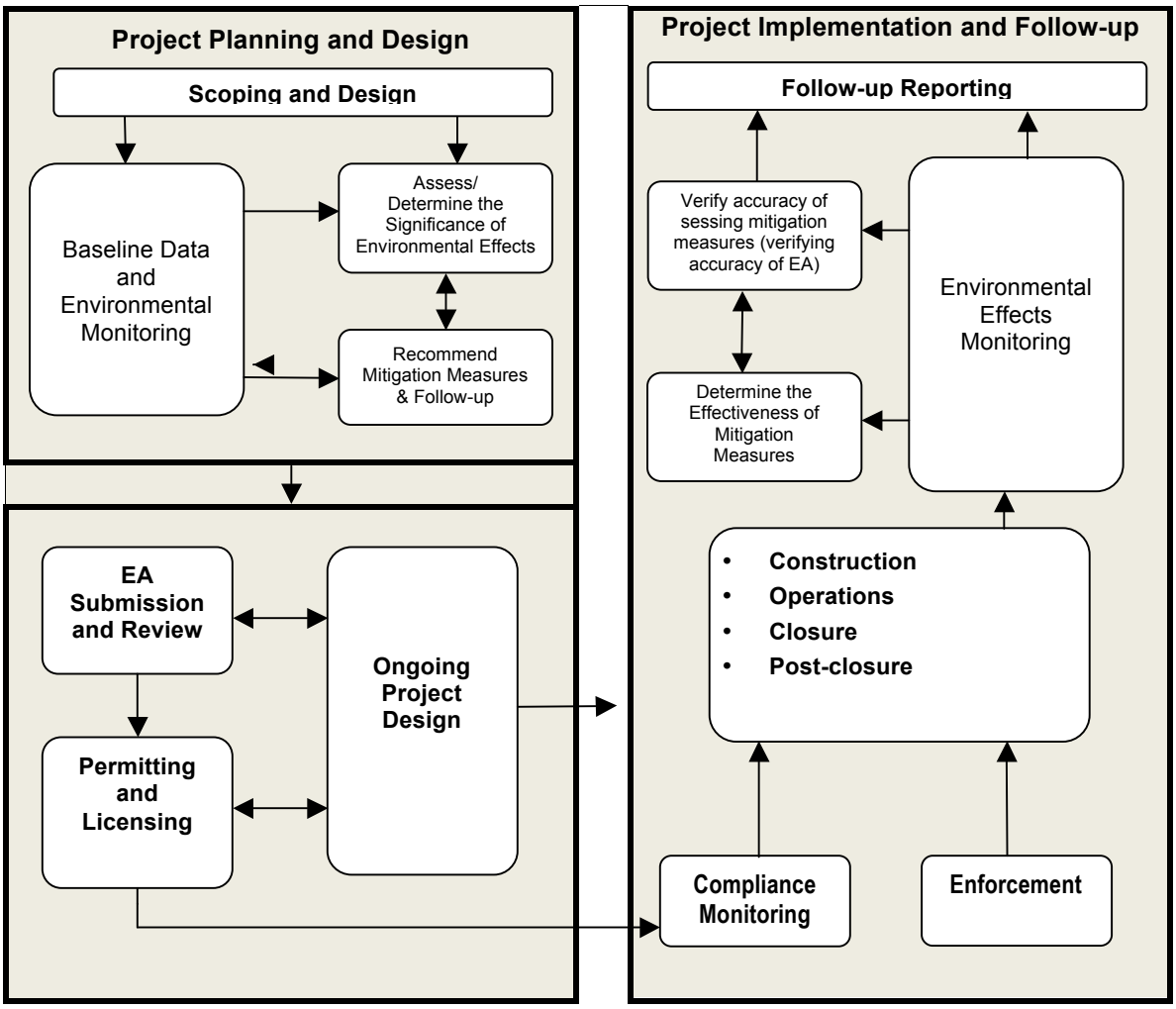
2) *Improvement of scientific and technical knowledge* to improve predictive capacity and assessment of baseline cause-effect relationships.

3) *Improvement of public awareness and acceptance* by reducing faulty perceptions and allaying public concerns by demonstrating compliance and a commitment to address problem areas requiring improvement.

4) *Integration with other information*: EIA follow-up programs may dovetail with other environmental information such as state of the environment reports and EMSs. They may also contribute to greater understanding of area-wide effects as well as detailed project operations. The EA and EA follow-up relationship is shown in figure 2.1.

Figure 2.1: The EA-EA Follow-up Interface





Adapted from: Gartner Lee 1999: Section 3

2.3.2 Limitations and Barriers of EA Follow-up

Due to their dynamic, potentially uncertain, and evolving nature under changing environmental or project conditions, follow-up programs can be prone to difficulties with implementation barriers. The following list, adapted from Arts and Morrison-Saunders (2002: 16-17), summarizes these obstacles:

1) *EA Limitations*: Building on the maxim that follow-up is only as good as the EA behind it, a critique of follow-up is that "the lack of scientific rigor during EA hampers

comparison with post-decision monitoring data", despite its ambitious intent. In turn, failures in the EA process lead to failures in follow-up activities.

2) *Lack of Guidance*: Few authoritative documents exist on how to conduct EA-follow-up, in Canada or elsewhere. This makes it difficult for one practitioner or project to reference or establish authority in such as way as to ensure that management practices can be replicated by others.

3) *Legislative Deficiencies*: Few jurisdictions require follow-up by law; many that do so, fail to adequately report on follow-up activities, making it difficult to establish a collective sense of what constitutes good or poor follow-up as a discipline.

4) *Demands on Financial and Human Resources*: To be executed well, EA follow-up requires significant resource commitments by both the proponent and regulatory agencies. In order be to allotted these resources, follow-up activities must prove their value to environmental and corporate management, a task that remains challenging without sufficient resource allotments in the first place.

Another widely referenced barrier is the post-decision impasse (Arts and Morrison-Saunders 2002). During the EA, obligations are usually clear: a proponent's job is to surmount statutory and regulatory hurdles to prove a project's credibility; conversely, a regulator's job is to ensure that laws are followed and public and environmental needs are met. Some proponents, however, believe that EA follow-up activities can produce redundancy, particularly if a project's scope has already been modified during the EA to incorporate environmental sensitivities and a compliance monitoring process is in place. In their perennial lobbying of governments about the burdens of regulatory red tape, some private sector proponents see redundancies within EA and EA follow-up as a *cost* of doing

business and a detractor to regulatory sensibility, rather than an *opportunity* for continual improvement and innovation (MAC 2001). While it is not the responsibility of environmental regulatory regimes to accommodate business demands simply to increase profits, truly effective regulation should work to reconcile a variety of public policy objectives, including those within economic and socioeconomic spheres (CEAA 2004).

To improve the cost-effectiveness and overall policy relevance of EA follow-up, Marshall (2001, 2002) cited and researched examples where "voluntarism and self-regulation in the form of environmental management systems has been used successfully to drive EIA follow-up activities". This helped to "fill gaps or deficiencies in government regulation for EIA follow-up" (Marshall 2001, 2002 in Morrison-Saunders et al. 2003).

2.4 Voluntary Corporate Responsibility (VCR)

Voluntary corporate responsibility is known by many different names—corporate sustainability, triple bottom line management/accounting, corporate responsibility (CR) and corporate social responsibility (CSR), among others. As used here, VCR refers to "voluntary or nonregulatory programs and initiatives undertaken by a company that go beyond the environmental and social performance requirements set by legislation" (Walker and Howard 2002: vii). More broadly, VCR embodies the commitment of business to voluntarily contribute to sustainable development by working with, and being accountable to, different stakeholders including employees, families, local communities and society (Gibson 1999).

In *Voluntary Codes*, Kernaghan Webb expanded on the meaning of voluntarism as activities which are both "intended to control behaviour", and are "to be applied in a consistent manner or to reach a consistent outcome" (Webb 2004: 11). With regard to

natural resources, George Greene, advisor for the international Mining, Minerals and Sustainable Development (MMSD) initiative of 2001-2003, stated that there are four general types of voluntary initiatives in the context of natural resource extraction and development:

1) **Broad guiding principles** are often a first step in defining and affirming a vision for an organization or project. They usually provide a framework for action, but lack specificity.

2) **Process-based management systems** establish a standardized management system to which subscribing organizations must adhere. Such systems tend to focus on how risks are managed, on the expectation that if a company is actively managing a particular issue, it will achieve the performance standard set out by the process in a way that suits the organization. An example is the International Standards Organization (ISO) 14001 EMS.

3) **Performance-based systems** are more prescriptive than process-based management systems and standards. They set minimum performance levels that are compared to specific criteria or targets, leaving less room for interpretation. An example would be the Forest Stewardship Council's (FSC) forestry standard (Gibson 1999).

4) **Process-based systems with performance elements** combine a structured management system with performance requirements. These may encourage a company to develop specific targets, while holding them to account with other standards (adapted from Greene 2002: 4-7).

The success of voluntary initiatives largely depends on key policy and business drivers. For example, some companies engage in voluntary activities because their activities are increasingly in the public eye, and voluntarism is a way of minimizing negative publicity.

Others adopt voluntarism to comply with certain standards, or in response to concerns about the firm's reputation among stakeholders and shareholders—often known as the "social license to operate" (Clausen and McAllister 2001: 13). James Cooney, director of International and Public Affairs at Placer Dome Ltd., stated that if an industry or company wants to establish a measure of security for its investments and sustain a long-term welcome internationally, it ultimately "will be judged by the quality of its performance technically, economically, environmentally, socially and ethically" (Cooney 1996: 22). Where voluntary efforts are involved, six drivers are significant:

- Incentives to reduce costs, especially by cutting resource use and waste generation;
- Desires to avoid, or at least delay, additional regulatory action that would impose undesirable administrative and compliance costs;
- Fear of damage to public image and associated customer, public and investor confidence;
- Requirements imposed by banks and/or insurers who do not wish to inherit; environmental liabilities. An example is the Equator Principles signed by a number of global financial institutions (IFC 2007)
- Demands of suppliers and customers who wish to avoid environmental costs and liabilities, and
- Pressure from fellow industry members, or conditions of membership such as the Mining Association of Canada's *Toward Sustainable Mining* (TSM) initiative.

Adapted from Lynes and Gibson 1998: 19

2.4.1 VCR at the Victor Project

The full extent of voluntary activities at Victor will not be known until the site is operating, but a number of voluntary environmental management strategies and systems are

already in place or being designed. For example, De Beers declared in 2004 its intention of developing an ISO 14001 compliant EMS for the site, which will be merged with the Occupational Health and Safety 18001 standard to provide the link in risk reduction between environmental and human health and safety management (Fowler 2005). In addition, De Beers will follow the Prospectors and Developers Association of Canada's (PDAC) Environmental Excellence in Exploration (E3) guidelines to ensure comprehensive and effective environmental practices at the site. Work is already underway to ensure that the EMS effectively integrates all E3 criteria into its reporting structure (Fowler 2005).

Examples of voluntary environmental initiatives undertaken as part of these broader management systems include a revegetation research project and waste management planning, which incorporates hazardous waste management. Progress on such specific areas is reported quarterly to both the company and the Environmental Management Committee (EMC), a multistakeholder review body established to monitor the environmental effects of the Victor Project. As highlighted by the Vice President of Sustainability and Stakeholder Relations at De Beers, a number of voluntary programs and practices are, and will be, undertaken voluntarily at Victor, simply because they make good business and risk management sense, in addition to their environmental and social benefits (Fowler 2005). Examples of voluntary social and socioeconomic initiatives include a literacy program called "Books in Homes", through which elementary school students get to choose from a selection of books compiled with the assistance of local teachers. To further these efforts, De Beers donated resources to a training centre in the community of Attawapiskat, which will also help improve adult literacy (Fowler 2005).

The most significant policy instrument in which voluntary initiatives will be implemented at Victor is the impact-benefit agreement (IBA)—a contractual and confidential agreement negotiated between De Beers and the local First Nations in the project region. The IBA is designed to help advance environmental, social and economic sustainability in areas not dealt with by the EA, EA follow-up and regulatory compliance instruments.

To demonstrate accountability to voluntary initiatives, each party in the company that is responsible for a different initiative completes a workbook covering financial, legal, social, human rights, health, safety and environmental performance criteria (Fowler 2005). Similar reporting against criteria is done for compliance with E3 principles, mentioned earlier, and the Global Reporting Initiative (GRI). The GRI includes a series of globally applicable sustainability reporting guidelines which recommend specific information related to environmental, social and economic performance. De Beers' adherence to these reporting systems demonstrates its commitment to voluntarism.

2.5 The Relationship between EA, EA Follow-Up and Voluntary Corporate Responsibility on the Project Management Continuum (PMC)

EA policy and practice continue to evolve substantially in both scope and rigour. Although EA itself is intended to be a planning tool that is intended to remain a distinct, but enabling, agent for permitting and future operational decisions, it is not always easy to distinguish where EA and EA follow-up ends and VCR begins. These lines become particularly blurred when a proponent voluntarily adds to, or builds on, regulatory compliance measures or EA follow-up commitments to: a) strengthen the effectiveness of those commitments and requirements, or b) execute an existing or future VCR practice. The Diavik Project illustrates the complex interactions among different components of the PMC.

Diavik is a useful reference point against which to compare Victor, as it is similar in size, produces the same commodity (diamonds), and faces similar socioeconomic, environmental and regional development concerns, such as the economic reliance of Aboriginal communities on a finite and nonrenewable resource.

Galbraith et al. (2007), refer to the environmental and socioeconomic agreements in follow-up arrangements negotiated for projects like Diavik as "*supra*regulatory agreements". These agreements are adopted to address inequities in the EA process. They are legally binding and their implementation may be a condition of project approval, but they are generally not considered legislative (Galbraith et al. 2007). Yet, when examining voluntary vs. regulatory instruments or agreements for Victor, it is necessary to be clear on what these two terms mean. As noted in 2.4.1, IBAs are usually negotiated voluntarily, but confidentially, between mining firms and local stakeholders. Such agreements may offer communities of interest opportunities with respect to royalty sharing, employment, economic development and protection of cultural, social, and environmental resources and values (Galbraith et al. 2007). Although Galbraith et al. consider both IBAs and environmental or socioeconomic agreements as being "*supra*regulatory", many stakeholder respondents to this study (chapter 3) perceived the IBA as the *primary* instrument through which VCR at Victor would be implemented. The IBA's role was, therefore, perceived quite differently as a follow-up vehicle, as compared to the roles of the socioeconomic and environmental agreement(s).

Unlike IBAs, "socioeconomic agreements" are generally negotiated between local governments, a proponent, and the federal and/or provincial or territorial government(s). These agreements may address similar issues as IBAs—including employment or economic

diversification—but also address the many nonbiophysical socioeconomic or cultural impact gaps left unattended by the EA process. "Environmental agreements" are also negotiated, but are usually mandatory in a CEAA-based review, for they often become the vehicle through which the mandatory EA follow-up program is implemented (CEAA 1992).

To develop a better understanding of the value and role of follow-up instruments relative to other PMC components, these instruments are compared against (i) the EA and regulatory process and (ii) VCR initiatives, in the context of some essential project management criteria in the Diavik Project (Table 2.3).

Table 2.3: Key Management Criteria Along the PMC: Case of the Diavik Diamonds Project, Northwest Territories

Key Management Criteria	EA and Regulatory Process	EA Follow-Up Management Agreements	VCR
Addressing gaps in the regulatory process (environmental, social or economic issues and impacts identified in, but not adequately dealt with during, the EA)		√	√
Management actions for specific biophysical environmental impacts and issues	√	√	√
Management actions for specific, non-biophysical socioeconomic impacts.		√	√
Monitoring and reporting on various environmental, social or economic issues	√	√	√
Sub-boundary issues such as wildlife migration corridors and water quality		√	√
Enforcement of commitments by law	√	√	
Project-specific institutions such as independent monitoring agencies		√	√

Management of cumulative environmental, cultural or socioeconomic effects	√	√	√

Adapted from: CEAA 1999

After the Diavik EA process, it was clear that significant regulatory gaps existed in the areas of wildlife, air quality and socioeconomic impacts and benefits (Kennett 2001). Neither federal nor territorial regulatory regimes enabled the identification of adequate mitigation measures for these areas, creating the incentive to use follow-up agreements to compensate for the deficiencies. In a 2001 study of project-specific agreements at northern diamond mines conducted for the Department of Indian Affairs and Northern Development (INAC), Kennett stated that the Environmental Agreement for the Diavik and Ekati diamond projects in the NWT became a defacto mechanism to "provide a holistic or integrated framework for project regulation" (Kennett 2001: 3). He concluded that the monitoring and reporting provisions developed for these agreements became a vehicle for demonstrating the benefits of regulatory compliance. He also stated that this "consolidation mirrors the integrated approach to environmental management adopted internally" (under VCR) ". . . and provides a single external check-list against which a company's environmental management plan can be compared" (Kennett 2001: 6). Based on his extensive primary research with project stakeholders, Kennett suggested "interviewees see consolidated reporting as a way to save time and money where reporting requirements address similar issues but have different timeframes or protocols" (Kennett 2001: 7). Using such agreements to fulfil certain regulatory reporting functions is also seen as having "greater public resonance and instilling more [public] confidence than licenses and permits" (Kennett 2001).

2.6 Rationale for Stronger PMC Integration: Studies from Australia and Canada

Although there are clearly environmental protection benefits of EA and EA decisions, many international and domestic scholars and practitioners recognize that the "traditional command and control approach, backed by clear and strong regulations alone may not be sufficient for EIA follow-up success" (Morrison-Saunders et al. 2003: 46). The effectiveness of EA follow-up is enhanced when results from one [follow-up] program are linked to future decision making and adaptive management (changing project decisions over time to optimize performance based on monitoring feedback) becomes a driver of follow-up activities. The implementation of adaptive management is a critical consideration when optimizing institutional arrangements for successful EA and EA follow-up.

As enablers of corporate accountability, a clear divide may be drawn between the role of regulation and the role of voluntary environmental or sustainable development initiatives. This is a consequence of noncompliance with the regulation bringing more opportunity for sanctions and public recourse than is the case with voluntary arrangements. Yet, some scholars question the ability of project-specific EA to effectively support: 1) EA follow-up, 2) EA process efficiency and 3) the long-term capacity of a project to support sustainability objectives over time. After accounting for the now-common adoption of voluntary programs by the private sector following project construction, many researchers (including Sanchez and Hacking 2002) champion a stronger policy, planning and institutional linkage between EA and voluntarism. This is viewed as a means of strengthening the sustainable development or environmental management capacity of the EA and regulatory process and, in turn, voluntary programs themselves. Indeed, there is recent recognition of the role of EA in post-development environmental management and project performance (Morrison-

Saunders 1996). On an applied basis in specific settings, the implementation of ongoing environmental management systems *after* EA has helped to "overcome obstacles such as failed remedial measures, unexpected project performance problems [and otherwise] poor EIA focus on important issues" (Morrison-Saunders 1996: 9).

