ENVIRONMENTAL ASSESSMENT ON THE CANADIAN FRONTIER: RESOURCE DECISION-MAKING AT GREAT WHALE, QUÉBEC AND VOISEY'S BAY, LABRADOR

A Thesis Submitted to the Committee on Graduate Studies

in Partial Fulfilment of the Requirements for the

Degree of Master of Arts

in the Faculty of Arts and Science

TRENT UNIVERSITY

Peterborough, Ontario, Canada

Canadian Heritage and Development Studies
M.A. Program

June 2000

Abstract

Environmental Assessment on the Canadian Frontier: Resource Decision-Making at Great Whale, Québec and Voisey's Bay, Labrador

Neal Burnham

Environmental assessment (EA) was an innovation designed to change the way governments 'think' about their actions by requiring the consideration of environmental and social factors in decision-making. This thesis considers the value of EA as a policy strategy to internalize environmental factors in resource decision-making by contrasting what EA claims to achieve, and what it accomplishes in practice. The experiences of the Great Whale and Voisey's Bay proposals demonstrate that despite the advances in design and practice, EA fails northern regions because the process is largely 'disconnected' from final decision-making. The failure of both the provincial and federal governments to undertake EA with any sincerity undermines the core principles of environmental sustainability and perpetuates an established legacy of disregard for aboriginal people and northern ecosystems. Notwithstanding the inherent weaknesses of the process however, EA remains a necessary and valuable exercise. As well as considering the future role of EA for northern resource decision-making, the study demonstrates that in light of the diffuse benefits and concentrated costs inherent to environmental protection, public concern can prompt shifts in the roles of regulators and tip the balance of power in favour of environmental protection.

Acknowledgments

I am indebted to a number of people and organizations who have helped me during the course of this project. Funding from the Northern Scientific Training Program (NSTP), Department of Indian and Northern Development, and from The Symons Trust Fund For Canadian Studies allowed me to roam around Labrador to talk with people about how the chance discovery of nickel changed their lives forever.

Thanks to those who gave their time and expertise for interviews, the Innu Nation and Labrador Inuit Association, and for those who made me feel welcome, especially Eva Kojak and Ron Webb in Nain, and Katie Rich in Davis Inlet. Stéphane Parent of the Canadian Environmental Assessment Agency (CEAA) cheerfully tracked down numerous documents I requested, while Brian Torrie made available to me a workspace and many invaluable resources at the CEAA office in Hull, Québec.

Thanks to my supervisors for their support and enthusiasm: to Dr. Peter Adams, M.P., who, between (or during?) sessions in the House of Commons, found time to read my manuscript with a keen eye; Dr. Stephen Bocking, who's insight and open door policy were taken advantage of more than once, and finally; to Dr. Robert Paehlke, who's guidance was appreciated more than he knows.

Finally, special thanks to my parents who, through their generosity and invariable support, have taught me my most important lessons in life; and to Sue who continues to do so.

Table of Contents

Chapters

Figures

Tables

Photos

Introduction
Environmental Assessment and the Canadian Dilemma

> *Politics is the forum wherein competing values are weighted one against the other. This process, by its nature, is an art rather than a science, and inevitably requires decision-makers to evaluate comparatively at least apples and oranges, if not cultures and bulldozers.*
>
> -Robert Paehlke[1]

The Canadian North has long been viewed by outside interests as a treasure chest of resources. Early resource exploitation in the North began with whaling, fur trading, and at the turn of the century, gold mining. More recently, a combination of high prices and accessibility to international markets combined with improvements in technology have increased the pressure on these regions for the development of minerals, oil, gas, and hydroelectric power.

Robert Page has characterized modern resource development in the North as the "Canadian Dilemma."[2] Page notes that the controversies over resource development in the 1970s provided a sharp focus for a long and disparate list of difficult political issues including environmental protection, native rights, energy conservation, the limitations of technology, and public

---

1 Robert Paehlke, "James Bay Project: Environmental Assessment in the Planning of Resource Development," in Resources and the Environment: Policy Perspectives for Canada, ed. O.P. Dwivedi (Toronto: McClelland & Stewart, 1980): 147.