Studies by researchers in the 1990s examined development projects in Western Australia to compare the environmental management benefits of mandatory, project-specific EA follow-up with voluntary corporate environmental management initiatives. This research undertaken by the proponent, West Australia Petroleum Property Ltd. (WAPET), was in response to scientific uncertainty during the EA process. Immediately following the development of the Saladin Oilfields in Western Australia in the late 1980s, an adaptive environmental management program was introduced. Although all regulations were followed by WAPET, and EA monitoring reports showed that no "environmental limits" were exceeded, the setting of such limits proved problematic, as they were inaccurate in estimating environmental thresholds. A disproportionate amount of attention was given by regulators and scientists to oil spill probability rather than other pressing environmental concerns such as the disposal of wastewater (WAPET 1992 in Morrison-Saunders 1996). In the end, information collected by the proponent's *voluntary* environmental management plan provided the evidence that additional remedial waste management measures were necessary to avoid adverse aquatic impacts (Morrison-Saunders 1996).

Similar findings have emerged from comparisons of EA and corporate-led voluntary environmental management in Canada. Regulatory requirements are touted by many as being more environmentally effective than voluntary programs due to their mandatory nature and presumed enforceability. Yet, the reverse can also be true. This often occurs if a

proponent is committed to long-term environmental protection or sustainable development and if the adaptive management capacity of its management actions is more attuned to biophysical sensitivities than a one-size-fits-all regulatory target. The reason for this difference is because voluntary measures can be more tailored to local conditions and thresholds than the management limits sometimes presented by prescriptive regulation (Sanchez and Hacking 2002). A good example of this dynamic is the permitting process applied to the Musselwhite gold mine in northwestern Ontario in 1995-1996. One of the primary CEAA triggers for the Musselwhite review was the federal *Fisheries Act*—under which no project is allowed to harm or destroy fish or fish habitat by way of a) physical alteration, or b) the deposition of deleterious substances into fish bearing waters, without a permit (*Fisheries Act*: s. 35, s. 36). According to this provision, and the policies of the Department of Fisheries and Oceans, all proposed projects must be assessed and permitted only after rigorous scientific and policy scrutiny, in order to minimize the effects on fish. Should a proposed project prove unable to avoid such impacts, the proponent may be required to "compensate" by creating habitat elsewhere that is as ecologically productive as that which was lost. The mitigation measures required by project regulators for the Musselwhite Project were implemented as a condition of *Fisheries Act* authorization. The proponent was required to spend hundreds of thousands of dollars to construct an artificial lake, with the hope of supporting a coldwater fish species, but company biologists predicted that the lake's habitat was not suitable to the survival of the species (Clausen 1997). After a brief period, the predictions of company biologists proved to be largely correct as most of the introduced fish died. Only after additional resources were spent as part of the company's *voluntary* environmental management program were biologists able to identify viable species

and habitats that were sustainable to offset what was lost due to decisions made under the environmental regulatory regime (Clausen 1997).

Although the extent to which the regulatory requirements proved to be inappropriate for the environmental conditions in the Musselwhite case may be rare, the case does demonstrate the potential pitfalls of an environmental permitting or EA process that presupposes scientific certainty under *uncertain* ecosystem conditions. What the Australian cases suggest is that many environmental, social or sustainable development issues can only be identified and effectively managed once project operations have commenced after construction. This is well after EA, permitting and follow-up design. All of the examples affirm that adaptive, ongoing environmental management that continues to reflect local environmental and social impacts, needs and sensitivities is a key determinant of a project's environmental footprint, as well as its capacity to promote sustainability.

2.6.1 Logistics of Integrating EA, EMS and VCR

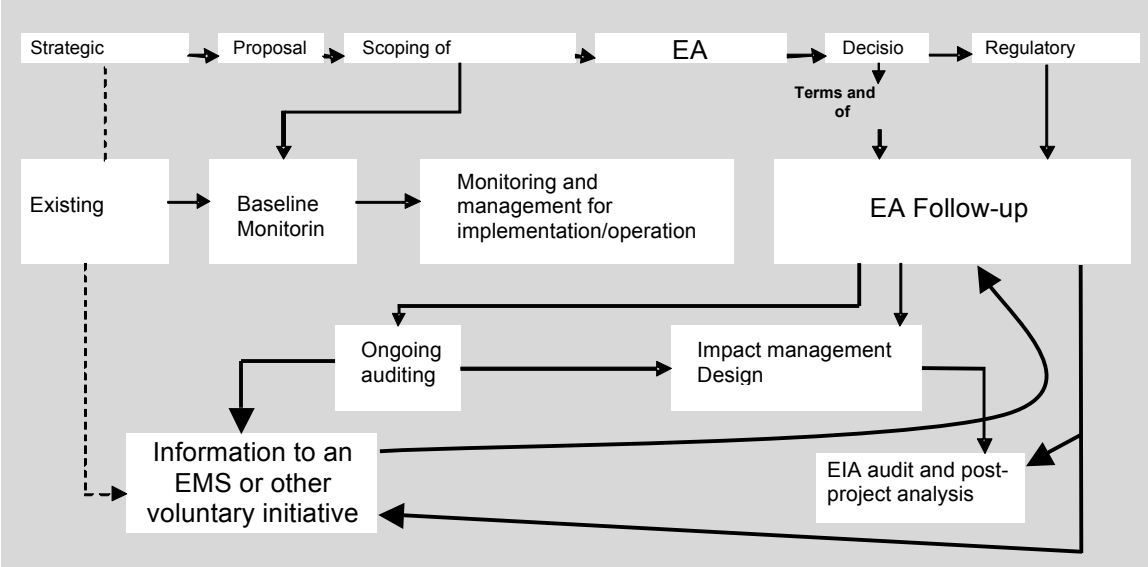
Whereas regulatory targets provide the public and governments with recourse if key environmental limits or rules are breached, enforcement and monitoring of corporate environmental compliance are notorious for being neither well resourced, nor comprehensively implemented by public agencies (American Bar Association 2006). At a remote mining project, a proponent and local communities are often the stakeholders with the greatest knowledge of existing and potential impacts, as well as viable impact prevention or mitigation measures, due to their close connection with, and responsibility for, the local environment. Whether through mandatory EA follow-up or as part of a voluntary initiative, the case studies above and the broader literature suggest that pre- and post-EA environmental and socioeconomic management and planning remain critically important to environmental

outcomes and regional sustainable development. The many mining projects now being proposed in Canada, coupled with their inevitable development of both mandatory and voluntary environmental and socioeconomic programs, suggest that EA and permitting processes should be designed to support the needs of these ongoing programs to maximize sustainable development capacity and administrative efficiency.

Sanchez and Hacking (2002) emphasized how important it is for EMSs—voluntary or otherwise—to address environmental impacts accurately. Since significant resources may be needed to establish and operate an effective ongoing environmental monitoring and management plan after project approval, effective use of the information and stakeholder engagement capacity generated during an EA can help reduce the cost and time required to establish an EMS. There is "considerable common ground between the planning stage of the EMS and a typical EIA process . . . [Both] aim to answer the same questions—what needs to be managed?, and how should it be managed? (Sanchez and Hacking 2002). Predicating key aspects of an EMS on an EA, then using the EMS as a delivery mechanism for EA recommendations and follow-up can be both cost-effective and good policy management. A logistical problem in doing this, however, is that there is often poor linkage between the environmental impact statement produced to gain project approval and the EMS that is implemented once a project is operational (Sanchez and Hacking 2002). A contributor to this lack of integration on the voluntary side is that the operational EMS staff and participants are not always the same as the EA staff and participants; nor do they always have a good grasp of the significance of key issues identified during the EA (Sanchez and Hacking 2002: 27). A contributing factor to this lack of integration on the EA side is that EAs and associated EA reports "often do not provide an adequate basis for the design of management plans…[and

cannot always be] translated into a set of clear procedures and/or instructions" (Sanchez and Hacking 2002: 27). As operational staff may be reticent to base management decisions on prior EA decisions that they deem bureaucratic or poorly investigated, the "available toolkit" including these two instruments could benefit from better integration. "If integrated and applied by a competent team, [EA and EMS] could together deliver cost-effective solutions for better environmental outcomes" (Sanchez and Hacking 2002: 27).

Figure 2.2 Interface of EA, EA Follow-up and EMS



Adapted and modified from: Sadler and McCabe (2000)

To better develop linkages between EA and EMS, or other types of VCR, leading researchers have stated that small adaptations of EA preparation methods and practices make it possible to deliver an EA-EMS combination that is more effective (Sanchez and Hacking 2002: 27). Generally, the most successful mechanisms for linking causal activities to impacts are prediction, assessment and monitoring processes. Therefore, in order to optimize the extent to which an EA can support the establishment of an EMS or another ongoing

voluntary activity, Sanchez and Hacking (2002) recommended the use of the "activity-aspect-environmental impact linkage" approach employed by the International Standards Organization's (ISO) 14001 series of environmental management standards (Sanchez and Hacking 2002: 30). "Environmental aspects" are identified under the ISO standard as the ways in which a given activity can be expected to affect the biophysical or social environment. These aspects are essentially the *pathways* of ecological influence, to be distinguished from the impact itself. This is a key reason why "the success of impact identification is greatly dependent on appropriately subdividing the project into its component activities" (Sanchez and Hacking 2002: 32). This subdivision of components is used to identify and scope the development and implementation of ongoing management activities, as cause-effect linkages have been clearly mapped out. Sanchez and Hacking suggest the use of such mapping techniques in EA to determine the significance of particular impacts to help scope key areas on which an EMS should focus in the future. Many EAs do an inadequate job of establishing baseline data sufficient to enable the future comparison of predicted and actual impacts, suggesting that more detailed mapping could connect these aspects of a PMC (Sanchez and Hacking 2002).

In *The Triple Bottom Line and Impact Assessment*, Frank Vanclay (2004) opines that the field of social, environmental and economic management and reporting within companies could learn much from the experiences of EA and social impact assessment (SIA). Whereas Sanchez and Hacking (2002: 27) state that EA "reports often do not provide an adequate basis for the design of [ongoing] management plans," Vanclay argues that ". . . the social dimension of triple bottom line management is not fundamentally different to the well-established field of impact assessment" (Vanclay 2004: 266). Vanclay explains that much of

the triple bottom line field fixates on corporate reporting, disclosure and accounting alone. However, it could also use impact assessment methodologies to better calculate the economic, social and environmental value corporations are capable of creating or destroying, and to augment that value where possible. Thus he defines the broader field of impact assessment, particularly SIA, as being a "philosophy" about development and democracy, and about the integration of ecological and socioeconomic systems and indicators. For a natural resource project in a remote, resource-dependent region, SIA can illuminate the goals and processes of development, making for easier and more accurate long-term development planning, and more efficient allotment of priorities under voluntary initiatives (Vanclay 2004). Not surprisingly, recommendations for the reconciliation or integration of these historically separate fields of SIA, EA and integrated management mirrors the sustainability assessment preconditions, principles and criteria outlined by Gibson (2001: 8-16).

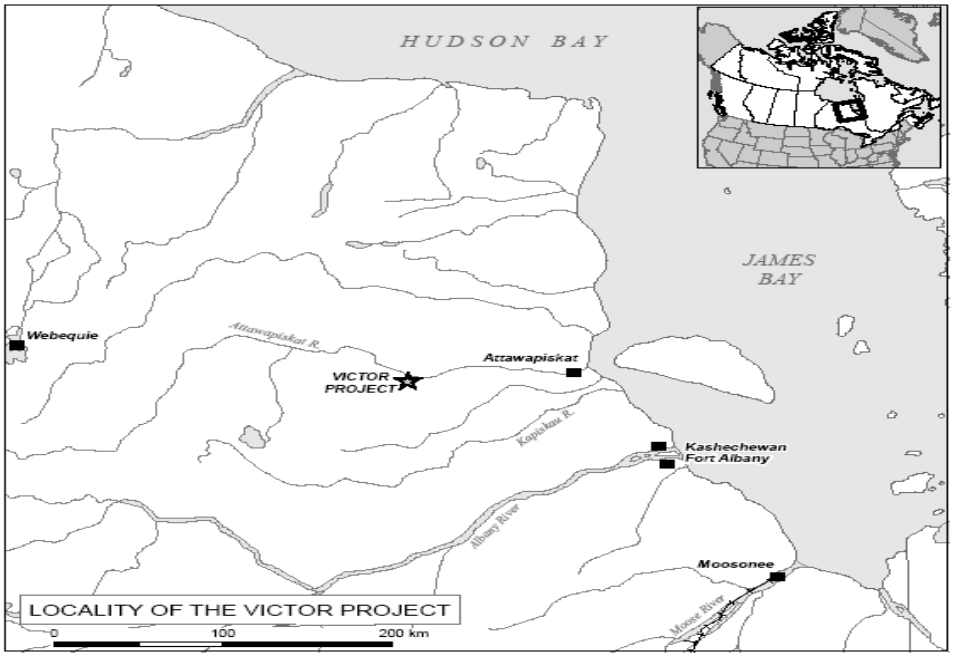
In the operational world of EA practitioners, there is a mainstreaming of impact assessment considerations through environmental auditing and environmental management systems (EMS). "Consumer and citizen demand for EMS accreditation is promulgating the adoption of EMS by businesses" (Vanclay 2004). Many leading companies are "moving from an EMS to a corporate social responsibility framework completely", and environmental and social impact assessment can provide important lessons to triple bottom line VCR practitioners in delivering results and accountability in VCR (Vanclay 2004).

2.7 The Victor Diamond Project's PMC

The history of diamond exploration in northern Ontario dates back to the 1960s, but the beginnings of the Victor project did not materialize until the 1996 discovery of the "Victor" kimberlite (a diamond-bearing geologic formation) in the James Bay lowlands. The

deposit that led to the proposal of the Victor project is situated 100-km west of the Cree village of Attawapiskat, Ontario (Fowler 2006). Advanced exploration in the area revealed the presence of a 25-million-tonne ore deposit lasting 14-17 years, with an average grade of 23 carats per hundred tonnes, valued at $100 CDN per tonne. Victor is expected to produce at least six million carats during its life and will employ 600 people during the three-year construction phase and 400 people during the production phase. A large percentage of the employees will be from surrounding First Nations communities (De Beers 2007).

Figure 2.3: Location of the Victor Project



(Fowler 2006: 5, with permission)

The project infrastructure consists of quarries and a sand/gravel pit, an open pit mine, an ore processing plant, a warehouse and service building, stockpiles of waste rock and processed ore, a water management facility, workforce accommodations, all-weather access roads, an airstrip, fuel and power facilities and storage facilities (Fowler 2006). The on-site

infrastructure is supported by off-site infrastructure such as marshalling yards, winter roads, a fuel pipeline and a construction camp (Lapalme 2004-2006).

2.7.1 Environmental Issues and Impacts: Victor Project

The terrain around the Victor Project is flat and soil drainage is poor. Annual precipitation averages 703 mm, 227 mm of which is snowfall. Bogs, wetlands and muskeg surround an area that is ultimately drained by two creeks. Vegetation is dominated by muskeg, but moose and caribou frequent the project site. Wolves and black bear are also present. Fish consist of walleye, pike, sturgeon and trout; given the shallowness of the water table, potential leaching of pollutants into watercourses could be detrimental for fish and other aquatic and terrestrial flora and fauna (De Beers 2007).

In the comprehensive study report issued by the Government of Canada, a number of important environmental concerns were identified as being critical to the health of the Victor region's ecosystem. For each concern in the comprehensive study report, De Beers is committed to performing against specific sub-criteria. These commitments were made as a means to prevent, limit, control and compensate for, or monitor, project impacts. Examples include holding technical sessions to review hydrogeologic impacts related to groundwater; monitoring and reporting of water quality readings in a nearby river; preparation of contaminant contingency plans; paying close attention to the distribution and movement of species at risk; and monitoring and reporting on airborne emissions and measures to reduce noise at the facility, among others (Lapalme 2005).

2.7.2 Socioeconomic Issues and Impacts: Victor Project

Although it does consider the social and socioeconomic implications of biophysical impacts, CEAA does not assess the direct social, cultural or socioeconomic impacts of a project such as the cultural loss, family and domestic problems, or mental and physical health issues that may be caused by a mining project. Despite this omission, some of these issues remain critical to the project region's social and economic sustainability—including for the communities of Attawapiskat, Mushkegowuk and Fort Albany (Figure 2.3). Traditional lands used by the community of Attawapiskat for hunting, fishing, trapping, spiritual or ancestral use extend from approximately 80 km south of the Attawapiskat River, north to the Hudson Bay coast, and inland to a maximum distance of about 325 km from James Bay (De Beers 2005). Considering this range, the Attawapiskat First Nation flagged many potential impacts as having cultural and socioeconomic significance, such as (De Beers 2005):

- Risk of fuel spills
- Effects on traditional activities and land uses
- Effects on creek and river quality and fisheries resources
- Effects on plant and wildlife communities, and especially on wildlife species
- How the land would be left at closure, so that it could continue to support plants, fish and wildlife, and traditional pursuits
- Limitations to employment and training opportunities
- Loss or reduction in social well-being

2.7.3 Federal and Provincial EA and Regulatory Processes

At the federal level, a comprehensive study EA under CEAA was triggered for Victor due to the application of certain *Comprehensive Study List* and *Law List* regulations. The key

federal environmental authorizations and approvals required for Victor led Natural Resources Canada (NRCan) and the Department of Fisheries and Oceans (DFO) to become the two lead Responsible Authorities (RAs). The former agency was the lead RA, for its issuance of an Explosives Factory/Storage License under the *Explosives Act*, and the latter for its issuance of a Fish Habitat Authorization under s. 35(2) of the *Fisheries Act*. A *Navigable Waters Protection Act* permit by Transport Canada was also required due to potential interference of the project with navigable waters, and Human Resources and Skills Development Canada was engaged due to its funding provisions for training programs. Other departments such as Environment Canada, Health Canada, and Indian and Northern Affairs Canada were also involved with the project review, but on an expert advisory basis. The following timeline depicts each stage of the federal regulatory process applied to the Victor Project.

Table 2.4: Federal EA and Permitting Timeline: Victor Diamond Project

2000-2002	De Beers conducts advanced exploration at the Victor site
May 2002	Victor Prospectus submitted by De Beers to Canada
October 2002	De Beers conducts and prepares feasibility study
March 2003	De Beers files a project description with Canada
April 2003	Attawapiskat First Nation informs Canada it is ready for the EA to begin
May 2003	De Beers submits a preliminary EA report, upon which a comprehensive study EA is triggered for Victor under CEAA
August 2003	NRCan is declared lead responsible authority (RA) for Victor, along with the Department of Fisheries and Oceans as the other RA
February 2004	Canada issues final guidelines to De Beers for preparation of its comprehensive study EA
March 2004	De Beers submits a comprehensive study EA to Canada
August 2004	De Beers submits a revised comprehensive study EA to Canada based on key re-

	evaluations within the project following Aboriginal consultations
June 2005	Comprehensive Study Report is released to the public for a 30-day review. Attawapiskat First Nation votes 85.5% in favour of the IBA negotiated between it and De Beers
August 2005	Minister of the environment approves the Victor Comprehensive Study Report by Canada, outlining key mitigation and monitoring measures
July-Sept 2005	Permits are issued by provincial and federal governments for the Victor Project
February 2006	Project construction commences and continues to 2008
2008	Production will begin in the 2nd or 3rd quarter of 2008

Source: Fowler (2006); De Beers (2006)

The Ontario Ministry of Northern Development and Mines, the Ontario Ministry of the Environment, the Ontario Ministry of Natural Resources and the Ontario Energy Board were also involved in the overall review and approval of the Victor Project.