2 Robert Page, Northern Development: The Canadian Dilemma (Toronto: McClelland and Stewart, 1986). See also D. Dacks, A Choice of Futures: Politics in the Canadian North (Toronto: Methuen, 1981).

participation.[3] More than two decades later, Canada's North remains a focal point for many of the same controversies. Driven by the global demand for energy and resources, several large-scale development projects are currently proposed, including massive hydroelectric development in Québec and Labrador, perhaps the world's richest nickel mine on Labrador's North Coast, and intensified diamond mining in the Northwest Territories. The dilemma of how to reconcile the rights and interests of native peoples, industry, and government with environmental and cultural protection is today just as onerous as it was two decades ago.

It has been suggested that in Canada, environmental decisions are made largely through administrative channels.[4] Thus, while current institutions are in no way adequate to the challenge presented by the modern environmental predicament,[5] it remains that accepting them as a permanent feature of the political landscape also means that if environmental problems are to be solved, they must be solved in part administratively.[6] Environmental assessment (EA) was an innovation intended to change the way governments 'think' about their actions by requiring the consideration of environmental and social factors in decision-making. In its most basic form, the process attempts to reduce the negative ecological or socio-economic impacts of development activities. Since its adoption by the federal government in 1973, EA has become the most visible and formal component

---

3 Robert Page, Northern Development: The Canadian Dilemma, p. x.

4 Albert A. Shpyth, The Effectiveness, Efficiency and Fairness of Environmental Impact Assessment in Alberta and Saskatchewan: A Case Study of the Oldman and Rafferty Dams (Hull, Que.: CEARC, 1991): 1.

5 Melody Hessing and Michael Howlett, Canadian Natural Resource and Environmental Policy (Vancouver: UBC Press, 1997).

6 Robert V. Bartlett, "Ecological Reason in Administration: Environmental Impact Assessment and Administrative Theory," in Managing Leviathan: Environmental Politics and the Administrative State, eds. Robert Paehlke and Douglas Torgerson (Peterborough, Ont.: Broadview Press, 1990):81.

of the decision-making process for development planning and resource management in Canada.[7]

More than twenty years ago, the Berger Commission inquiry into the Mackenzie Valley Pipeline Proposal exposed conflicting ideas about resource development in Northern Canada. The title of the 1977 report, Northern Frontier, Northern Homeland captured the essence of the problem: what makes sense at the frontier may not make sense within the homeland. When these are the same location, only viewed from different perspectives, there is a potential for conflict. How this conflict is resolved depends on the process used for the evaluation, and most importantly, where the authority over decision-making resides.[8]

The Berger Inquiry not only set the standard for environmental assessment in Canada, but established that 'environment' must include human, social, and cultural concerns. Berger stressed that those affected by development have a right to a fair hearing and to have their concerns incorporated into the decison-making process. Berger also established that aboriginal knowledge should be combined with Western science-based expertise in order provide the best possible information for decision-makers. It was also made it clear that none of this could be accomplished without widespread public consultation, as well as adequate time and funding for a thorough review.[9]

Since the Berger Inquiry however, critics of EA have argued that there

---

7 Bruce G. Doern, "Getting it Green: Canadian Environmental Policy in the 1990s," The Environmental Imperative: Market Approaches to the Greening of Canada, ed. Bruce G. Doern, Publication of the C.D. Howe Institute, Policy Study no. 9 (Toronto/Calgary: C.D. Howe Institute, 1990).

8 Thomas R. Berger, Northern Frontier, Northern Homeland: The Mackenzie Valley Pipeline Inquiry, Volumes 1&2 (Ottawa: Minister of Supply and Services, 1977).

9 Ibid.

hasn't been a single assessment conducted in Canada that has met the standard it set in 1977.[10] The recent environmental assessments of the Broken Hills Proprietary (BHP) and Diavik diamond mines in the Northwest Territories suggest we may be failing to meet even the basic requirements established by Berger.[11] As Wismer has concluded, environmental assessment is failing aboriginal people across Canada:

> Experience to date with the BHP review raises serious questions about the state of environmental assessment in Canada. As a regulatory and planning mechanism designed to ensure fair, effective and efficient decision making, it does not seem to be working.[12]

Given the central role EA plays in resource decision-making, and the incessant pressures to develop northern resources, this thesis attempts to answer several important questions about the value of EA as a policy strategy to internalize environmental and social concerns in decision-making. By examining two northern assessments, it is possible to contrast what EA claims to achieve for environmental protection, and what it accomplishes in practice. The environmental assessments of the failed Great Whale Complex (Complex Grande Baleine) in Northern Québec and the Voisey's Bay Mine and Mill Project in Labrador, both reflect the procedural and conceptual advances made in EA practice since the Berger Inquiry. These EA studies are notable because they both recognized the complexities of northern

---

[10] Susan Wismer, "The Nasty Game: How Environmental Assessment is Failing Aboriginal Communities in Canada's North," Alternatives, 22.4 (1996):10-16; Peter Usher, "Northern Development, Impact Assessment, and Social Change," in Anthropology, Public Policy, and Native Peoples in Canada, eds. Noel Dyck and James B. Waldram (Montréal & Kingston: McGill-Queen's University Press, 1993): 98-130. Other critics include, Larry Innes, Environmental Advisor, Innu Nation, personal communication, 14 August, 1998, Sheshashit, Labrador; Judy Rowell, Environmental Advisor, Labrador Inuit Association, personal communication,7 August, Nain, Labrador.

[11] See for example, Canadian Arctic Resources Committee (CARC), "Comparing the final guidelines with those for BHP, CARC's comments, and the Government Response," Diamond Alert Bulletin, 18 September, 1998.

[12] Susan Wismer, "The Nasty Game," pp.10-16.

development and incorporated into the reviews different cultural values and sustainability assurances. Further, these initiatives included the use of precautionary approaches to development, reversing the onus of proof onto those proposing development activities, and recognizing and refining the role aboriginal knowledge in the review process. The challenge then, is to account for why EA, despite these advances, continues to fail in northern regions.

The central premise of this thesis is that while EA represents a powerful strategy to internalize environmental and social concerns in resource decision-making, in its present form, federal EA continues to fail northern communities because final decision-making is 'disconnected' from the EA process. Thus, the general shortcomings of the process may not be the result of bad technique. Rather, EA fails northern communities because decisions about large-scale resource development are not required in the final approval process, and therefore may not be formally linked to final decision-making. As a consequence, concern for the environmental and social impacts of development activities may be undermined by competing economic and political influences. This, of course, presupposes that a panel will have a wide range of expertise and representation which will lead to a competent and thorough analysis of the impacts a project may have.[13] While formal EA regimes provide the potential for good EA administratively, as chapters four

---

13 This clearly is not always the reality. In the case of the BHP EA study for diamond mining at Lac de Gras in the Northwest Territories, many interveners were highly critical of how the panel conducted the assessment. Minister of Indian Affairs and Northern Development, Ron Irwin, after accepting the panel's recommendation that the mine proceed, went beyond its recommendations and added to the federal government's conditions for project approval, the creation of a mandatory monitoring agency. While this initiative had been supported by the Northern Environmental Coalition, aboriginal peoples, and even some government agencies, it had not been supported by the panel. See Kevin O'Reilly, "Diamond Mining and the Demise of Environmental Assessment in the North," Northern Perspectives, 24.1-4 (1996): 1-4; Susan Wismer, "The Nasty Game," pp.10-14.

and five demonstrate, it is the people who are involved which breathe life into them.