2.8 Methods

This section describes the study research methods. It begins in 2.9.1 with a short description of the purpose and benefits of a case study approach to research, as well as the rationale for using Victor as a case study. Then it describes the evaluative framework designed for the study, and its application in the interview questionnaire. This framework is based on a review of the EA literature dealing with the integration of EA, EA follow-up and VCR. To avoid duplication of material covered in chapter 2, literature reviewed here helps to develop the evaluative framework and explain how the framework is used to develop the interview questionnaire and evaluate the questionnaire results. The next section provides an overview of how the documents that comprise the Victor EA are used and referenced to design the questionnaire, covering their role in helping with the analysis. The section that follows presents a description of the interview questionnaire itself, followed by a description

of the selection of key informants and their involvement in the interview. Study limitations and sources of bias follow, concluding with a final section on the transcription of the results.

2.8.1 The Case Study Approach: Victor Project

A case study is an ideal method of testing hypotheses when a holistic, in-depth investigation is undertaken (Feagin et al. 1991). Because this analysis examines interconnections of environmental, social and economic criteria, as well as different stages of the process used to manage these criteria over time (the PMC), the Victor project alone is the case study, to control the complexity of issues examined. Since the same regulatory and policy regime that applies to Victor applies to other projects subject to CEAA, focusing on Victor enables conclusions to be drawn about the efficiency and effectiveness of EA, and the broader EA follow-up and VCR instruments that follow CEAA reviews in Canada.

Generally, case study research is oriented toward using multiple sources of evidence to prove or disprove a certain argument; it is particularly useful if both qualitative and quantitative data are used in a study (Yin 1994). Yin (1994) stated that the case study is designed in four stages: 1) design the case study; 2) conduct the case study; 3) analyze the case study evidence, and 4) develop the conclusions, recommendations and implications. This general approach was followed for this research.

A potential limitation of the case study approach is the potential nonapplicability of results beyond a specific case studied (Blaikie 2000). Where possible, circumstances that are unique to the Victor Project are highlighted in the analysis and distinguished from broader conclusions about EA, EA follow-up and VCR in general. Victor is used simply as a representative example of broader PMC trends.

2.8.2 Evaluative Framework: Foundation for Interview Questionnaire

The preceding discussion of literature examining the relationships among EA, EA follow-up and VCR indicates that better integration between parts or all of the PMC could bring improvements. These relate to process effectiveness associated with environmental protection and sustainable development capacity, as well as process efficiency related to consistency, lack of duplication and timeliness. This section synthesizes four key themes, or categories, from this literature. Together, they comprise an evaluative framework that is used as a basis for the interview questionnaire, and the analysis of the Victor case in the subsequent chapters.

To build the evaluative framework, many published and unpublished sources on the improvement and integration of EA, EA follow-up and VCR were reviewed and referenced. Enough information was gathered to: (1) describe the PMC as an actual continuum and process that exists across large-scale natural resource projects, given the similar structure and purpose of its constituent parts, (2) evaluate and critique the current approach to EA, EA-follow-up and VCR along the PMC, and (3) identify key ways in which the integration of these instruments could or should or should not be improved in practice. The key themes/categories in the framework are: (1) Issue identification (social, economic, environmental); (2) Stakeholder relations, including such issues as trust, confidence and participation; (3) VCR providing additional follow-up management functions, and (4) overall integration, effectiveness and efficiency of the PMC. Each theme/category is described, below.

2.9.2.1 Category 1: Issue Identification (Social, Economic, Environmental)

The evaluative framework and questionnaire begins by asking about the extent to which the EA process: (1) identifies and explains all of the regulatory and permitting requirements for a proposed project, and (2) identifies key environmental and socioeconomic issues and impacts in a manner that enables future EA follow-up or VCR practices to better manage such issues and impacts. The purpose here is to identify the comprehensiveness of the process in: (1) identifying all mandatory requirements that a proponent must satisfy, and (2) accounting for sustainable development-based—rather than only environmentally based—issues and impacts.

As effective EA processes are meant to be inclusive, they should also help to integrate and assess key sustainability principles. Indeed, CEAA acknowledges "sustainable development" as its primary purpose. It is therefore understandable that essential sustainable development criteria can be used as a baseline against which to assess certain aspects of an EA process and the full PMC for a given project. Because sustainable development includes biophysical environmental as well as social and economic well-being, Gibson's definition of sustainability is used as the benchmark against which to assess whether or not the Victor EA captured these criteria.

The interview questionnaire examines respondents' opinions of: (1) the extent to which regulatory and permitting requirements for the project and its ongoing operations were identified in the EA, (2) the extent to which environmental, economic and social indicators of sustainable development were identified and analysed within the EA process, and (3) the way in which the EA analysis supports or detracts from the goals and needs of other parts of the PMC. From the questionnaire responses, initial conclusions can be made about the

inclusiveness and effectiveness of the CEAA process. Conclusions can also be made about current stakeholder support for stronger or weaker integration of social, economic and environmental decision criteria, and whether or not different parts of the PMC already support, or should/should not support the role of other parts in achieving environmental, economic and social objectives.

2.9.2.2 Category 2: Stakeholder Relations

Elinor Ostrom stressed the importance of "social capital" in institutional design. She defined social capital as:

> The aspects of structural relationships between individuals that enables them to create new values… [social capital is created] through changes in the relations between persons that facilitate action. (Ostrom 1992: 13).

In any process involving different interests that must be reconciled or traded-off, the need to maintain positive stakeholder relations is important, especially if those same stakeholders are expected to work together collaboratively.

Mitchell states that one of the means to achieve sustainable development is to "move towards approaches which combine the experience, knowledge and understanding of various groups and people" (Mitchell 1996: 161). "By consulting people affected by a policy or project, it is possible to: (1) define problems more effectively, (2) access information and understanding that fall outside the scientific realm, (3) identify alternative solutions that are socially acceptable, and (4) create a sense of ownership for a plan or solution, which facilitates implementation" (Mitchell 1996: 161, 156). Public and stakeholder engagement and participation are two of CEAA's many purposes. Given the extensive stakeholder engagement and consultation during the EA and EA follow-up design for Victor, the

evaluation of the Victor PMC asks questions about the levels of stakeholders' trust, the capacity of various parties to live up to their EA and regulatory commitments, and the role of the EA in supporting this trust. It also asks about the extent to which the EA process strengthened different stakeholders' confidence in the ability of other stakeholders to live up to these commitments.

Finally, public engagement is widely acknowledged in the EA literature as a key contributor to sustainability (Mitchell 1996; Gibson 2002; Morrison-Saunders 2003). The research framework and questions not only assess the level of engagement in the Victor EA, but also extend the breadth of the literature by considering the effect of different parts of the PMC on that engagement.

Under "Stakeholder Relations" in the questionnaire, for example, one of the questions asks: "Did the EA process increase or decrease the confidence of stakeholders that the proponent *has the ability* to design and implement effective environmental and socioeconomic management and mitigation measures in the EA follow-up program for the VDP?" By asking this question, it is possible to assess areas in which the status quo approach to EA is, or is not, supportive of EA follow-up and if not, why not. The associated assessment of stakeholder intent to collaborate in developing and implementing the follow-up program, and the role of the EA in facilitating this collaboration, is used to examine informants' opinions of whether Victor project stakeholders will continue to work cooperatively over time, and why.

2.9.2.3 Category 3: EA Follow-up and VCR Providing Ongoing Management Functions

Sanchez and Hacking (2002) state that the baseline data generated in EA processes are often disregarded when companies establish VCR programs. Yet, they contend, "once a

project has been approved, a [potentially voluntary] EMS can help to ensure that the capacity exists to implement the necessary environmental management and optimise day-to-day operations" (Sanchez and Hacking 2002: 26). Although both EMS and VCR instruments ask "what needs to be managed" and "how should it be managed", the interrelationships between these tools "remain poorly understood by many practitioners, proponents and regulatory officials" (Sanchez and Hacking 2002: 26). The literature cites areas where the two instruments overlap, including screening and scoping of impacts, describing project activities, utilizing baseline data, obtaining public input on decisions, identifying and integrating legal requirements such as licensing, and developing management, monitoring and mitigation plans (Sanchez and Hacking 2002; Marshall 2002). To assess the capacity of VCR to provide follow-up management functions, the research framework and research questions explore the adequacy of the EA in: (1) gathering baseline data that could support and inform future follow-up and VCR, (2) identifying targets and issues necessary for the follow-up program and VCR to be successful, and (3) managing key environmental and socioeconomic issues on an ongoing basis. The latter question about the management of environmental and socioeconomic issues is left purposefully broad, since there are numerous aspects of EA, EA follow-up and VCR that address ongoing management of these issues.

This part of the questionnaire inquires about the adequacy of the EA in gathering key baseline data for follow-up and future VCR implementation as well as the potential sustainable development benefits of VCR. Voluntary initiatives can, if "supported by a well-coordinated private sector strategy and a carefully conceived public policy and regulatory framework that is based on principles of integrated or adaptive management," address social,

economic and environmental issues not addressed by regulatory or other means (Clausen and McAllister 2001).

Due to the increasing ubiquity of VCR and broader corporate responsibility in the natural resource sector, this part of the questionnaire also explores the overlap between EA, EA follow-up and VCR, and whether the EA for Victor was designed and carried out to support or detract from these initiatives. Such a question is critical given De Beers' commitment to implementing VCR initiatives at the Victor site and in the community and region during construction and operation. This is exemplified by the company's adoption of measures such as the ISO 14000 EMS, funding and developing education-related materials for local youth. By asking informants their opinions on the link between EA findings and capacity for future VCR, observations are made on the importance and stakeholders' support for this integration, as well as in what areas this integration should, or should not, be improved relative to others.

2.9.2.4 Category 4: Overall Integration, Effectiveness and Efficiency of the PMC

Whereas the EA process is a form of anticipatory planning and management, based on predictions of *probable or possible* effects, an EMS manages *actual* realities and effects. EMS processes are "proactive management tools that are sensitive to the existing environmental effects of operations and easily adapted to control risk" (Marshall 2002: 287). They serve as a good medium to ground-truth and verify the accuracy of the EA process and manage adaptively in response to unforeseen effects. Marshall suggests using environmental management plans (EMP) to link EA and voluntary EMS and VCR initiatives, since they

"contain project-specific protocols that act as an EMS interface between an EA and the subsequent project planning and development phases" (Marshall 2002: 287).

To test the presence of linkages among EA, EA follow-up and VCR at Victor and potential environmental and socioeconomic benefits of such linkages, interviewees are asked about the extent to which the EA and EA follow-up will assist in the design and application of VCR. Questions also probe the ability of VCR initiatives to manage environmental and socioeconomic issues and impacts.

Finally, to assess the added value of VCR relative to EA and EA-follow-up in the PMC, stakeholders are questioned about the value of VCR in accomplishing certain environmental, socioeconomic or sustainable development goals. More specifically, they are asked about the value of VCR in accomplishing these goals beyond what would be possible under EA, EA follow-up and regulatory actions alone. These responses are used to test participants' opinions of the value VCR, which is compared with the literature in defence of this integration.

2.8.3 Review of Important Victor EA Documents

The Victor EA process took nearly two and a half years, from the date of initial assessment to final approval (Table 2.8). Due to this interval and the complexity of issues assessed, four documents are essential in order to understand: (1) the breadth of environmental, economic, social and sustainability issues around the project and project region, and (2) the EA, EA follow-up and permitting processes. The documents include the project description by De Beers, the comprehensive study guidelines issued by the Government of Canada, the comprehensive study EA by the proponent, and the final

comprehensive study report issued by the Government of Canada in response to the proponent's comprehensive study. The following sections provide a brief overview of these documents, and the role they served in helping to develop the evaluative framework and analyze the Victor PMC.

2.9.3.1 Victor Project Description

Submission of a project description is a mandatory first-step for a proponent wishing to determine if an EA under CEAA is required for a proposed undertaking. The project description enables a proponent to: (1) determine the need for an EA, (2) determine the type of EA such as a screening or comprehensive study, and (3) promote efficient coordination of an EA by providing enough information to determine which department or agency will become RAs and FAs, and which stakeholders need to be consulted (CEAA 2000). Proponents receive guidance on how to prepare project descriptions under CEAA's Operational Policy Statement.

The Victor Project Description (2003) provides an overview of the on- and off-site infrastructure for Victor in its early design phase, a description of the biological, chemical and physical environment, and the anticipated production rate and project schedule, among others. Although this document provides less-detailed analysis of the project's potential impacts than the comprehensive study EA documents, it provides a useful overview of the environmental, social, infrastructural and geographical parameters of the project, prior to the EA (CEAA 2000).

2.9.3.2 Comprehensive Study Guidelines

Under CEAA, it is the responsibility of the Government of Canada to ensure that once a proposed project triggers a comprehensive study level of EA under the *Comprehensive Study List* regulations, guidelines are given to a proponent on how to prepare the comprehensive study in accordance with the rules governing both comprehensive studies and CEAA overall (CEAA 2007). These guidelines are referenced in the present study as a background source to help understand the impact criteria being set out by Canada for an EA. They also include a brief section on general criteria for EA follow-up; the relevant authorizations required for a project are also identified (CEAA 2007). The list of authorizations also helped to target key informants to respond to the questionnaire. For example, the section on fish and fish habitat indicates that the Department of Fisheries and Oceans (DFO) is a major project regulator. The section on explosives dictates the important role of Natural Resources Canada as lead responsible authority (RA).

2.9.3.3 Proponent's Comprehensive Study

The company's comprehensive study is the actual "EA" for the Victor Project. It details the regulatory and planning context, clarifies responsibilities of both federal and provincial agencies, and explains the company's efforts to respond to these authorities' needs and requests. This document is large, and primarily focuses on identifying and mitigating biophysical impacts. These include potential waste management impacts, such as the effect of acid mine drainage on ground and surface water, effects of the project on aquatic and terrestrial species and habitats, and other ecological concerns. Although assessment of non-

biophysical socioeconomic impacts is not a mandatory part of CEAA, De Beers includes a detailed description of such issues affecting the community and project region by designating them as valued ecosystem components (VECs) to accompany the biophysical VECs (De Beers 2005). This overview contains a description of the educational status of nearby communities; an overview of the health system in Attawapiskat; discussion of the employment and income situation of local communities; potential substance abuse problems, and the cultural and subsistence importance of hunting and harvesting, among others. While not a mandatory part of the EA, the inclusion of socioeconomic criteria suggests that these issues could become important in other stages of the PMC, such as during EA follow-up or in design of VCRs.

The comprehensive study delimits where the EA leaves off and where regulatory and EA follow-up begins along the PMC. This information is critical to the design of the questionnaire and evaluative framework for the present study, since the questionnaire addresses the PMC as a whole.

2.9.3.4 Government of Canada's Comprehensive Study Report

This final key document is used to develop the evaluative framework and conduct the research. The CSR outlines the impacts of the project as described by the proponent (CEAA 2000). It includes: (1) government requests for further clarification and information, (2) a summary evaluation and response of the government to impacts described by De Beers, (3) agreements or disagreements with De Beers' assessment of impacts and issues (the "government position"), as well as (4) comments on the significance of impacts and any

mitigation measures that De Beers must implement in response to these impacts (Canada 2005).

The breadth of environmental issues and impacts addressed in the comprehensive study report are in many cases less detailed than the comprehensive study, but the report includes a detailed section on EA follow-up. Follow-up measures are identified and explained in the Victor environmental agreement. For example, under "Air Quality", the federal government's response to De Beers' proposed monitoring plans is:

> The RAs are including an air quality follow-up program in the Environmental Agreement. This program will initially encompass the entire program as described below. However, this agreement will be flexible and can be amended by the parties formally engaged in the follow-up program review. (Canada 2005).

Because this part of the comprehensive study report separates EA follow-up from EA and regulatory compliance, careful review of the document is necessary to both design the evaluative framework and questionnaire, and conduct the analysis of key informants' perception of the role and conduction of EA follow-up measures, as part of the PMC.

2.8.4 Key Informant Interview Questionnaire

With case study research, it is often necessary to acquire information from "different members of a community who are especially knowledgeable about a topic… [They enable a researcher] to ask questions about community members' experiences." They can "provide structure and consistency to information-gathering and are especially suited to getting a picture of a particular environment and how it works" (Sherry and Marlow 1999: 2). Informant interviews are also used to: collect information about a pressing issue or problem in a community from a limited number of well-connected and informed experts; understand the motivation and beliefs of community residents on a particular issue; get information from

people with diverse backgrounds and opinions; ask in-depth or probing questions; and acquire information on sensitive topics (UCLA 2002). Given the importance of demonstrating the strength of opinions numerically, this approach was integrated into a questionnaire, using a five-point Likert scale. A copy of the questionnaire is attached as Appendix A.

2.8.5 Key Informant Selection

Key informants were selected from a small number of scientific and policy practitioners who participated in the Victor EA, based on their ability to respond to the questions knowledgeably, and articulate their opinions and position(s) and those of their respective stakeholder group(s) from a small number of scientific and policy practitioners who participated in the Victor EA. This approach resulted in the identification of the following seven key informants:

- Anonymous participant
- Consultant to the First Nation (consultant to FN)
- Government agency # 1 (agency #1)
- Government agency # 2 (agency # 2)
- Government agency # 3 (agency # 3)
- Proponent # 1
- Proponent # 2

2.8.6 Likert Scale Questionnaire Statements

Considering the small number of study respondents, the qualitative part of the questionnaire is designed to capture *why* respondents feel they way they feel under each question; the quantitative aspect assesses the level and strength of agreement or disagreement with different issues through the Likert scale. Likert scales are often used as a means to

gauge and compare the strength of a select group's opinions on a question by revealing the extent to which they agree or disagree with a given statement (Likert 1932).

Each of the 35 questions contains two parts. Respondents can: (a) Strongly Agree, (b) Somewhat Agree, (c) Neither Agree nor Disagree, (d) Somewhat Disagree or (e) Strongly Disagree. Beneath each Likert response the informant may explain the reasons why she or he chose a specific response. The individual can then explain how she or he would "improve" the part of the process addressed in the question, should it warrant "improvement." For the analysis that follows, the Likert responses are assigned numerical values: – 2 = Strongly Disagree; -1 = Disagree; 0 = Neither Agree nor Disagree; 1 = Agree and 2 = Strongly Agree. The response scores of all participants are added together for each question and divided by seven, to establish the average strength of agreement or disagreement among informants for each question in each category (see Tables 3.2 through 3.5).

2.8.7 Completing the Interview Questionnaires

Each stakeholder was contacted by telephone to determine the level of interest in participating as an informant in the research. A follow-up email was then sent with a more detailed description of the study's purpose, giving the prospective informant an opportunity to confirm an interest in participating. Once participation was confirmed, a time was arranged to conduct the interview in person or by teleconference.