The Canadian experience with EA continues to demonstrate that the process is highly discretionary, and that approval for large and influential projects may be largely predetermined. In the Canadian North, concern for local aboriginal and environmental interests have for the most part, been incidental and dependent more on the political and economic costs and benefits of proceeding with a project rather than on the proficiency of those conducting the environmental studies. Thus, while local residents bear the environmental impacts from development activities, conditions which would serve to keep any economic benefits within the region, may 'leak' to commercial centres outside the vicinity of the project.

A fundamental challenge for northern EA can be described in terms of conflicting values. Approaches to problem solving are founded on, and shaped by, systems of knowledge, beliefs and values- in short, ethics. As such, policy and administrative procedures, if one looks deep enough, are grounded in a system of ethics.[14] As Rees and Boothroyd have identified, "the significance of ecological and social impacts is a function of values."[15] It is on this basis that native and non-native interpretations of environmental and social impacts frequently clash. As Shapcott notes, the dominant society's world view is not only antithetical, but hostile to traditional native perspectives:

> The prevailing ideologies in Canada- of liberalism and conservatism- uphold individual property rights and private enterprise. The capitalist mode of production and the class system which shapes and is shaped by it, thrives on

[14] John S. Dryzek, "Ecological Rationality," International Journal of Environmental Studies, 21 (1983):5.

[15] William Rees and Peter Boothroyd, "Impact Assessment from Pseudo-Science to Planning Process: An Educational Response," Impact Assessment Bulletin, 3.2 (1984).

hierarchy, competition, centralized authority, and a clear separation between the human and non-human worlds.

Many aboriginal people still perceive themselves to be as much an integral part of the northern ecosystems as the plants and animals on which they live.[16] Subsistence activities including hunting and fishing- dependent on healthy and functioning ecosystems- form a critical role in community relations and culture.[17] As a result of the fundamental differences between northern and southern worldviews, the utility of externally-imposed EA has been questioned by aboriginal people.[18] In a federal system where much decision-making power is at the discretion of governments, or regulatory bodies whose focus is on ensuring resource development rather than environmental protection or cultural preservation, many are critical that their concerns will be reflected in resource decision-making. The political and economic power of participants in an EA are therefore, decisive factors in determining the degree to which groups can make themselves heard in the review process. As the following pages testify, this situation continues to put aboriginal people at a distinct disadvantage in the EA process. Among the most important requests made by native people in regard to EA has been to have an opportunity to provide input into the terms of reference for EA studies which, in the past, have been far too restrictive.[19] Aboriginal communities affected by resource development want to be involved in the

16 William E. Rees, "A Rationale for Northern Land-Use Planning," Homeland or Hinterland: Land-Use Planning in Northern Canada, eds., Terry Fenge and William E. Rees (Ottawa: Canadian Arctic Resources Committee, 1987): 6.

17 See Peter J. Usher, "Modelling Subsistence Systems for Social Impact Assessment," Canadian Environmental Assessment Agency, Voisey's Bay Public Registry.

18 Native people have expressed a myriad of concerns about the current practice of EA. Many of these concerns are echoed by non-aboriginals. See Marilyn Kansky, Native Indian and Inuit Views on the Federal Environmental Assessment and Review Process (Alberta: Environmental Law Centre, 1988).

19 Marilyn Kansky, Native Indian and Inuit Views on the Federal Environmental Assessment and Review Process, pp.58, 93.

EA process from start to finish, and they want to participate in its design and implementation, and thus to have control over their own futures.