Each questionnaire interview took between 50 and 65 minutes to complete in a quiet, uninterrupted environment. The interviews were recorded with a cassette to ensure accuracy of responses. Although each informant was asked questions in an identical manner,

interviewees were able to elaborate on their opinions and perspectives below each question. Figure 2.4 demonstrates this approach.

Figure 2.4: Example of an Interview Question

4. The EA process identified potentially adverse environmental impacts of the VDP in a manner that will enable possible future Voluntary Corporate Responsibility Programs dealing with *environmental* issues to be more effectively designed.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

2.8.8 Study Limitations

One limitation of this study is the small number of informants, and the inability of the research results to demonstrate statistical significance among, and between, the responses. Based on the Likert scale, quantitative methods help determine the strength of agreement among the informants for each question. The remaining analysis is qualitative.

Another limitation of the study is the telephone-based discussions. While the interview with the lead responsible authority was in person, the other six were conducted by telephone. This eliminated the ability to detect nonverbal cues such as facial expressions and body language, which can be valuable sources of information, and may lend clues to the strength of informants' opinions on different issues.

While an effort was made to eliminate bias in the questionnaire design, the researcher has an academic and professional background in sustainability policy, mining and

environmental assessment. The researcher has also written journal articles on the importance of integrated and efficient resource development assessment and approval processes, as well as policy frameworks in support of voluntary corporate responsibility. The study was designed to limit on respondents the influence of the researcher's knowledge of the PMC, and associated opinions on its management, but one of the key informants was aware of the researcher's academic and professional experience at the time of the interview. Such awareness may have influenced this informant's response.

2.8.9 Results Interpretation and Transcription

Individual responses to all questions are broken down into the four categories of the evaluative framework (chapter 3, Tables 3.1 to 3.4). Mean scores among the seven informants are generated for each question within each category, enabling comparison of: (1) the strength of responses on each question, and (2) strength of response between the categories. A table and a graph are used to convey these means in each category.

Following the Likert analysis within each category is a section which characterizes the responses. It considers why informants feel the way they do, and how and why they suggest the process could be improved.

CHAPTER 3: RESULTS AND ANALYSIS

The analysis is divided into four sections, with one section covering each questionnaire category. The mean averages of the Likert responses are referenced in parentheses. Key informant recommendations on how to "improve the process" are reported in chapter 3, and then included in the discussion about the PMC, its design and its management in chapter 4. Only major differences and similarities among stakeholders and stakeholder groups are highlighted, in an effort to synthesize the responses and identify patterns. The "overall results" sections following each category summarizes the major findings, with the exception of the last four broader questions of category 4, where the responses are relatively short, and are therefore discussed individually.

3.1 Interview Questionnaire Results - Category 1: Issue Identification (Social, Economic, Environmental)

This category analyzes the effectiveness of the EA process in identifying key issues that are central to sustainable development and PMC effectiveness. The analysis is divided into two subsections: (1) the identification of permitting, licensing, regulatory and other compliance requirements, and (2) the identification of social, economic and environmental impacts in support of follow-up and VCR.

Table 3.1: Category 1: Issue Identification Mean Scores

Question	Mean Score
1. The EA process identified all permitting, licensing, regulatory and other governmental compliance requirements that need to be recognized in order to design and implement both i) the EA follow-up program, and ii) voluntary corporate responsibility programs for the Victor Diamond Project (VDP).	1.14
2. The EA process identified all potentially adverse VDP *environmental* impacts in a manner that will enable the effective management of these impacts *under the EA follow-up program*.	1.43
3. The EA process identified all potentially adverse VDP *socioeconomic* impacts in a manner that will enable the effective management of these impacts under the *EA follow-up program*.	- 0.43
4. The EA process identified potentially adverse VDP environmental impacts in a manner that will enable possible future voluntary corporate responsibility programs dealing with *environmental* issues to be designed more effectively.	0.57
5. The EA process identified potentially adverse VDP socioeconomic impacts in a manner that will enable possible future voluntary corporate responsibility programs dealing with *socioeconomic* issues to be designed more effectively.	- 0.43

Figure 3.1: Category Mean Scores by Question

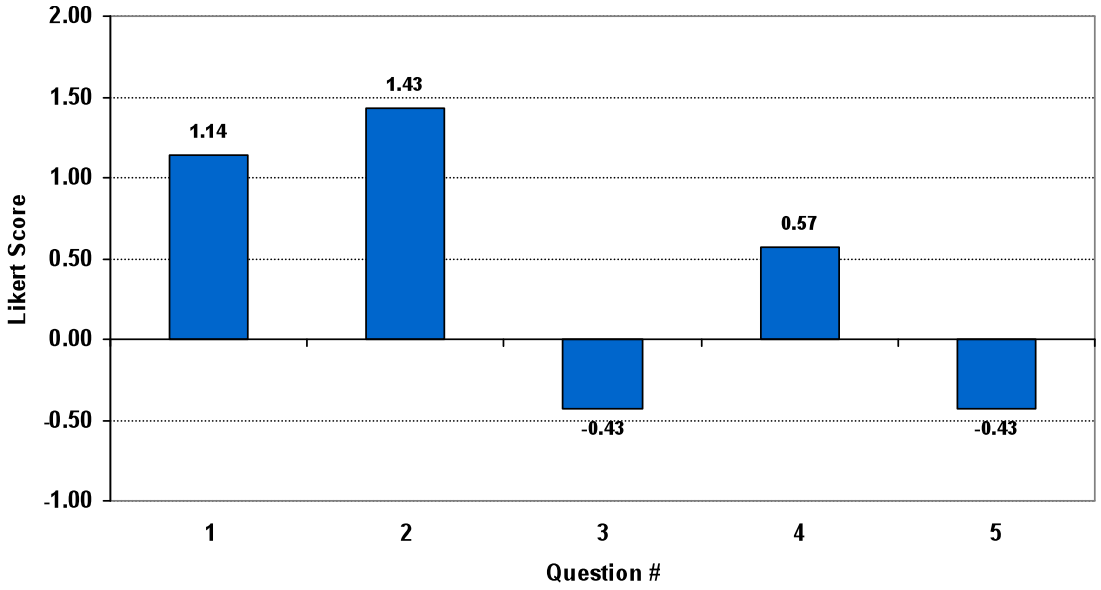


Table 3.2: Individual Results from Category 1

	Anonymous Participant	Consultant to the FN	Agency # 1	Agency # 2	Agency # 3	Proponent # 1	Proponent # 2
Question							
1	0	1	2	2	1	1	1
2	1	1	1	2	1	2	2
3	2	-2	-1	-1	0	-2	1
4	1	0	0	-1	1	2	1
5	0	2	-1	-1	-2	-2	1

3.1.1 EA Identification of Permitting, Licensing, Regulatory and other Compliance Requirements in Support of Follow-up and VCR

There is general agreement among stakeholders that the EA process did an effective job of identifying all necessary permitting, licensing, regulatory and other compliance requirements (1.14). This agreement suggests that CEAA is effective at preparing for the requirements of the regulatory phase of project approval and management. The two informants that strongly agree with this statement are Agencies # 1 and 2. Four other informants somewhat agree that the EA identified these compliance requirements insofar as preparing for EA follow-up and VCR.

3.1.2 EA identification of Environmental and Socioeconomic Impacts in Support of Follow-up and VCR

Even stronger than the level of agreement regarding the identification of regulatory requirements is the general agreement among stakeholders, including the consultant to the First Nation, that the EA identified all environmental impacts in a manner that will enable the effective management of these impacts under the EA follow-up program. Both of the proponent's representatives agree strongly with this contention, arguably showing a level of pride in the effectiveness of their personal efforts. Conversely, the other respondents

disagreed that the socioeconomic issues were effectively identified—whether in support of follow-up or VCR.

Multiple stakeholders including proponent # 1, one of the agencies, and the consultant to the First Nation, indicated that they believe the EA process is insufficient to support the design and implementation of VCR. They note that (1) VCR is not a mandatory part of CEAA, and (2) effective VCR requires identification of socioeconomic issues which extend beyond biophysical impacts alone. The lack of nonbiophysical socioeconomic impact assessment criteria within CEAA is seen among many practitioners as one of the act's key limitations (Gibson 2002).

Clearly, CEAA only addresses socioeconomic effects which result from a biophysical impact. This is confirmed by stakeholders (- 0.43) when answering each question dealing with the EA's success at identifying socioeconomic impacts in a manner that is supportive of EA follow-up or VCR. Only the federal RA believes that socioeconomic issues were addressed, but he confined his definition of "socioeconomic" to CEAA's interpretation of this term. Accordingly, a strong point of agreement among most stakeholders, with the exception of one government representative, is the critical importance of doing socioeconomic assessment under CEAA or a separate piece of legislation devoted to socioeconomic assessment. Evidently, too many nonbiophysical social and economic issues were raised throughout the Victor review as being critical to the project and to the well-being of the region, but were disregarded in the EA. Of those who are uncomfortable making a recommendation on this matter, proponent # 2 believes that the assessment is comprehensive because CEAA restricted the criteria to biophysical impacts. In so doing, it was made clear that the structure of the EA would not have been sufficient to address socioeconomic issues.

3.1.3 Category 1: Overall Results

In summary, respondents believe that the Victor EA process did an effective job at identifying all relevant compliance requirements and biophysical environmental impacts in a manner that is supportive of EA follow-up. This effectiveness, however, is considered by the respondents to be weaker in the instance of VCR, due to the reliance of VCR on the identification of nonbiophysical socioeconomic impacts and issues that are neither effectively nor comprehensively addressed in CEAA.

In addition, environmental impacts are generally considered to be clearly identified during the assessment, but socioeconomic issues were generally believed to be not well-identified, owing to the fact that CEAA does not assess socioeconomic impacts, except to the extent that they arise from biophysical environmental impacts.

3.2 Interview Questionnaire Results – Category 2: Stakeholder Relations

How stakeholder engagement is undertaken is critical to the PMC's efficiency and effectiveness. This category is analyzed in three sections: subsection 3.2.1 examines respondents' opinions of stakeholders' trust that parties will act fairly and meet obligations; 3.2.2 addresses stakeholders' confidence in the proponent's *ability* to 1) meet obligations arising from the EA, and 2) implement effective environmental and socioeconomic management and mitigation measures at Victor in both EA follow-up and VCR programs. The focus of section 3.2.3 is similar to 3.2.2, except that it examines these same issues from the perspective of the proponent's *intent*, rather than the proponent's *ability*.

Although not listed in the Likert tables, many questions in category 2 ask informants to explain or expand on their Likert responses. The answers to these parts of the questions are referenced, where applicable, as a window into the opinions of the informants.

Table 3.3: Category 2: Stakeholder Relations Mean Scores

Question	Mean Score
6. Stakeholders who are interested in, or affected by, the VDP have a high level of trust that all parties will act fairly and meet their obligations arising from the EA and the EA follow-up program.	-0.86
7. Stakeholders are confident that the proponent *has the ability* to meet all of its obligations arising from the EA for the VDP	0.71
8. Stakeholders are confident that the proponent *intends* to meet all of its obligations arising from the EA for the VDP.	0.14
9. Stakeholders are confident that the proponent *has the ability* to design and implement effective environmental and socioeconomic management and mitigation measures in the EA follow-up program for the VDP.	0.86
10. Stakeholders are confident that the proponent *intends* to design and implement effective environmental and socioeconomic management and mitigation measures in the EA follow-up program for the VDP.	-0.29
11. Stakeholders intend to fully collaborate in designing and implementing the EA Follow-up Program.	1.57
12. Stakeholders are highly confident that the proponent has the ability to design and implement effective environmental and socioeconomic management measures in possible future voluntary corporate responsibility programs for the VDP.	0.57
13. Stakeholders are highly confident that the proponent *intends* to design and implement effective environmental and socioeconomic management and mitigation measures in voluntary corporate responsibility programs for the VDP.	0.29
14. The EA process increased public awareness of, and engagement with, the VDP.	1.43

Figure 3.2: Category 2 Mean Scores by Question

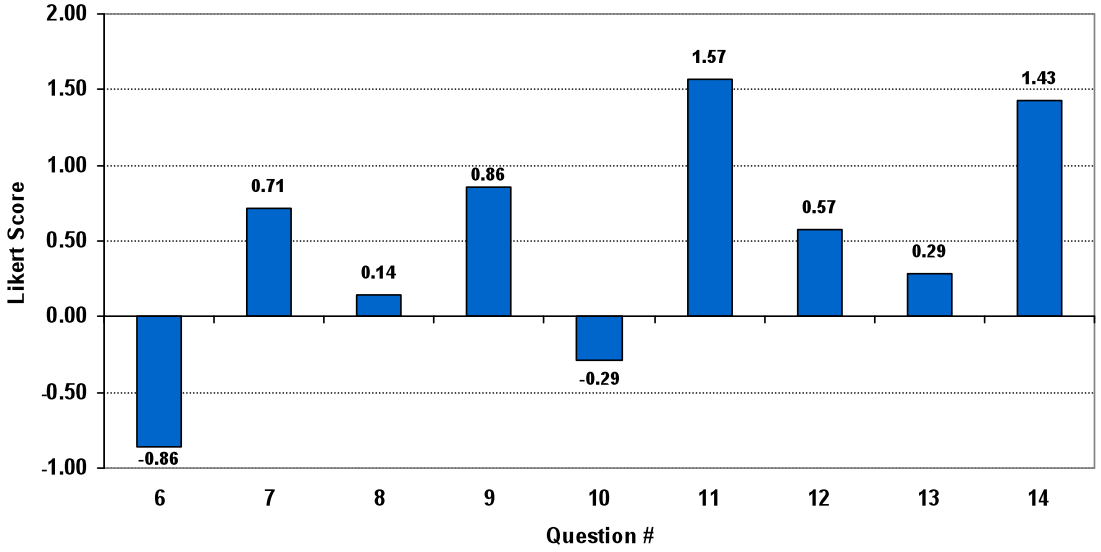


Table 3.4: Individual Results from Category 2: Stakeholder Relations

	Anonymous Participant	Consultant to the FN	Agency # 1	Agency # 2	Agency # 3	Proponent # 1	Proponent # 2
Question							
6	-2	-1	-1	-2	-1	0	1
7	0	0	2	1	2	1	-1
8	0	0	0	-2	1	1	1
9	0	0	2	-1	2	1	2
10	0	-2	0	-2	-1	1	2
11	2	2	1	2	2	1	1
12	0	1	1	-2	1	2	1
13	0	1	0	-2	-1	2	2
14	2	0	2	1	1	2	2

3.2.1 Stakeholders' Trust that Parties will act Fairly, Collaborate, and Meet Obligations

When asked whether stakeholders trust that parties will act fairly and will meet obligations (Question # 6), respondents generally disagree with this statement (-0.86). A primary reason for this response is because First Nations strongly distrust governments and

industry. All seven respondents flagged the low level of trust that First Nations possess toward federal and provincial governments and the proponent. Four respondents (anonymous participant, agency # 2; proponent #1 and proponent # 2) claim that this absence of trust is historic in origin due to longstanding tension between remote First Nation communities and the federal government. The anonymous participant states that the absence of trust dates back to "when Europeans arrived in North America." Similarly, the consultant to the First Nation believes that "many of the suggestions of the Royal Commission on Aboriginal Peoples remain unaddressed" [by the federal government], which fuels an ongoing lack of trust within both Attawapiskat and other First Nations communities. This lack of trust is compounded by First Nations' belief that federal and provincial governments are incapable of managing the environmental effects of the project, a contention that was highlighted by the federal expert department. Nor do First Nations believe that De Beers will fulfil its commitments and follow-up in the ways the communities expect.

Most respondents are uncertain about whether the non-First Nations stakeholders trust each other. The exception is proponent # 1. He believes the government agencies trust both each other and the company, due to their similar understanding of modern science.

Despite First Nations' low level of trust in government and industry during the Victor review, six of the seven informants believe that the EA process increased trust to some extent. They credit this change to the intensive community consultations conducted during the EA processes and the resolution of many First Nations' concerns, as exemplified in responses to questions 6, 7 and 8.

Stakeholders are generally positive that the different parties will work collaboratively to design and implement the EA follow-up process (1.57). Many First Nations, including the

Attawapiskat, the Kasheshewan, the Albany and the Moose Factory were engaged in the design of the follow-up program. Also, the Province of Ontario engaged nongovernment organizations in the development of monitoring programs. However, proponent # 2 is uncertain about the extent to which positive collaboration will continue with the Attawapiskat First Nation, since its leadership changed following a recent election.

Feedback across stakeholder groups suggests that the EA was highly effective at eliciting engagement and in facilitating the transfer of data and information deemed critical to EA follow-up success.

3.2.2 Stakeholders' Confidence in the Proponent's *Ability* to Meet EA Obligations and Implement Environmental and Socioeconomic Management in the EA follow-up Process and VCR

Conflicting themes emerged related to stakeholders' confidence in the proponent's ability to meet obligations arising from the EA process. On one hand, most government representatives are confident that De Beers has the ability to meet its obligations due to its financial strength, and the high value of Victor's diamonds. Conversely, a common response by the First Nation's consultant, agency # 3, and proponent # 1, is that First Nations are not confident that De Beers will meet its obligations, particularly with regard to impacts of the project on water quality. Proponent # 2 likewise assumes that stakeholders are aware that De Beers will do some things, but not all things they would like. Agency # 3 also notes that First Nations are not able to, or interested in, distinguishing between the proponent's or others' ability and willingness; they see management actions as "will do", or "will not do". This mixed response is reflected in the 0.71 score.

Stakeholders are conflicted in their confidence in the proponent's ability to design and implement effective environmental and socioeconomic management and mitigation measures in EA follow-up. With the exception of the consultant to the First Nation, informants are confident that De Beers is capable of designing and implementing environmental management measures, given the firm's competent engineering staff and consultant teams with biophysical and technical management skills. Conversely, most stakeholders question De Beers' ability to effectively manage socioeconomic issues. Reasons include: (1) that socioeconomic assessment was not undertaken, (2) that socioeconomic issues can be ambiguous, (3) that many socioeconomic issues are difficult to trace to the project, and (4) that De Beers may have insufficient management expertise to deal with such concerns. The mixed feelings toward the proponent's environmental vs. socioeconomic management abilities are reflected in the 0.86 score for this question.

Stakeholders are similarly varied in their opinions of the proponent's ability to design effective environmental and socioeconomic mitigation measures in the context of voluntary corporate responsibility (0.57). The slightly positive overall response is the same in the context of EA follow-up (0.86). Agency # 3 and agency # 1 both feel that De Beers wants to "do the right thing," and has the capacity and ability given its size and influence.

With respect to the relationship between the EA and VCR capacity, the consultant to the First Nation notes that "working together has increased the community's confidence in De Beers' ability to deliver on its commitments in a general sense." However, he also observes that one mechanism to strengthen this belief would have been to establish issue-specific working groups early in the process, to help facilitate community learning. This did not occur.

3.2.3 Stakeholders' Confidence in the Proponent's *Intent* to Meet EA Obligations and Implement Environmental Management in EA Follow-up and VCR

The anonymous participant says that he/she would not speculate on the reasons for stakeholders' relative levels of confidence in the proponent. However, among the other informants, stakeholders' confidence in the proponent's intent to design and implement effective environmental and socioeconomic measures in EA follow-up (-0.29) is lower than stakeholder confidence in the proponent's ability to do the same in the context of VCR (0.29). Despite follow-up being required by law, this discrepancy appears related to the acknowledgement of participants that VCR would be implemented as part of the IBA.

With regard to EA follow-up, the consultant to the First Nation feels there is no reason stakeholders should be confident because adequate baseline data had not been generated at the time of the interview. As a consequence, effective follow-up is virtually impossible. This same individual states that the confidence of First Nations with respect to the collection and use of socioeconomic data was much higher at the beginning of the process than it was at the end, as First Nations began to realize the limitations of the CEAA process in forcing the proponent to effectively use socioeconomic data and information.

On the environmental side, agency # 3 maintains that a number of stakeholders lost confidence in the proponent's willingness to undertake wildlife monitoring effectively. This respondent is convinced that although monitoring would occur, the proponent may not use the data received to perform adaptive management.

Four respondents (anonymous, consultant to the First Nation, agency # 3 and proponent # 2) state that the success of VCR activities will be determined through the impact-benefit agreement (IBA). The First Nation's consultant is satisfied that

nonmandatory environmental and socioeconomic concerns are being addressed by the proponent in the IBA, which may be reflected in the average responses across all respondents.

Both proponent # 2 and proponent # 1 feel that stakeholders are confident that the proponent intends to undertake effective VCR programs and practices. This may be because these same individuals are party to the IBA, and are more optimistic about others' opinions as to the seriousness of their commitment to the IBA and other VCR activities.

Agency # 1 states that the EA process may have decreased stakeholders' confidence in the proponent's intent to undertake an effective VCR. A reason is that the EA does not effectively acknowledge the role or purpose of VCR. When coupled with the proponent's and other stakeholders' frustration over having to undertake certain EA follow-up measures, agency # 1 feels the EA process may have a negative effect on stakeholders' perceptions of VCR practices. Proponent # 2's response to this same question, which is that "EA follow-up cannot be separated from VCR", is discussed in chapter 4, where linkages between elements of the PMC are addressed.

3.2.4 Category 2: Overall Results

- Generally, respondents believe that levels of trust among First Nations representatives toward both government and industry are very low. This absence of trust is due primarily to stakeholders' perception of tension and distrust among First Nations toward governments and the private sector over historical transgressions and broken commitments and promises.

- Respondents are more confident in the ability and intent of stakeholders to work collaboratively to design and implement EA follow-up than they are in the overall levels of stakeholders' trust. They also generally agree that the EA was effective at engaging stakeholders and in facilitating the necessary data and information for biophysical and environmental follow-up success.
- Regarding the proponent's *ability* to meet its EA obligations and implement effective environmental and socioeconomic follow-up and VCR, there is a general level of confidence that De Beers has the financial capacity to do so. However, De Beers' ability is perceived as not being entirely realized due to a lack of confidence among First Nations that the proponent will meet its obligations and commitments.
- Stakeholders' confidence in the proponent's ability to manage biophysical environmental issues is generally high, but this confidence is significantly reduced with respect to socioeconomic issues due to the absence of socioeconomic assessment in CEAA and the proponent's lack of social impact assessment expertise.
- The issue of the proponent's intent to meet EA obligations and implement effective environmental and socioeconomic follow-up and VCR yielded much different responses than perceptions of the proponent's ability. Confidence is higher about the intent to meet biophysical environmental obligations than the intent to meet socioeconomic obligations. Confidence is also higher with respect to the proponent's intent to design and implement effective environmental and socioeconomic VCR programs than it is for follow-up, largely due to the perceived strong willingness of the proponent to commit to its IBA obligations.

3.3 Interview Questionnaire Results - Category 3: EA Follow-up and VCR Providing Ongoing Management Functions

The evaluative framework (in 2.9.2) cites a number of examples in the literature where EA follow-up measures and VCR provide ongoing management functions at a project. As indicated in chapter 2, EA follow-up initiatives often occur under the umbrella of a project's environmental or socioeconomic agreement, whereas VCR initiatives may be contractual, such as those dictated by an IBA, or entirely voluntary. This section tests whether, and the extent to which, the Victor EA effectively supports both follow-up and VCR—in a manner that allows these two instruments to effectively manage environmental and socioeconomic impacts over time.

The effectiveness of the EA in collecting baseline data in support of both EA follow-up and VCR is discussed in 3.3.1. The following section considers whether the EA sufficiently identifies, or accounts for, the monitoring, reporting, performance and continual improvement mechanisms necessary for both EA follow-up and VCR to manage environmental and socioeconomic impacts. This section (3.3.2) assesses the adaptive management capacity of EA follow-up measures, by asking whether appropriate modifications of those measures will be implemented when needed. Section 3.3.3 deals with a broader question—whether VCR will provide additional sustainable development benefits beyond those provided by the EA and EA follow-up alone.

Table 3.5: Category 3 Mean Scores - EA Follow-up and VCR Providing Ongoing Management Functions

Question	Mean Score
15. The EA gathered all of the baseline data that will be necessary to design and	0.29

implement an effective EA follow-up program.	
16. The EA gathered all of the baseline data that would be necessary to design and implement effective voluntary corporate responsibility programs.	0.29
17. The EA identified all monitoring, reporting, performance targets, and continual improvement mechanisms (such as adaptive management) necessary for the EA follow-up program to effectively manage the environmental and socioeconomic impacts of the VDP.	0.14
18. The monitoring, reporting, performance targets and continual improvement mechanisms identified in the EA could be incorporated in the design and implementation of voluntary corporate responsibility programs in order to help manage adverse environmental and socioeconomic impacts of the VDP.	0.57
19. I expect that the monitoring, reporting and continual improvement mechanisms that will be implemented in the EA follow-up Program will assess the performance of the environmental and socioeconomic mitigation measures identified during the EA, and that appropriate modifications of those measures will be implemented when needed.	1.43
20. I expect that voluntary corporate responsibility programs implemented at the VDP will provide additional sustainable development benefits beyond those provided by the EA and EA follow-up alone.	1.00

Figure 3.3: Category 3 Mean Scores by Question

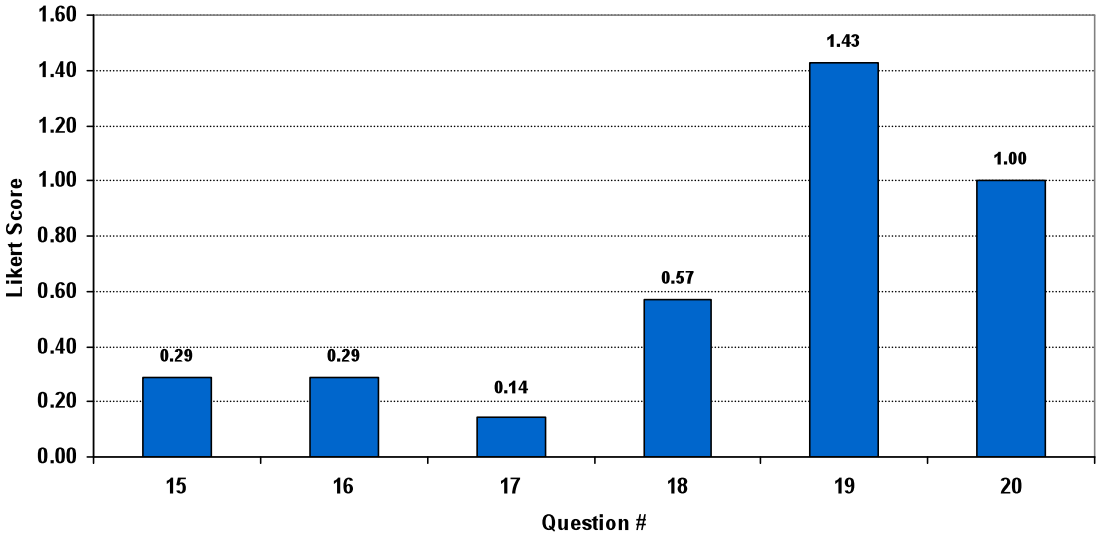


Table 3.6: Individual Results from Category 3: VCR Providing Additional Follow-up Management Functions

	Anonymous participant	Consultant to the FN	Agency # 1	Agency # 2	Agency # 3	Proponent # 1	Proponent # 2
Question							
15	1	-2	1	1	-1	1	1
16	1	-2	0	1	0	1	1
17	1	-1	-1	1	-1	1	1
18	1	-1	1	2	-1	1	1
19	2	0	1	2	1	2	2
20	1	2	1	-2	1	2	2

3.3.1 Collection of EA Baseline Data to Support EA Follow-up and VCR

Respondents generally agree that the EA gathered some baseline data in support of both follow-up and VCR, but the level of agreement is not strong, at a mean score of 0.29 for both questions. Not enough socioeconomic data were gathered, as noted by the consultant to the First Nation, and as intimated by proponent # 1, who stated that regional planning and community data were not available until De Beers generated this information. With regard to follow-up, certain respondents, such as the consultant to the First Nation (strongly disagreed) and agency # 2 (somewhat agreed), feel, for example, that groundwater impact assessment and management required more baseline information.

Agency # 3, the consultant to the First Nation, and proponent # 2 believe that it is not the responsibility of the federal EA process to collect baseline data in support of VCR. However, proponent # 1 feels that information gathered for the EA would be used to help to design voluntary work at Victor.

3.3.2 EA Identification of Monitoring, Reporting, Performance and Continual Improvement Mechanisms in Support of the Environmental and Socioeconomic Management Capacity of EA Follow-up and VCR

The section of the questionnaire on EA identification of monitoring, reporting and other performance-based mechanisms in a follow-up context yields neither strong nor weak levels of agreement across respondents (0.14). Four informants somewhat agree (anonymous participant, agency # 2, proponent #1 and proponent # 2) that the EA supports this management in the context of follow-up; three others somewhat disagree in the context of follow-up (agency # 3, consultant to the First Nation and agency # 1). Reasons for agreement include confidence in the criteria laid out by the government (anonymous participant), and greater confidence in environmental management mechanisms than in the socioeconomic mechanisms. In-keeping with the perceived disparity between the environmental and socioeconomic management capacity of the EA, both the consultant to the First Nation and agency # 2 feel that these mechanisms are accounted for on the environmental side, but are neglected on the socioeconomic side.

Responses are more positive, but not by much (0.57), pertaining to the EA's identification of monitoring, reporting, performance and continual improvement in support of VCR. Again, the consultant to the First Nation somewhat disagrees, stating that "one of the biggest failures of the EA process was not creating a running list of EA commitments to monitoring, mitigation, reporting, performance and continual improvement, made by the proponent." This makes it difficult to assess what a regulatory instrument would address, relative to what a voluntary instrument would address. This response directly contrasts with agency # 2's contention that these measures are "clearly laid out" in the comprehensive study report, and agency # 3's response that the proponent waited for the information generated in

the EA to be finished before finalizing the IBA. Of course, proponent # 2 states openly that mechanisms were addressed in the EA to help with *environmental*, but not necessarily *socioeconomic*, VCR issues.

Stakeholders are more confident that monitoring, reporting and continual improvement mechanisms in EA follow-up will assess and appropriately modify environmental and socioeconomic mitigation measures than for the two prior questions (1.43). A reason may be because this question addresses the *extent to which* environmental and socioeconomic mitigation measures will be assessed, rather than the *ideal* management of those issues in the context of sustainable development. The anonymous participant has faith that all stakeholders will fulfil commitments and that the right things will be done, such as adaptive management. The consultant to the First Nation is the most sceptical (neither agrees nor disagrees on this question). Indeed, this individual questions both the socioeconomic capacity of follow-up instruments and the comprehensiveness of the measures themselves. The government and proponent representatives are quite confident that the right things will be done, feeling that the "exhaustiveness" of the process will elicit thorough follow-up.

3.3.3 VCR Providing Additional Sustainable Development Benefits beyond EA and EA Follow-up alone

The final part of the third section of the questionnaire asks a much broader question about the sustainable development capacity of VCR initiatives. This question drew significant interest from the interviewees. The consultant to the First Nation is not, for legal reasons, at liberty to write about his perception of the scope of voluntary instruments in the IBA, but maintains that the IBA does provide for "additional environmental management that

will benefit the community". In fact, with the exception of the lead RA, all interviewees strongly agree that voluntary arrangements would have sustainable development benefits (1.00). The First Nation also strongly agrees that voluntarism would create benefits in such areas as education and training. It should be noted, however, that agency # 2 perceives voluntary arrangements to be in addition to those which are included under the umbrella of the IBA.

Regarding suggestions for improvement, agency # 3 states that no one met in advance of the project to define what sustainable development might mean for the community of Attawapiskat, or other communities affected by the project. For example, little attention is given in the EA, or other mechanisms, to what will happen after the mine closes, with the exception of the posting of a biophysical reclamation bond and any benefits afforded by the confidential IBA. Moreover, it is noted that because such issues as economic diversification and secondary industries do not result from a biophysical impact, they are not considered in the most critical stages—project design and EA. As a check against too many private sector expectations and the often-high expectations of voluntarism, proponent # 2 points out that "De Beers is not a charity", and cannot cure all social ills in the community despite working hard to do what it can, where it can.

3.3.4 Category 3: Overall Results

- Baseline data gathering (in support of follow-up and VCR) is generally seen as good on the environmental side, but less so in the socioeconomic area. Although it is flagged by a number of respondents that it is not the responsibility of the federal EA process to collect baseline data in support of VCR, proponent # 1—who may be more

aware of De Beers' voluntary interests than other stakeholders—states that the baseline information would be useful to help design voluntary work at the project.

- Generally, there are mixed opinions on whether the EA identified monitoring, reporting and continual improvement mechanisms in support of follow-up and VCR. The proponent's representatives are more confident and somewhat agree, whereas most government representatives somewhat disagree. For follow-up, some, such as agency # 2, are confident in the rigorousness of the government's criteria in the EA, but this confidence is greater for environmental than socioeconomic issues. For VCR there is only slightly greater confidence in this linkage. The consultant to the First Nation believes that because there is not a running list of EA commitments such as monitoring and mitigation, it is difficult to determine what a regulatory vs. voluntary instrument would address. In contrast, proponent # 1 believes the mechanisms are clearly laid out in the EA.
- The process is seen as fairly "exhaustive" and stakeholders are quite confident in the monitoring, reporting and continual improvement aspects of EA follow-up. Thus, they feel that appropriate modifications of environmental and socioeconomic mitigation measures will be adopted as needed. But the response is stronger for environmental issues than for socioeconomic concerns.
- Respondents generally agree that VCR has the capacity to deliver sustainable development benefits. But no effort was taken in advance of the EA to define what sustainable development would mean for the Attawapiskat region. Other important reservations about the capacities of voluntarism include: (1) the limits of the

proponent to cure all social ills, and (2) critical issues such as secondary economic spin-offs of project options are dismissed by the EA early in the process.

3.4 Interview Questionnaire Results - Category 4: Overall Integration, Effectiveness and Efficiency of the PMC

The final component of the questionnaire and framework addresses the overall integration, efficiency and effectiveness of the PMC components. This section groups the questions into four key themes: 3.4.1 focuses on procedural integration of the EA, permitting, EA follow-up and VCR (questions 21 and 29), 3.4.2 addresses the role of EA in increasing the ability and commitment of the proponent to implement VCR (questions 22 and 23), 3.4.3 deals with the requirements and criteria of EA follow-up as well as the capacity of the follow-up program to assist in the development of VCR (questions 24 and 28). It also examines the capacities and functions of VCR initiatives, relative to other instruments, in the context of Victor. This includes how VCR would complement follow-up measures, and the ability of VCR to manage environmental and socioeconomic issues adaptively in ways that are different than EA and EA follow-up alone (questions 25, 26 and 30). Some questions address elements contained in other questions, so effort is made in the discussion to eliminate duplication. Responses to question 27, for example, are incorporated in the discussion in more than one section.

Finally, 3.4.4 addresses four questions at the end of the questionnaire that do not use Likert responses. These questions are broad and qualitative, concerning informants' opinions of: the role of specific PMC instruments in facilitating progress on environmental and socioeconomic issues, and which configuration of these instruments is most effective in facilitating sustainable development.