A critical analysis of EA is especially useful as it has been identified a key policy process globally to achieve what the World Commission on Environment and Development (WCED) coined 'sustainable development'.[20] As it is coming to be interpreted in Canada, sustainable development involves more than ecological sustainability, it also includes economic and socio-cultural sustainability.[21] While specific interpretations of this concept vary widely, it nevertheless provides direction for public policy by outlining some general core requirements. As Sadler suggests, these requirements involve the reconciliation of three 'pillars of sustainability' which include living within global biophysical carrying capacity, providing a decent living standard for all people, and ensuring a reasonable measure of distributional fairness in access to resources and their economic benefits.[22] As Fenge has argued, sustainability is really about "power, values, and knowledge, for these determine the scale, pace, and timing of development and the priority given to competing resources."[23]

At the beginning of any discussion about resource development and sustainability, the critical questions must be: development for whom and for

---

20 Barry Sadler and Peter Jacobs, eds., Sustainable Development and Environmental Assessment: Perspectives on Planning for a Common Future (Ottawa: Canadian Environmental Research Council, 1990); Barry Sadler, "Sustainability Strategies and Green Planning; Recent Canadian and International Experience," in Achieving Sustainable Development, eds., Ann Dale and John B. Robinson (Vancouver: UBC Press, 1996):23-62; The World Commission on Environment and Development (WCED), Our Common Future (New York: Oxford, 1987): 349.

21 Fikret Berkes and Helen Fast, "Aboriginal Peoples: The Basis for Policy-Making toward Sustainable Development," in Achieving Sustainable Development, eds., Ann Dale and John B. Robinson (Vancouver: UBC Press, 1996): 205.

22 Barry Sadler, "Sustainability Strategies and Green Planning: Recent Canadian and International Experience," Achieving Sustainable Development, eds., Ann Dale and John B. Robinson (Vancouver: UBC Press, 1996): 24-26.

23 Terry Fenge, "Toward Sustainable Development in the Circumpolar North," Canadian Arctic Resources Committee (CARC), no date; Http://www.carc.org/pubs/briefs/brief1.htm.

what purpose? What happens when, in the calculus of sustainability, those most affected by environmental degradation associated with resource development, do not reap any of the economic benefits? How does EA help plan for the maintenance of healthy ecological systems and for compensation to minorities who stand 'in the way' of developments deemed to be in the broader public interest? These concerns challenge the fundamental questions of project justification and of policy which *should* be given to economic activities that reinforce, rather than override choice of lifestyle, local self-sufficiency, and community traditions, specifically those held by native peoples and others whose values are different from the urbanised mainstream of Canadian society.[24] Thus, questions about the distribution as well as the consumption of natural capital lie at the centre of the debate over sustainability. As the following chapters suggest, the Canadian North continues to be viewed as a resource hinterland serving its southern centres and international markets. The failure of provincial and federal governments to undertake with any sincerity the environmental assessment process undermines the core principles of sustainability and perpetuates the legacy of disregard for aboriginal people and northern ecosystems. This perception of the region as a resource hinterland is contrasted by another dominant perspective on resource development, the 'homeland' view held by those living in these regions. The following paragraphs briefly describe these two dominant views on resource development before considering how environmental policies may be biased against sustainable decision-making, especially in Canada's North.

---

[24] Barry Sadler and Peter Jacobs, "A Key To Tomorrow," p.15.

Two Views of Northern Resource Development

Historically, the approach to the northern resource development has been governed by the economic rule of "maximum immediate exploitation".[25] This is to say that resources should be extracted or harvested at maximum capacity while maintaining a minimal economic cost. This resource development strategy often resulted in a "boom and bust" cycle of activity for local communities. This cycle is characterised by a large influx of capital, technology, and workers from southern regions, a short period of development activity, and the subsequent collapse of the economies of communities that quickly become reliant on the short-lived prosperity.[26] In the past, virtually no one saw beyond the 'boom' of rich times, and those who did, mostly the aboriginal people who knew they would remain long after the resources were gone, had no influence over the course of events.

The past two decades, however, have witnessed the increasing empowerment of aboriginal people, brought about by closely related developments on many different fronts, including constitutional development, court decisions, policy changes, and the land claims process.[27] As a catalyst for these developments, the last two decades have also witnessed a gradual transformation in the ideas of social justice and environmental consciousness on the part of mainstream society and, at the same time, an increased degree of politicization of aboriginal people. Both the 'hinterland' and the 'homeland' perspectives reflect profoundly different views towards

---

25 Robert Gibson, "Punching Dummies in the North," Alternatives, 22.4 (1996): 1.

26 Robert F. Keith and Mary Simon, "Sustainable Development in the Northern Circumpolar World," in Conservation with Equity: Strategies for Sustainable Development proceedings of the Conference on Conservation and Development: Implementing the World Conservation Strategy, eds. Peter Jacobs and David A. Munro (Gland, Switzerland: IUCN, 1986): 215.

27 See for example, Claudia Notzke, Aboriginal Peoples and Natural Resources in Canada (North York, ON.: Captus Press).

resource development.

Hinterland Model

The "hinterland" model, largely held by non-northerners, envisions the North as a place needing 'development'. By exploiting its natural resources, economic wealth is created while improving northerners' access to goods and services from Southern Canada. Large-scale resource development from this perspective is undertaken with the goal of selling minerals, gas and hydroelectricity in a global marketplace. A hinterland model is therefore predicated on the assumption that economic growth is an unquestionable good, and that large scale resource development is desirable.[28] Another characteristic of a hinterland is that it may not only lack economic autonomy, it also lacks political autonomy, and therefore any power over self-determination. An fundamental assumption of the hinterland model is that there exists no cultural and socio-economic differences between southern and northern societies- a serious weakness when applied to much of northern Canada where aboriginal peoples make up a majority of the population.[29]

Homeland Model

The Canadian North is also a homeland, or more correctly, a series of homelands for several aboriginal groups and non-native residents. While past generations had lived solely off the land, the limited ability of wildlife to support growing populations and modern lifestyles has made the cash

---

[28] The hinterland model was exemplified in the 1950s at the federal level by John Diefenbaker's "Northern Vision" and W.A.C. Bennett's "Roads to Resources" programme in British Columbia. The Canadian Arctic Resources Committee notes that in these programs, "Emphasis was laid on the frontier nature of Canada and the pioneering character of its people, with all the attendant attitudes of man's dominion over nature as a measure of the progress of civilization." See, Canadian Arctic Resources Committee, "Northern Resource and Land Use Policy and Study," Northern Perspectives 7.3 (1979): 3. See also Robert M. Bone, The Geography of the Canadian North (Toronto: Oxford University Press, 1992): 62-62.

[29] Robert M. Bone, The Geography of the Canadian North (Toronto: Oxford University Press, 1992): 13.

economy necessary. At the same time, however, many native northerners still rely on the land for food, enjoyment, and the maintenance of their cultures and identities.[30] A primary concern of northern residents is the impact of resource development on hunting and trapping, land claims, and native self-government.[31] While many recognize that resource projects may offer economic benefits in the form of jobs and business opportunities, development also impacts wildlife habitat, and by drawing people away from their traditional activities, and may weaken the cohesiveness of aboriginal society. Based on the boom-and-bust cycle of resource development, aboriginal people fear that once resources are exhausted, they will be left with neither the traditional skills nor the economic means to support themselves. Thus, in order to protect their own future, aboriginal groups have argued that land claims must be settled before any resource development should be allowed to proceed. In order for resource development to benefit northerners, they must have some control over the pace, scale and timing of the development, and ultimately, how the benefits are distributed.[32]

The homeland versus hinterland perceptions of the Canadian North is representative of the very heart of the debate over resource development. The implication for policy approaches in cross-cultural situations is that there must, from the very beginning, be recognition and an understanding of the context in which it is used, and the procedures by which it advances in order to be relevant for local residents. Northern communities have had very little

---

30 Peter Usher, "Northern Development, Impact Assessment, and Social Change," in Anthropology, Public Policy, and native Peoples in Canada, eds. Noel Dyck and James B. Waldram (Montréal/Kingston: McGill-Queen's University Press, 1993): 107. In his article, Usher describes these two divergent models as "modernization/acculturation" and "hinterland as homeland" models.