Table 3.7: Category 4 Mean Scores - Overall Integration, Effectiveness and Efficiency of the PMC

Question	Mean Score
21. The regulatory and permitting process are well integrated with both the EA process and the design of the EA follow-up program.	0.86
22. The EA process has increased *the ability* of the proponent to design and implement effective voluntary corporate responsibility programs for the VDP.	0.71
23. The EA process has increased *the commitment* of the proponent to design and implement effective voluntary corporate responsibility programs for the VDP.	-0.57
24. I expect that the design and implementation of the EA follow-up program would assist in the development of effective voluntary corporate responsibility programs for the VDP.	0.57
25. I expect that voluntary corporate responsibility programs would increase the contribution of the Victor Diamond Project to the socioeconomic well-being of the project region beyond the requirements of the EA and the EA follow-up program alone.	1.29
26. I expect that voluntary corporate responsibility programs for the VDP would provide greater flexibility to adaptively manage environmental and socioeconomic impacts than the mandatory requirements of the EA and the EA follow-up program alone.	0.43
27. The actions required to comply with the EA follow-up program for the VDP will likely result in unnecessary duplication of existing permitting and licensing requirements.	-1.29
28. A well-designed EA follow-up program for the VDP would be comprehensive enough to completely eliminate the need for voluntary corporate responsibility programs.	-1.29
29. The EA took into account the ways in which voluntary corporate responsibility programs at the VDP might manage potential environmental or socioeconomic impacts.	-0.86
30. If implemented, voluntary corporate responsibility programs would complement instruments and measures required under the EA follow-up program.	1.57

Figure 3.4: Category 4 Mean Scores by Question

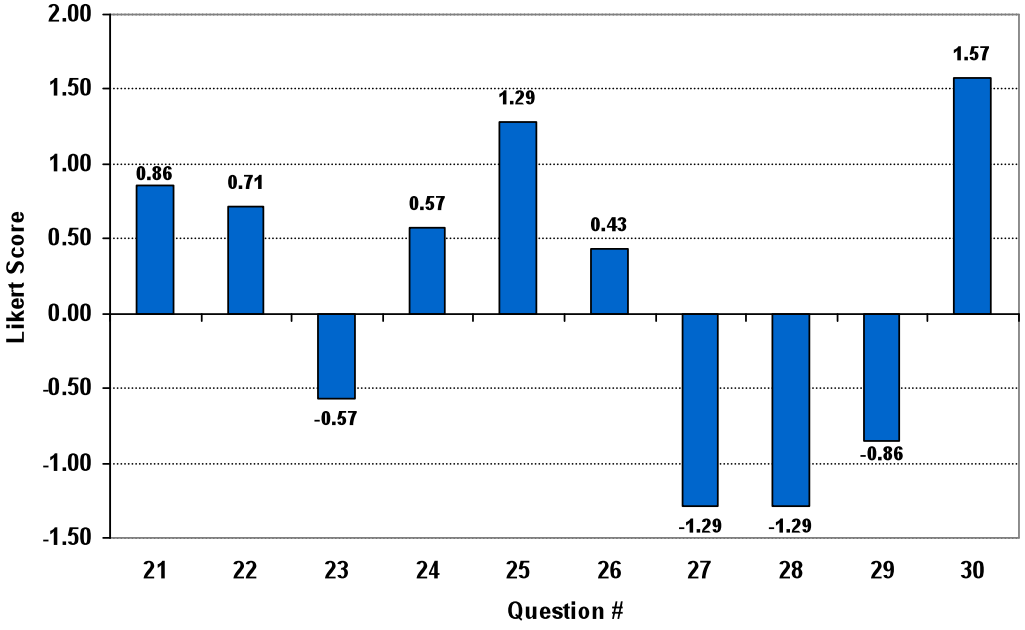


Table 3.8: Individual Results from Category 4: Overall Integration, Effectiveness and Efficiency of the PMC

	Anonymous participant	Consultant to the FN	Agency # 1	Agency # 2	Agency # 3	Proponent # 1	Proponent # 2
Question							
21	2	-1	1	2	1	2	-1
22	0	1	1	1	-1	2	1
23	0	0	0	-2	-1	-1	0
24	0	0	1	-2	1	2	2
25	0	2	1	1	1	2	2
26	0	0	0	1	0	0	2
27	-2	2	-2	-2	-1	-2	-2
28	-2	-2	-1	-2	-1	1	-2
29	1	0	-1	-2	-1	-1	-2
30	1	2	1	2	1	2	-2

3.4.1 Integration of EA, Permitting, EA Follow-up and VCR

Responses are diverse on whether the regulatory and permitting process is generally well integrated with EA and EA follow-up (0.86). The anonymous participant, agency # 1, agency # 2, agency # 3, and proponent # 1 all agree that the process is well integrated. For example, in the area of fisheries authorizations, the permitting process is both tied to the EA, and also triggers the specific level of EA, to improve efficiency and continuity. Fish habitat decisions are also supposed to be integrated with provincial requirements. Yet, the consultant to the First Nation and proponent # 1 feel there is poor harmonization between the Government of Canada and other jurisdictions, which affected their otherwise positive response to this question. For example, the First Nation's consultant states that although:

> Canada has been charged with implementing a follow-up program to address any shortcomings in the regulatory process . . . many of these shortcomings are in areas of provincial jurisdiction . . .[which presents a problem] since the provincial government refuses to sign the follow-up program agreement (Consultant to First Nation response to Question 21).

Agency # 1 only somewhat agrees that the permitting process is well integrated with EA and EA follow-up. This respondent feels that more consolidation of regulatory and follow-up requirements is necessary. He recommends that in certain circumstances, rather than multiple RAs and federal authorities managing a process simultaneously, a single agency could potentially produce a more coordinated and consistent approach to establishing mitigation and design criteria, ensuring greater integration and efficiency.

When asked whether the EA took into account how VCR might manage issues at Victor, the mean response is that it did not (-0.86). Proponent # 2, who strongly disagrees with this statement, states that if the EA were to address voluntary instruments, such instruments would "no longer be voluntary."

In contrast to this opinion, however, both agencies # 2 and # 3, as well as the consultant to the First Nation and the anonymous participant, express a different perspective. They recognize that although the EA did not address voluntarism explicitly, it is recognized that De Beers does things voluntarily and proactively. In addition, De Beers "volunteered a large number of commitments" during the EA process, some of which "went beyond regulatory mechanisms and are being incorporated into the follow-up program." Given these responses, it appears that there was not a direct effort to account for voluntarism during the review. Nevertheless, voluntarism and its role in either the IBA or follow-up commitments is addressed multiple times by De Beers and other stakeholders during the EA itself and the follow-up program design.

Agency # 1 states that it would be useful for EA to acknowledge the role and relevant environmental and socioeconomic contribution of VCR. But it is too challenging to include them rigorously, since there is no way for the government to ensure implementation of VCR initiatives. Similarly, proponent # 2 states that it is the responsibility of the policy process to facilitate and acknowledge VCR. While policy should establish a foundation or a framework to accommodate the eventual presence of VCR, VCR should not be specified, or accounted for, in regulations. Proponent # 2 claims that "legislation cannot account for eventualities" in the same way that more adaptive VCR can. Proponent # 2 also believes that this question should be left to stakeholders to determine what is, and is not, appropriate in a voluntary context.

3.4.2 Effect of EA on the Proponent's Ability and Commitment to Implement VCR

Respondents did not elaborate on their opinions of why the EA would or would not support the proponent's *ability* to implement VCR (0.71). Proponent # 1 strongly agrees that

the EA would assist in VCR. This comment is supported by proponent # 2 who, after the EA process, had "a better idea of what the gaps were." In effect, the EA process is viewed as the vehicle for identifying key issues, which in turn means the proponent has access to better information on key sensitivities and issues in the region, from which to design or develop VCR initiatives.

With respect to the effect of the EA on the proponent's *commitment* to implement VCR, responses are slightly less positive (0.57) among the interviewees for a number of reasons. These include: (1) VCR being more informed by community needs and interests than the EA (consultant to the First Nation), (2) it is hard to know whether the proponent is committed to doing what it says it will do (agency # 1), and (3) De Beers is a privately owned company whose objective is to make money (agency # 2). Considering market pressures on corporations, building a large suite of voluntary instruments in response to EA alone is unlikely. On the other hand, both of the proponent's representatives note that De Beers was committed to VCR from the outset of the project's design, and that the EA made no difference to the firm's willingness to be engaged in such issues.

3.4.3 Relationship between EA Follow-up and VCR

There is considerable disagreement among respondents as to whether the design and implementation of the follow-up program will assist in the development of VCR at Victor (0.57). Both the federal RA and consultant to the First Nation neither agree nor disagree with this question, although the latter notes that while follow-up *should* assist in the design and implementation of VCR, it likely will not. Yet, agency # 1 (somewhat agree), proponent # 2 (strongly agree), and proponent # 1 (strongly agree) feel that the identification of follow-up program commitments enables the proponent to identify and distil the gaps between that

which is covered by the EA, the EA follow-up and the regulatory process vs. what could be covered by VCR.

Respondents generally disagree with the statement that a well-designed EA follow-up program on its own would completely eliminate the need for VCR (-1.29). As noted by two of the government agencies (# 1 and # 3), EA follow-up is only capable of looking at biophysical mitigation measures identified during the EA, and making appropriate modifications to those measures. Others, such as proponent # 2, observe that "Voluntarism is critical to handle unpredictable events for which there is no regulatory tool" (federal RA). This response is echoed by the First Nation's consultant. He believes that instruments such as IBAs are better able to handle issues such as wildlife management, than EA and EA follow-up. Similarly, agency # 1 states that while EA follow-up could only effectively deal with biophysical issues, there are social and economic issues for which VCR is more suited. Agency # 2 also points out that although follow-up measures might address such issues as the effect of the project on hunting wildlife, the process does not evaluate or address the effects of less hunting on the family, in the form of nourishment or traditional and cultural use. This is the gap that VCR fills. Finally, proponent # 2 agrees that however one designs a regulatory or EA regime, there is always room to go beyond, for it is here where the corporate responsibility leaders can be distinguished from the corporate responsibility laggards.

When asked whether VCR would increase the contribution of the project to the socioeconomic well-being of the project region beyond the EA and EA follow-up process alone, responses are generally positive (1.29). This is in keeping with the statements above concerning VCR's benefits. Although the anonymous participant does not want to speculate,

the consultant to the First Nation is confident (strongly agreed) that VCR would increase the contribution of the project to socioeconomic well-being. However, he is concerned that the "failure to adequately prepare the community's organizations for implementing the IBA will negatively affect the potential benefits of the project." Proponent # 2 states that there is a positive "domino effect" for major projects in remote regions, as long as proponents are committed to maximizing opportunities that increase the knowledge and capacity of communities. This contention is in striking contrast to fears expressed in some literature that communities may be worse off from a sustainability perspective after a mine closes than they were before it opened (Clausen and McAllister 2001).

When asked if VCR would, if implemented, complement EA follow-up measures, the responses are resoundingly positive. Both proponent # 1 and proponent # 2 strongly agree with this complementarity, recognizing that it would help to address remaining gaps. Government representatives also generally agree that VCR would further assist with existing initiatives, suggesting that the mechanisms would not conflict.

3.4.4 Category 4: Overall Results

- Generally, the government representatives and proponent # 1 agree that the EA and permitting, follow-up and VCR stages of the PMC are well-integrated. But proponent # 1 and the consultant to the First Nation assert that poor harmonization between the federal and provincial EA processes remain persistent problems that hinder the effective integration of the different PMC elements. That key long–term management issues under provincial jurisdiction are not accounted for by CEAA's EA follow-up requirements also presents a barrier to process effectiveness, as indicated by the First Nation's consultant.

- There is strong disagreement regarding the extent to which the EA should take into account the potential of voluntarism. As proponent # 2 poignantly remarks, were the EA to prescribe voluntary measures, they "would no longer be voluntary". Other informants state that although the EA itself did not address voluntarism, it was routinely acknowledged during the EA that De Beers would do things voluntarily. However, in light of: (1) De Beers' volunteering commitments during the EA that would go beyond follow-up as well as the IBA, and (2) the remark by agency # 1 that EA should acknowledge the role of VCR despite the challenges, the link between these two elements of the PMC should be examined more closely. This is a major recommendation in chapter 4.
- Building on the observation above, both proponent # 1 and proponent # 2 feel that key issues identified during the EA would be helpful in improving the proponent's ability to design VCR measures. Issues not covered by the EA or regulatory processes are identified, clarifying gaps that the VCR could fill.
- There is little confidence that the EA increases the propensity of the proponent to implement VCR, since VCR ultimately should be informed more by community needs than the EA. Some feel that in light of the reality that De Beers exists to make a profit, the company may have little incentive to follow through on its intentions to adopt VCR measures due to incremental costs. The proponent's representatives disagree with this contention, stating that commitment to VCR would be strong with, or without, the EA.

- Respondents generally agree that the follow-up program would lead to improved VCR, but the responses varied. Although the proponent's representatives are confident that this linkage would be strong, the First Nation's consultant is sceptical.

- VCR is seen as having a much broader purpose than EA follow-up, since follow-up looks only at mitigation measures in the EA, whereas voluntarism can address a variety of issues for which no regulatory or other instruments exist. This statement is reinforced by respondents' strong agreement that VCR will help to increase the contribution of the project to the socioeconomic well-being of the region. Thus it is not surprising that the informants consider VCR and follow-up measures as being complementary, since VCR can fill the many management gaps left after follow-up measures have been implemented.

3.4.5 Broader Questions: Feedback on the Role and Effectiveness of Different Elements of the PMC in Managing Environmental and Socioeconomic Issues

The four broader questions at the end of the questionnaire are discussed individually.

Should the EA Follow-up Program include both Environmental and Socioeconomic Management Measures?

(if yes) Should one agreement cover both (environmental and socioeconomic management measures) or should there be separate agreements covering each of these?

(if no) Would regulations or a VCR be a more appropriate instrument through which to implement either environmental or socioeconomic management measures? Please explain why. (If yes, explain which would be more appropriate).

With the exception of proponent # 2, all respondents agree that the EA follow-up program for Victor should contain both environmental and socioeconomic measures. Essentially, those who answered this question in the affirmative feel that socioeconomic

issues should be integrated with biophysical concerns. Since CEAA does not include socioeconomic issues that are not caused by biophysical impacts, questions remain on how to integrate the two effectively. Proponent # 1 feels that the inability of RAs to sign off on, or address, issues beyond their specific mandates is a formidable barrier. As agency # 1 commented, this is particularly problematic when socioeconomic issues and impacts are considered more important from a sustainability perspective than environmental issues and impacts.

The First Nation's consultant believes that it is not follow-up that should be integrated, but rather the EA, in predicting effects. However, because many socioeconomic issues need to be dealt with separate from biophysical issues during EA and in EA follow-up, proponent # 2 states that it is preferable to create two types of agreements, to reduce confusion. This statement is in contrast to the consultant to the First Nation's observation that Aboriginal peoples "tend not to see the world in such a reductionist way; change is change"—be it environmental or socioeconomic. On the other hand, agencies # 2 and 3 agree with the anonymous participant that one follow-up agreement would be best. One agreement can address the inherent integration of environmental and socioeconomic issues, helping to compensate for CEAA's limited consideration of those socioeconomic impacts that may result from biophysical impacts. Proponent # 2, however, disagrees with these opinions, and states that the follow-up agreement should clearly be limited to biophysical issues, since that is the limit of CEAA's scope. Any socioeconomic follow-up should, therefore, stem only from separate socioeconomic assessment legislation.

Responses vary concerning whether regulations or VCRs are more appropriate instruments with which to implement environmental or socioeconomic management

measures. Agency # 2 feels that voluntary instruments are better for some issues; regulatory tools are better for others. This same point is made by both of the proponent's representatives. They feel that for socioeconomic issues, VCR is better due to the flexibility necessary to adaptively manage nonquantifiable socioeconomic concerns. For biophysical issues, regulatory instruments are seen as more effective, due to their more quantifiable nature, and the accountability that can be demonstrated through a regulatory framework.

Do you expect that the EA Follow-up Program will be well-Integrated and Managed in concert with other Environmental Management Measures required by Regulatory Permits, Licenses and Authorizations?

With the exception of the First Nation's consultant who responds "unlikely", the consensus among all stakeholders is that the EA follow-up program is being managed and designed to avoid duplication with other measures. Proponent # 1 states that this issue is being handled well. The consultant to the First Nation, however, feels that the parties did not complete the necessary groundwork to ensure integration. He cites poor collection of socioeconomic baseline data and failure to adequately track which measures would be implemented through which instruments.

In your opinion, which of the following, or combination of the following, is the best means to maximize sustainable development benefits associated with the Victor Project?

1) An EA alone
2) An EA with a mandatory follow-up program
3) Voluntary Corporate Responsibility Programs

Responses to this question are unanimous that both VCR and EA with a mandatory follow-up program are necessary. Given jurisdictional fragmentation, each of these tools helps to manage and fill potential gaps. The federal expert department observes that it is

possible to adopt all three PMC elements but still not have them maximize, or even facilitate, sustainable development. Sustainable development is a long-term objective and each instrument must be well managed and well executed to facilitate such long-term gains.

In your opinion, would well-designed Voluntary Corporate Responsibility Programs eliminate the need for EA and regulatory authorizations?

Many respondents are uncertain why this question was asked at all, but they all believe that VCR alone, no matter how well designed, is not a surrogate for effective EA and regulation. Regulations are critical to ensure that a proponent and others do not cut corners, and that accountability can be demonstrated and enforced. Indeed, proponent # 1 states that some companies are progressive because they are forced to be progressive. Regulatory tools provide structure, which is necessary to create an efficient and effective EA, and, accordingly, an efficient and effective PMC.

CHAPTER 4: DISCUSSION AND RECOMMENDATIONS

Based on the results presented in chapter 3, this chapter discusses the overarching question(s) asked in each of the four categories of the evaluative framework. It also identifies policy, regulatory and management recommendations concerning the different dimensions of the PMC, and its constituent parts. The results and discussion are compared with the background literature, where applicable.

4.1 Category 1: Conclusions and Recommendations

"Did the Victor EA effectively identify both compliance requirements and key environmental, social and economic issues and impacts in support of EA follow-up and VCR?"

The answer to this question is mixed depending on the mandatory requirement, issue, or impact being identified. Respondents believe that the environmental assessment (EA) was, for instance, effective in identifying permitting, licensing and regulatory compliance requirements (1.14). The EA also identified environmental impacts insofar as what is necessary for these impacts to be effectively managed and monitored in EA follow-up (1.43)

Whether for EA follow-up or for VCR, respondents indicate that the Victor review was much less effective in its identification of socioeconomic issues and impacts than environmental impacts (-0.43). From a sustainable development perspective, the absence of socioeconomic assessment is the primary aspect of the Victor PMC that requires improvement. In addition, the identification of environmental impacts in the EA is insufficient to support Voluntary Corporate Responsibility (VCR). The following discussion

provides a rationale in support of including socioeconomic assessment and sustainability considerations in EAs of large-scale natural resource projects under CEAA.

4.1.1 The Importance of Regional Planning

Economically viable natural resources are often discovered years prior to a project proposal's submission to the EA and regulatory process (Pasho 2000). As recommended by the consultant to the First Nation, it is at this stage, when the likelihood of a project going forward increases, that planning should commence. Anticipatory planning is essential to ensure that project proposals reconcile with the community's short and long-term development needs and preferences.

The idea of using land-use and regional planning to help inform more sustainable patterns of present and future natural resource development is not new. As early as 1983, professionals in the environmental and land-use fields have observed that "in the absence of a fully integrated and formalized cooperative approach to planning . . . no framework has existed to assess the broad long-term cumulative and interactive effects of incremental development" in remote Canada (Staples in CARC 1983: 242).

Comprehensive, sustainability-based plans are able to develop a unifying vision and strategy for land use and resource management. They provide a secure basis for public and private planning and investment in community development, and improve equity and fairness among groups (Brown 1996: 4). The problem for Victor is that a comprehensive regional planning framework providing environmental, social, economic and cultural baseline information in advance of EA, was not available or in place. If implemented, sustainability-

based land use plans would help to ensure "a prosperous and [more] diverse economy that maximizes jobs through resource use . . . ." (Brown 1996: 2).

Recommendation # 1: The governments of Ontario and Canada should better prepare natural resource extraction-prone regions for development through targeted regional land-use planning and capacity building.

Recall from section 2.1 that the effectiveness of a proposed project's EA and broader PMC requires social, economic and environmental issues and impacts to be identified comprehensively, and addressed in a holistic manner (Gibson 2002; Hazell 1999). Also recall that at the federal level EA is "conceived narrowly as the identification and evaluation of actual or anticipated biophysical effects resulting from a project or other undertakings" (Watson and Agnolin 2001: 4). The Victor case supports Watson and Agnolin's conclusion that the limited social and socioeconomic assessment in EA remains highly problematic. What makes the literature criticizing EA's omission of social and economic impacts more salient is that 6 of the 7 study respondents, including the proponents, state that socioeconomic assessment *should* be part of CEAA itself, or a separate but still mandatory legislative process.

It is important to remember, however, that not all CEAA-based EAs fail to consider social, cultural and economic impacts of undertakings. The Voisey's Bay Mine and Mill Project, mentioned in chapter 2, assessed socioeconomic perspectives. What differentiates the Voisey's and Victor cases, however, is that the former was assessed by a public review panel under CEAA, whereas the latter was assessed as a comprehensive study under CEAA. The differences are highly significant. Review panels are sometimes appointed by the Minister of the Environment to assess complex projects with the potential to result in

heightened public concern or highly unique significant adverse effects (CEAA 2007: 1). Due to the potentially serious regional development impacts and opportunities posed by the Voisey proposal to the Innu and Inuit communities of Labrador, the panel was struck to address public concerns and long-term regional needs. The most notable contrast between the panel's decision criteria and the Victor comprehensive study was the early requirement for the proponent to "indicate how the project would deliver durable and equitable social and economic benefits to Aboriginal people in northern Labrador" (CEAA 2005: 3). The panel demanded that the proponent address in its assessment such issues as ensuring direct employment at the project, meeting a requirement that communities participate financially in the project, and demonstrating the economic opportunities afforded by the project to the region, by way of increased mining revenues and potential spin-off industries. There was no similar legislative requirement for the Victor Project.

The Voisey's case set an important precedent for the conduct of EA at the federal level, since CEAA's purpose of sustainable development was actually addressed. That CEAA can require sustainable development-based considerations for one large-scale, remote mining project but not another is a major inconsistency in the federal EA process. As the interviewed stakeholders attest, this inconsistency should be addressed.

The unanimous observation of Victor EA stakeholders that socioeconomic assessment would have resulted in a more effective and, in some cases efficient, project review and PMC is among the most significant findings of this research. The Mushkegowuk Council, governing another First Nation community in the Victor project region, indicated early in the EA process that the list of criteria for residual effects should include the social, . . . economic . . . in addition to the ecological context[s]" (Beck and Koene 2005: 6). The

reason is because these criteria will be important in assessing the long-term impacts of the project on local First Nations. Proponent # 1 also acknowledges that due to the many socioeconomic issues brought into follow-up discussions, better inclusion of these issues in EA would have expedited solutions to the various data challenges faced when designing ongoing mechanisms to manage socioeconomic issues, post-approval.

A barrier to socioeconomic assessment (SIA) is its inherent qualitative nature, relative to biophysical assessment. As noted by proponent # 2, in SIA it can be difficult to know to attribute specific social impacts to either: (A) the proposed project, thereby enabling the impact to be addressed in project design and management, or (B) the developmental tendencies and trends of the region, where the root causes of social impacts may be more diffuse. Therefore, significant legislative, policy, and planning changes are required to reform CEAA to include SIA. In lieu of triggering SIA for all proposed projects, it is recommended that, in the short-term, the CEA Agency work with Major Projects Management Office to build socioeconomic scoping into remote natural resource PMCs at an early stage.

Whereas the role of regional planning process should be to identify environmental, social and economic baseline information within different regions for different purposes, the scoping recommended to introduce SIA effectively should be determined on a project-specific basis. It should examine the project within the context of important social, economic, cultural, political, health and historic indicators that embody a region or community's developmental circumstances. These indicators should then be used as a mechanism with which to dictate the type of impact assessment that should apply to the

project, such as a conventional environmental assessment, or a more holistic, sustainability-based assessment (see recommendation # 3).

Recommendation # 2: That the CEA Agency and the soon-to-be established Major Projects Management Office make provisions to scope the significance of nonbiophysical socioeconomic impacts of major project proposals in resource-dependent communities and regions.

4.2 Category 2: Conclusions and Recommendations

"Do stakeholders trust each other to meet EA obligations, and are they confident in the proponent's ability and intent to undertake effective environmental and socioeconomic management in EA follow-up and VCR?"

Due to the universal agreement among respondents that First Nations trust neither governments nor industry, the answer to this question is generally negative. Although it is acknowledged that governments and industry have a reasonable level of trust in each other, trust within Aboriginal communities toward governments and industry continues to be problematic from a stakeholder relations perspective. The following discussion outlines recommendations to improve this trust.

Trust issues within First Nations communities are largely historic in origin, but the study respondents make a number of recommendations to improve current levels of trust. For example, the anonymous participant recommends that key issues need to be discussed with First Nations openly and early in the process, but that improving trust will take time. To help improve relations, the consultant to the First Nation recommends that:

> Canada should consider either funding the collection of a broad spectrum of socio-economic baseline data concurrent with the EA process, or force proponents to collect it during the EA process, [since] doing neither leaves communities unprepared for social and economic change.

This recommendation is directly addressed in recommendations 1 and 2 above, insofar as the need to collect socioeconomic, as well as biophysical baseline data. By increasing a community's *awareness* of its own development needs and opportunities, Aboriginal communities could: (1) acquire greater confidence in the project approval process, (2) establish greater familiarity with their own development potential. It is recommended that the memorandum of understanding negotiated between stakeholders in advance of the Voisey's Bay EA should be referenced as a model to which non-panel review EAs and PMCs for remote mining projects could refer.

It is obvious from the results of this study that EA follow-up on biophysical environmental issues is comprehensive under CEAA. Questions remain on such long-term issues as the cumulative impacts of the mine on groundwater, but the numerous consultations between De Beers, the governments, and local communities incrementally improved respondents' confidence and trust in the effectiveness of EA follow-up during the review. Since stakeholders have much less confidence and trust in the proponent's ability and intent to deliver effectively on socioeconomic impact management, however, confidence should be improved in this aspect of PMC management, particularly for future EAs.

4.2.1 Sustainability Assessment

A targeted effort should be made to practice broader, sustainability-based assessment, including the assessment of social, economic and environmental impacts. This type of assessment should be undertaken early in a project's design phase. In so doing, communities could better articulate short- and long-term needs to proponents and governments, helping to shape the design of projects and their attendant follow-up and VCR programs. A sustainability assessment methodology, outlined by Gibson and the International Mining,

Minerals and Sustainable Development North America Project (MMSD) in chapter 2, would improve stakeholder engagement and trust. It would also facilitate exchange of the right types of information necessary to improve stakeholders' confidence in the management potential of EA follow-up and VCR. Specifically, Gibson (2001: 1) recommends that environmental assessment should be "anticipatory and forward looking, integrative, often flexible . . . [and should] encourage positive steps—toward greater community and ecological sustainability . . ."

To help sketch out an approach to implementing Gibson's and others' recommendations, the work of the 2003 Tahltan Mining Symposium, held in Dease Lake, British Columbia is instructive (IISD: 78). In this symposium, the Tahltan peoples sought to define a sustainability vision of their own by applying the MMSD's *Seven Questions to Sustainability*. The specific objective was to identify a future vision for their land and people in the context of the opportunities and challenges of mining projects.

The questions being asked in the MMSD and Tahltan exercises (figure 2.2) are too all-encompassing and, arguably, progressive to be efficiently applied in a status quo PMC. However, by identifying and answering the most critical of these questions, many of the Victor stakeholders' concerns could have been addressed. For example, proponent # 2 is concerned with process timelines and wanted to ensure that the project was approved efficiently and without process duplication. Yet, the consultant to the First Nation also said that "proponents would do well to put their schedules away and focus on increasing the understanding of the project among communities. If they do, they may find that the schedule takes care of itself." Community planning sessions should be held in advance of sustainability assessments to ask the basic question: "will the project contribute to the long-

term viability of the local, regional and global economy and provide specific opportunities for the less advantaged?" Indeed, based on the results of this study, time delays attributed to extensive community engagement may have been reduced if broader engagement and capacity building had been encouraged or required earlier in the process.

A critical question is of course how to implement sustainability assessment. First, recall that both regional planning and socio-economic and environmental scoping would, in an ideal scenario, collect and disseminate important socioeconomic and biophysical information in advance of a project's design. By comparing this information with the design parameters of the project, a decision can be made as to whether to trigger: (A) a normal biophysical assessment under CEAA; or (B) an actual sustainability assessment, in which biophysical and nonbiophysical socioeconomic impacts of a project would be assessed in lieu of a typical CEAA screening or comprehensive study. Because some review panels already include sustainability criteria, it is proposed that sustainability assessment should also have the potential to inform, but not necessarily supersede or replace, panel reviews.

Recognizing the constitutionally authority of provincial, and increasingly territorial governments over social issues related to natural resource development, harmonization arrangements should be established among different levels of government. Such harmonization would ensure that federal sustainability assessment decision criteria can be adequately addressed by provincial processes and vice versa. Given the duty and responsibilities of the federal government to consult with, and accommodate Aboriginal peoples, the rationale for instituting sustainability assessment in CEAA is particularly strong for project proposals that may affect Aboriginal communities. For such projects, the Government of Canada has significant capacity and authority to shape and influence a project's contribution to sustainability and regional development in a way that reconciles with the needs of Aboriginal peoples.

Recommendation # 3: Pursuant to # 2, modify CEAA to ensure regional sustainability assessment of project proposals in environmentally and/or socioeconomically sensitive natural resource dependent communities and regions.

4.3 Category 3: Conclusions and Recommendations

"Did the EA gather and identify all the necessary baseline data, performance and other mechanisms necessary to effectively design and implement EA follow-up and VCR in support of sustainable development?

Regional planning and sustainability assessment are necessary in advance of a project-specific EA to improve both process effectiveness and efficiency and broader regional sustainability capacity. To avoid being repetitive of recommendations in the earlier categories, conclusions and recommendations in this section emphasize, among other related issues, the need for better integration of follow-up and VCR for projects assessed under status quo, project-specific EA.

Overall, the assessment of the Victor Project did a poor job of gathering socioeconomic baseline data in support of follow-up and VCR, due to the limitations of CEAA. However, the assessment did a better job of gathering biophysical environmental data. De Beers actually collected significant nonbiophysical socioeconomic data (as indicated by the government representatives), despite not being required to do so by the CEAA process. The study results do not indicate why this information was collected, but it is assumed that the data were gathered in anticipation of both the IBA and other nonmandatory socioeconomic follow-up and VCR initiatives. The biophysical orientation of comprehensive studies under CEAA does not support the effectiveness and efficiency of follow-up and VCR as well as it could, because proponents ultimately face the need to collect data for socioeconomic management measures, as demonstrated in the study.

Even for biophysical considerations, the EA only identified general follow-up objectives; it did not fully identify all monitoring, reporting and performance targets, given the numerous gaps filled during the negotiation of the EA follow-up program. Indeed, the EA follow-up program should have been designed or planned concurrently with the EA, since there was duplication and reanalysis of issues dealt with in the EA during the design of EA follow-up. This inefficiency could have been avoided in a more proactive, integrated, and follow-up-focused EA process.

As suggested by the consultant to the First Nation, a compendium of all mandatory *and nonmandatory* commitments made by, and asked of, the proponent and other parties should have been kept and tracked during the EA. Although one can conclude from the results that monitoring, reporting and continual improvement identified in the EA would assist with VCR programs, better tracking of commitments as well as regional and site-specific information would have improved process effectiveness. Indeed, "the level of detail provided in the description of the various environments in the [environmental impact assessment] must be prioritized" to ensure an effective EMS (Sanchez and Hacking 2002: 31).

Due to the exhaustiveness of the Victor EA process, stakeholders generally feel that follow-up measures will be capable of managing biophysical issues identified during the EA. Thus, the actual requirements for biophysical EA follow-up under CEAA need not be significantly changed. Rather, it is the point at which, and way in which information from the EA is fed into follow-up that should be modified. This can be achieved by designing follow-up arrangements earlier and more proactively in the PMC.

Recommendation # 4: Implement a mandatory regulation to CEAA requiring key socioeconomic information to be collected during all EAs of major projects to expedite, and make more comprehensive, VCR practices.

4.4 Category 4: Conclusions and Recommendations

"Were the different elements of the Victor PMC efficiently and effectively integrated, and what sustainable development benefits will these elements of the PMC provide, based on the way in which they were undertaken?"

Stakeholders generally feel that the PMC for Victor was not well-integrated, either from an effectiveness or efficiency perspective.

4.4.1 Integration of the Regulatory Process with EA Follow-up

Despite the above conclusion that PMC integration is generally poor, the study suggests that the regulatory and permitting processes are well integrated with EA and EA follow-up. Information identified in the EA is used to acquire permits and authorizations, and community consultations are geared specifically around the requirements of both the EA and the permits being sought after the EA.

A clear gap on the permitting side is the effort to reconcile federal EA follow-up with provincial regulatory jurisdiction. The consultant to the First Nation acknowledges that "the problem on this project is that a federal EA was conducted for a project that requires mostly provincial authorizations." The regulatory process does not cover many of the areas included in the follow-up program to account for EA commitments due to overlaps with areas of provincial jurisdiction (consultant to the First Nation). The resulting confusion and duplication of federal and provincial requirements create process inefficiencies. The aforementioned recommendation that "a running list of commitments should be kept which

includes a clear indication of how each commitment will be met: by regulation, a binding follow-up agreement, the voluntary IBA, or other means" would address this inefficiency (consultant to the First Nation). Agency # 1 endorses the concept that better consolidation and communication of regulatory and follow-up requirements is required.

Recommendation # 5: Institute a provision in CEAA requiring all follow-up measures to be designed *during* comprehensive study-level EAs.

4.4.2 Planning for VCR and Management during EA and EA Follow-up:

The EA did not formally take into account the future management potential, or role, of voluntarism. Yet, parties to the impact benefit agreement (IBA) insisted on waiting until the EA was finished to finalize the IBA. Although De Beers could have demonstrated its commitment to voluntarism irrespective of the EA, there is clearly a substantive link between these two aspects of the PMC. This point was stated by proponent # 2 and the consultant to the First Nation, both of whom are privy to the details of the IBA.

It is clear that the implementation of follow-up conditions would greatly assist in the design of VCR, since gaps left unaddressed by follow-up and regulatory compliance can be addressed by voluntary measures. Considering Agency # 1's recommendation that EAs for large-scale projects should identify and plan for voluntary practices, issue-specific working groups should be established early in the project design and assessment phase to distinguish EA follow-up commitments from those best dealt with by VCR. This recommendation is supported by the consultant to the First Nation.

Recommendation # 6: Ensure more thorough harmonization of federal and provincial requirements in advance of EA by maintaining a running list, across all jurisdictions, of definite and expected EA, EA follow-up and VCR commitments.

4.4.3 Role and Potential of VCR in the Project Management Continuum

Respondents generally agree on the social, economic and environmental value and utility of VCR. With the exception of the anonymous participant, who did not comment, all respondents agree, strongly or somewhat, that VCR would increase the contribution of the Victor project to the socioeconomic well being of the project region.

It is also evident that stakeholders believe VCR initiatives may have the capacity to provide much greater flexibility to adaptively manage environmental and socioeconomic impacts than EA, regulatory compliance and EA follow-up alone. The consultant to the First Nation recognizes that "IBAs tend to be global in their approach, putting in place mechanisms [to manage specific issues], but they can also establish specific programs which can be quite narrow and specific." That two of the key stakeholder communities—the First Nations and agency # 1—confirm the value of VCR indicates that this entire aspect of the PMC should be explicitly addressed during planning and EA. This conclusion is reinforced by a later question on the extent to which VCR would complement the requirements of EA follow-up; all stakeholders somewhat or strongly agreed that it would.

It is recognized by agency # 1 that the voluntary nature of VCR initiatives inherently limits the control of government authorities over their execution. However, the virtues of VCR—including IBAs and EMSs—are also recognized by this same key informant and the literature (Eccleston and Smyth 2002; Sanchez and Hacking 2002; Vanclay 2004). An example is Sanchez and Hacking's claim that voluntary environmental management systems help to fill one of the "generally recognized shortcomings of the EIA process—poor implementation of mitigation measures and management plans [in EA follow-up]" (Sanchez and Hacking 2002: 27).

The broader sustainability assessment methodology discussed earlier in this chapter should be used as a framework with which to plan for, design, and implement different stages of the PMC. It should also be used to elicit better and more accountable VCR. Due to the procedural and logistical ambiguities of sustainability assessment as a discipline, it is recommended that Sanchez and Hacking's "activity-aspect-environmental impact linkage" methodology be used to collect and manage biophysical data and information within and between EA, EA follow-up and VCR (Sanchez and Hacking 2002: 28).

"Environmental aspects" are defined in a methodology pioneered by the International Standards Organization as being an "element of an organization's activities, products or services that can interact with the environment". (Sanchez and Hacking 2002: 28). Unlike typical project-specific EA, where CEAA's *Law List* and *Comprehensive Study List* trigger what gets assessed for proposed projects, Sanchez and Hacking recommend a broader mapping of an entire project's interaction with the environment. Once these aspects are identified, provisions are made for public consultation, description of the baseline environment, impact identification, federal and provincial legal requirements, and ongoing management planning (Sanchez and Hacking 2002: 29). Both follow-up and VCR can be addressed through this framework, since the approach is not limited to the narrow scope of assessment otherwise dictated by, and limited to, the criteria within the various triggers of CEAA or other EA regimes.

Recommendation # 7: Adopt Sanchez and Hacking's "activity-aspect-impact linkage" method in comprehensive study-level EAs, to help identify and plan for more comprehensive management in follow-up and VCR.

4.4.4 Comprehensiveness of EA Follow-up Requirements

As noted by the consultant to the First Nation, the question of whether "the EA follow-up program should include both environmental and socioeconomic management measures" is the "million dollar question". Just as socioeconomic assessment should be mandatory in CEAA, so too should socioeconomic follow-up be obligatory. This recommendation is supported by all stakeholders, with the exception of proponent # 2. Proponent # 2 recommends that separate socioeconomic assessment legislation be introduced at the federal level, in which case follow-up would also be mandatory.

Recommendation # 8: That nonbiophysical socioeconomic follow-up become mandatory under CEAA, based on the condition of a project triggering a sustainability assessment (Recommendation # 3)

4.5 Significance and Contribution of Results to the Literature

The literature on EA, EA follow-up and VCR is generally very specific, such as focusing on the relationship between EA and EMS, or very broad, such as focusing on the overall sustainability capacity of status-quo EA. This study complements the existing literature by identifying the project management continuum (PMC) as an actual process, and acknowledging the overlap, possible efficiency improvements and complementarity among the different PMC elements.

By using as its focus a recent, large-scale project under CEAA, this study helps improve the understanding of the way in which the planning and approval of major resource projects can elicit or hinder regional sustainability. The study also identifies the need for academics and others to undertake new, applied research on how to optimize regional

planning and specific project impact assessments in support of the efficiency and effectiveness of future PMCs.

The study highlights the need for social and socioeconomic impact assessment. Although the EA literature widely endorses socioeconomic assessment as a means of making EA processes more effective, the study also makes a case for the process efficiency improvements offered by including socioeconomic impacts in EA. It demonstrates that by gathering socioeconomic information early in the process, it is possible to improve stakeholders' levels of trust, while also expediting the identification of follow-up and VCR needs.

Finally, this study will also complement the work of Gibson and the MMSD, by emphasizing the need for sustainable development-based decisions vis-à-vis a more integrated PMC. In so doing, it complements the recommendations of Sanchez, Hacking, Vanclay, Eccleston and Smythe, by applying their support of EA and VCR integration in a broader context which covers the planning, assessment, approval and ongoing operation of a project.

4.6 Final Conclusions

The federal environmental assessment process for the Victor Diamond Project did not meet many of the key process efficiency and effectiveness criteria outlined in the literature and the evaluative framework. One of the Victor EA's most significant omissions in this regard was that of nonbiophysical socioeconomic impact assessment, making the inevitable identification and management of socioeconomic issues later in the PMC more inefficient than if such impacts had been originally included in the EA. To address this problem, the

Canadian Environmental Assessment Act should be expanded to include socioeconomic assessment for projects that warrant it. This improvement to CEAA would also better address the act's actual mandate of sustainable development.

Stakeholders' trust during the Victor EA was highly compromised. Despite the significant extent to which First Nations and other community members were engaged and consulted once the project had been proposed, the efficiency and effectiveness of each individual stage of the Victor PMC would have been improved if more proactive regional engagement and capacity building had been undertaken among all stakeholders in advance of the EA. Such engagement and capacity building is also endorsed by the literature, as it would help compensate for: (1) historical factors that may compromise trust between Aboriginal peoples and other stakeholders, and (2) generally weak integration and stakeholder engagement within, and among, status quo PMCs . For future EAs under CEAA, early stakeholder engagement and capacity building should be elicited through: (1) regional planning in resource-rich regions in advance of EAs commencing, and (2) sustainability assessments of projects that warrant more comprehensive analysis and planning.

EA follow-up at Victor is expected to be effective in its management of biophysical mitigation measures. Socioeconomic gaps during the EA phase, however, are a barrier to the integration of EA follow-up with EA and VCR. The introduction of nonbiophysical socioeconomic assessment in CEAA would help to ameliorate this problem, but early engagement and capacity building is, based on the results, the most important means to improving the efficiency and effectiveness of EA follow-up.

The sustainability benefits of voluntary corporate responsibility at the Victor project are widely acknowledged among key informants. Existing and prospective VCR initiatives

are also seen as complementary to the objectives of EA, EA follow-up, and associated regulatory instruments. While none of the study respondents believes that VCR can or should be a surrogate for other PMC elements, they generally agreed that more comprehensive identification of regional baseline information earlier in the PMC would improve the efficiency and effectiveness of future VCR. It is proposed that regional land-use planning and sustainability assessment methodologies be used in areas that are biophysically and socioeconomically sensitive to large scale resource development.

APPENDIX A

PROJECT-SPECIFIC ENVIRONMENTAL ASSESSMENT AND CORPORATE RESPONSIBILITY: THE VICTOR DIAMOND PROJECT, ON

INTERVIEW QUESTIONNAIRE

BY SPOKEN WORD, PRIOR TO THE INTERVIEW:

"I would like to ask you a series of questions about the Victor Diamond Project's (VDP) 1) environmental assessment (EA), 2) follow-up program (being developed pursuant to the EA) and 3) voluntary corporate environmental or sustainability practices that may be developed at the Victor Diamond Project in the future.

I will therefore refer to three main components in my questions:

1) The recently completed Environmental Assessment for the Victor Diamond Project. I'll call this the "EA."

2) The Follow-up Program required by the EA to deal with ongoing environmental and socio-economic management at the Victor Diamond Project (VDP), the specific details of which are still being negotiated between De Beers, the federal and provincial governments, First Nations and other stakeholders. I'll call this the "EA Follow-up Program."

3) All current and future voluntary corporate responsibility activities at the Victor Diamond Project. By this I mean all non-regulated (non-mandatory) practices and initiatives undertaken by De Beers and/or the Victor Diamond Project (including voluntary aspects of environmental management systems) to manage the environmental, social and socio-economic impacts of the Victor Diamond Project. I'll call these activities "Voluntary Corporate Responsibility Programs" (VCRP). Note that these programs would lie outside those practices required by regulation and the EA Follow-up Program.

As you are aware, neither the EA Follow-up Program, nor a full suite of Voluntary Corporate Responsibility Programs (VCRPs) have been finalized or undertaken at the Victor Diamond Project (VDP) as yet. Therefore, please answer each of the questions to the best of your ability based on your experience with the project, your knowledge and your impressions of the VDP and its stakeholders thus far.

Before we start, I would like to ask for your permission to tape the interview. These tapes will then be transcribed and destroyed. Further to the consent statement read to you by the researcher, your identity will be kept confidential to the full extent permitted by the law, and

in any report, publication or presentation arising from this research your name will not be used when citing information acquired from you.

Do you have any further questions?

Can we start?

I'll start with a few general questions about your background and experience with EA and/or voluntary programs:

- What is your professional background and current position?
- Is this the position you held throughout the Victor EA?
- In what manner were you involved with the Victor EA?

Please describe your education, training and experience with EA, EA Follow-up Programs and Voluntary Corporate Responsibility Programs:

I'm now going to ask you a series of questions about the Victor Diamond Project and the Victor EA. For many of the questions, I will begin by reading you a statement. I will then ask about the degree to which you agree or disagree with that statement.

The scale with which you can answer the questions throughout the interview will be as follows:

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

After each question you will be given a chance to:

1) Explain why you feel/think the way you feel/think, and

2) Provide some suggestions on how to improve the process, should you feel it needs improvement.

I ISSUE IDENTIFICATION (SOCIAL, ECONOMIC, ENVIRONMENTAL)

1. The EA process identified all permitting, licensing, regulatory and other governmental compliance requirements that need to be identified in order to design and implement both i) the EA Follow-up Program and ii) Voluntary Corporate Responsibility Programs for the Victor Diamond Project (VDP).

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

2. The EA process identified all potentially adverse *environmental* impacts of the VDP in a manner that will enable the effective management of these impacts *under the EA Follow-up Program*.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

3. The EA process identified all potentially adverse *socio-economic* impacts of the VDP in a manner that will enable the effective management of these impacts under the *EA Follow-up Program*.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

4. The EA process identified potentially adverse environmental impacts of the VDP in a manner that will enable possible future Voluntary Corporate Responsibility Programs dealing with *environmental* issues to be more effectively designed.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

5. The EA process identified potentially adverse socio-economic impacts of the VDP in a manner that will enable possible future Voluntary Corporate Responsibility Programs dealing with *socio-economic* issues to be more effectively designed.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

II STAKEHOLDER RELATIONS (TRUST, CONFIDENCE, PARTICIPATION)

6 a) Stakeholders that are interested in, or affected by the VDP have a high level of trust that all parties will act fairly and meet their obligations arising from the EA and the EA Follow-up Program:

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

b) What have been the main causes of the current level of trust or distrust among stakeholders?

c) Did the EA process for the VDP increase or reduce trust among stakeholders?

Why do you feel this way?

Do you have any suggestions for improvement?

7 a) Stakeholders are confident that the proponent *has the ability* to meet all of its obligations arising from the EA for the VDP:

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

b) Did the *EA process increase or decrease* the confidence of stakeholders that the proponent *has the ability* to meet all of its obligations arising from the EA?

Why do you feel this way?

Do you have any suggestions for improvement?

8. a) Stakeholders are confident that the proponent *intends* to meet all of its obligations arising from the EA for the VDP:

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

b) Did the *EA process increase or decrease* the confidence of stakeholders that the proponent *intends* to meet all of its obligations arising from the EA for the VDP?

Why do you feel this way?

Do you have any suggestions for improvement?

9 a) Stakeholders are confident that the proponent *has the ability* to design and implement effective environmental and socio-economic management and mitigation measures in the EA Follow-up Program for the VDP:

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

b) Did the EA process increase or decrease the confidence of stakeholders that the proponent *has the ability* to design and implement effective environmental and socio-economic management and mitigation measures in the EA Follow-up Program for the VDP?

Why do you feel this way?

Do you have any suggestions for improvement?

10 a) Stakeholders are confident that the proponent *intends* to design and implement effective environmental and socio-economic management and mitigation measures in the EA Follow-up Program for the VDP:

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

b) Did the EA process increase or decrease the confidence of stakeholders that the proponent *intends* to design and implement effective environmental and socio-economic management and mitigation measures in the EA Follow-up Program for the VDP?

Why do you feel this way?

Do you have any suggestions for improvement?

11 a) Stakeholders intend to fully collaborate in designing and implementing the EA Follow-up Program.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

b) Did the EA process help increase or decrease the willingness of stakeholders to collaborate in designing and implementing the EA Follow-up Program?

Why do you feel this way?

12. a) Stakeholders are highly confident that the proponent *has the ability* to design and implement effective environmental and socio-economic management measures in possible future Voluntary Corporate Responsibility Programs for the VDP:

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

b) Did the EA process increase or decrease the confidence of stakeholders that the proponent *has the ability* to design and implement effective environmental and socio-economic management measures in possible future Voluntary Corporate Responsibility Programs for the VDP?

Why do you feel this way?

Do you have any suggestions for improvement?

13. a) Stakeholders are highly confident that the proponent *intends* to design and implement effective environmental and socio-economic management and mitigation measures in Voluntary Corporate Responsibility Programs for the VDP:

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

b) Did the EA process increase or decrease the confidence of stakeholders that the proponent *intends* to design and implement effective environmental and socio-economic management and mitigation measures in Voluntary Corporate Responsibility Programs for the VDP?

Why do you feel this way?

Do you have any suggestions for improvement?

14. The EA process increased public awareness of, and public engagement with, the VDP.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

III VOLUNTARY CORPORATE RESPONSIBILITY PROGRAMS (VCRPS) PROVIDING ADDITIONAL FOLLOW-UP MANAGEMENT FUNCTIONS (E.G. MONITORING, COMPLIANCE, ADAPTIVE MANAGEMENT, CONTINUAL IMPROVEMENT, ETC)

15. The EA gathered all of the baseline data that will be necessary to design and implement an effective EA Follow-up Program.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

16. The EA gathered all of the baseline data that would be necessary to design and implement effective Voluntary Corporate Responsibility Programs.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

17. The EA identified all monitoring, reporting, performance targets, and continual improvement mechanisms (such as adaptive management) necessary for the EA Follow-up Program to effectively manage the environmental and socio-economic impacts of the VDP.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

18. The monitoring, reporting, performance targets and continual improvement mechanisms identified in the EA could be incorporated in the design and implementation of Voluntary Corporate Responsibility Programs in order to help manage adverse environmental and socio-economic impacts of the VDP.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

19. I expect that the monitoring, reporting and continual improvement mechanisms that will be implemented in the EA Follow-up Program will assess the performance all of the environmental and socio-economic mitigation measures identified during the EA, and that appropriate modifications of those mitigation measures will be implemented when needed.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

20. I expect that Voluntary Corporate Responsibility Programs implemented at the VDP will provide additional sustainable development benefits beyond those provided by the EA and the EA Follow-up Program alone.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way? (If Agree, ask what these additional benefits will be)

Do you have any suggestions for improvement?

IV OVERALL INTEGRATION/EFFECTIVENESS/EFFICIENCY OF THE EA, THE EA FOLLOW-UP PROGRAM, AND THE VOLUNTARY CORPORATE RESPONSIBILITY PROGRAMS

21. The regulatory and permitting process is well integrated with both the EA process and the design of the EA Follow-up Program.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

22. The EA process has increased *the ability* of the proponent to design and implement effective Voluntary Corporate Responsibility Programs for the VDP.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

23. The EA process has increased *the commitment* of the proponent to design and implement effective Voluntary Corporate Responsibility Programs for the VDP.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

24. I expect that the design and implementation of the EA Follow-up Program would assist in the development of effective Voluntary Corporate Responsibility Programs for the VDP.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

25. I expect that Voluntary Corporate Responsibility Programs would increase the contribution of the Victor Diamond Project to the socio-economic well-being of the project region beyond the requirements of the EA and the EA Follow-up Program alone.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

26. I expect that Voluntary Corporate Responsibility Programs for the VDP would provide greater flexibility to adaptively manage environmental and socio-economic impacts than the mandatory requirements of the EA and the EA Follow-up Program alone.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

27. The actions required to comply with the EA Follow-up Program for the VDP will likely result in unnecessary duplication of existing permitting and licensing requirements.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way? (If they agree, what will be the areas of duplication?)

Do you have any suggestions for improvement?

29. A well-designed EA Follow-up Program for the VDP would be comprehensive enough to completely eliminate the need for Voluntary Corporate Responsibility Programs.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

30. The EA took into account the ways in which Voluntary Corporate Responsibility Programs at the VDP might manage potential environmental or socio-economic impacts.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

31. If implemented, Voluntary Corporate Responsibility Programs would complement instruments and measures required under the EA Follow-up Program.

Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree

Why do you feel this way?

Do you have any suggestions for improvement?

32. Should the EA Follow-up Program include both environmental and socio-economic management measures?

(If yes) Should one agreement cover both (environmental and socio-economic management measures), or should there be separate agreements covering each?

(If no) Would regulations or Voluntary Corporate Responsibility Programs be more appropriate instruments through which to implement either environmental or socio-economic management measures? Please explain why. (If yes, explain which would be more appropriate).

33. Do you expect that the EA Follow-up Program will be well integrated and managed in concert with other environmental management measures required by regulatory permits, licenses and authorizations?

Why do you feel this way?

Do you have any suggestions for improvement?

34. In your opinion, which of the following, or combination of the following, is the best means to maximize sustainable development benefits associated with the VDP:

1) An EA alone
2) EA with a mandatory Follow-up Program
3) Voluntary Corporate Responsibility Programs

Why do you feel this way?

35. In your opinion, would well-designed Voluntary Corporate Responsibility Programs eliminate the need for EA and regulatory authorizations?

Why do you feel this way?

GLOSSARY

***Canadian Environmental Assessment Act* (CEAA):**

A federal statute of Canada, promulgated in 1992, to "establish a federal environmental assessment process to achieve sustainable development by conserving and enhancing environmental quality and by encouraging and promoting economic development that conserves and enhances environmental quality"…by providing an effective means of integrating environmental factors into planning and decision-making processes in a manner that promotes sustainable development" (CEAA, C.37 1992).

Environment:

Includes the biophysical components of the Earth: (*a*) land, water and air, including all layers of the atmosphere; (*b*) all organic and inorganic matter and living organisms, and (*c*) the interacting natural systems that include components referred to in (*a*) and (*b*) above (CEAA, C.37 1992).

Environmental Assessment (EA):

An assessment of the environmental effects of a project or undertaking, usually a physical work, conducted in accordance with the *Canadian Environmental Assessment Act* (CEAA, C.37 1992). (Note: While some definitions of EA and environmental impact assessment (EIA) include social and socioeconomic assessment, only the definition of CEAA, the regime in question, will be used for this project. Under CEAA, "environmental assessment provides an effective means of integrating environmental factors into planning and decision-making processes in a manner that promotes sustainable development….[and is] in respect of a project, an assessment of the environmental effects of the project that is conducted in accordance with this Act and the regulations" (CEAA, C.37 1992). In the international literature, the general principles and practices of EA are more often termed "environmental impact assessment" (EIA). In this paper, this latter term of "EIA" or "IA" (impact assessment) is used only with reference to specific publications or research.

Environmental Management System (EMS)

EMSs include a systematic approach to environmental management in which organizations integrate environmental considerations in decision making. EMSs also establish a framework for tracking, evaluating and communicating environmental performance by ensuring that major environmental risks and liabilities are identified, minimized and managed. The International Standards Organization (ISO) 14000 certification series is the most globally recognized EMS standard in the world (Environment Canada 2005).

EA Follow-up:

Under CEAA, follow-up is defined as a program for *a*) verifying the accuracy of the environmental assessment of a project, and (*b*) determining the effectiveness of any measures taken to mitigate the adverse environmental effects of the project (CEAA, C.37 1992). For the purposes of this paper, follow-up is defined more broadly than the specific definition under CEAA, so as to include any follow-up management actions undertaken on an agreed-to basis among certain parties further to the assessment and regulatory commitments: (e.g. an environmental or socioeconomic management agreement or other formal commitment made pursuant to the approval of the project).

Mitigation Measures:

In respect of a project, mitigation measures are the elimination, reduction or control of the adverse environmental effects of that project, including restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means (CEAA, C.37 1992).

Regulatory Permits/Authorizations:

Regulatory approvals, permits and authorizations granted under both federal and provincial bodies of legislation once the proponent has demonstrated its ability to comply with the conditions and stipulations of those regulations in its proposed operations. The proponent and operator is then, by law, held accountable to those regulations.

Socioeconomic:

Term pertaining to changes in human welfare/society as a result of an activity or service of companies, governments, organizations or individuals involved with the Victor project. These changes can be realized and demonstrated vis-à-vis such indicators as growth in the size of the economy, the number of jobs created (or destroyed), education levels, or in other areas of social capacity such as changes in life expectancy, substance abuse levels in families or educational attainment as a result of Victor's development and operation.

> Sociocultural: Term pertaining to changes in human culture, norms or traditions as a result of an activity or service of companies, governments, organizations or individuals involved with the Victor project. These changes can be realized vis-à-vis such indicators as interruptions in, or modifications to, traditional or spiritual practices of communities (e.g. modified hunting schedules) or the familial impacts and benefits of a modified work schedule (e.g. 2 weeks on, two weeks off at a project site, resulting in both more and less time at home with families).

Note: For the purposes of simplicity in this research, the term "socioeconomic" also includes sociocultural impacts and assessment.

Stakeholders:

Any party involved with Victor or other referenced undertakings and projects that are either directly or indirectly affected as a result of the approval and development of the project. Stakeholders also include those groups and individuals that take an active interest in the project and become involved in the project's public consultation processes. Examples for Victor include the Government of Canada, the Government of Ontario, various Aboriginal and nongovernment organizations, De Beers and its industry and consulting counterparts and financial affiliates.

Strategic EA:

Strategic EA is a systematic process of evaluating the environmental effects of a proposed policy, plan, program, or other strategic-level initiative. SEA contributes to decision making by informing managers, ministers and Cabinet about:

- The positive and negative environmental effects of a proposal, and
- The means to optimize the positive effects and reduce or avoid negative ones (Transport Canada, Strategic EA 2001).

Sustainable Development:

An approach to development that works to integrate social, economic and environmental objectives in a manner that strives to meet the needs of the present without compromising the ability of future generations to meet their own needs (WCED 1987).

> For the purposes of this research paper, the term "sustainability"is synonymous with sustainable development. While many authorities and sources differentiate the two concepts (i.e. *weak* vs. *strong* sustainability, carrying and regenerative capacity of ecosystems, etc.), each definition recognizes the fundamental importance of reconciling human behaviour with biophysical limits and needs in a manner that is socially fair and equitable over time.

Victor Diamond Project (Victor, VDP):

A diamond mining project being proposed, and being developed by De Beers Canada in the Attawapiskat River Basin, situated approximately 90 km west of the Attwapiskat First Nation (AttFN) community, and 100 km west of the James Bay coast in northern Ontario. The project was assessed as a Comprehensive Study under the *Canadian Environmental Assessment Act* from 2004 – 2005 (De Beers 2004).

Voluntary Corporate Responsibility Programs/Initiatives/Practices (VCR)

VCR practices are the coordinated activities undertaken by companies or groups of companies to go beyond the environmental and social performance requirements set by legislation" (Walker and Howard 2002: vii). More broadly, they embody the voluntary

commitment of business to contribute to sustainable development by working with, and being accountable to, a range of stakeholders—employees, their families, the local community, and society. The purpose of VCRs purpose is to improve business relationships and capacity, while at the same time improving quality of life of people while working to minimize the impacts of those businesses' activities on the environment and society.

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