31 Robert M. Bone, The Geography of the Canadian North, p.14.

32 Susan Wismer, "The Nasty Game: How Environmental Assessment is Failing Aboriginal Communities in Canada's North," Alternatives, 22.4 (1996): 10.

control over the basic content of programs in the past which have, for the most part, failed to recognize any cultural, economic, or ecological differences between southern regions.

As a way to explain how the intended purpose of environmental assessment can be undermined by competing economic and political considerations in the present political and regulatory context, it is useful to consider the costs and benefits environmental protection presents to decision-makers.

The Bias of Environmental Policy

Environmental assessment, like all public policy, is limited by the degree of support it receives. As Wilson has argued, policies for environmental protection, with diffuse benefits and concentrated costs, are likely to elicit different politics than those where both 'winners' and 'losers' are concentrated.[33] The incentives for decision-makers to enable strong environmental protection are diffuse because they benefit the general public who are likely to be uninformed, unorganized, and as Harrison has suggested, "unappreciative".[34] The 'costs' of environmental protection, however, are borne by a smaller number of regulated firms or individuals who are likely to be well organized and unyielding in their opposition to policies which conflict with their own development agendas. These parties are likely to be better positioned to lobby against environmental restrictions on development or polluting activities because regulated industries can offer politicians more than just votes or even campaign contributions; they create jobs, and thus

---

[33] James Q. Wilson, "The Politics of Regulation," in James McKie, ed., Social Responsibility and the Business Predicament (Washington, DC: Brookings Institution, 1975) qtd. in Kathryn Harrison, Passing the Buck: Federalism and Canadian Environmental Policy (Vancouver: UBC Press, 1996): 12.

[34] Kathryn Harrison, Passing the Buck, p. 13.

offer extremely valuable indirect benefits. As Lindblom has suggested, as long as the structural status quo of the capitalist market economy is maintained, business will assume a "privileged" position to influence policy-making because government relies on business to a large extent to carry out basic functions such as job creation and organizing the economy.[35] As a result, governments may be more responsive to these concentrated interests rather than to general members of the public. Thus, as Harrison argues, "The logic of collective action is heavily weighted against strong environmental policy."[36]

In the case of northern resource development, where decision-makers must decide whether, or on what terms development activities should proceed, regulators are likely to respond more favourably to the concentrated interests of large multi-national companies and Crown corporations than to local aboriginal groups who possess neither the economic or political levers of power to dramatically influence decision-making. The direct benefits associated with mega-scale initiatives[37] include royalty and taxation revenues, as well as the creation of thousands of job opportunities which may in turn lead to indirect benefits at the ballot-box and contribute to regional investment. The majority of ecological and social impacts accompanying large-scale resource development in the Canadian North however, are borne by local, usually predominantly aboriginal communities, and not by the more populated regions in the south. Thus, stringent environmental protection measures which could potentially jeopardize the approval or profitability of

---

35 Charles E. Lindblom, Politics and Markets: The World's Political-Economic Systems (New York: Basic Books, 1977): 171-175.

36 Kathryn Harrison, Passing the Buck, p. 14.

37 As Robert Bone has described, mega resource projects can be characterized according to their enormous size, and dominate the local and regional economy during the construction phase. Construction costs usually exceed $1 billion. Robert M. Bone, The Geography of the Canadian North (Toronto: Oxford University Press, 1992):135.

an development proposal, generates only diffuse benefits for electorally-minded governments. Adding to the complexity of how decisions about environmental protection are made, and about how the costs and benefits are distributed within the federal context, are situations where resource decision-making involves several jurisdictions.

As Harrison has convincingly argued, both the provincial and federal governments will value their environmental jurisdiction during periods of heightened public salience of environmental issues. The rest of the time, due to the concentrated costs of environmental protection, the federal government may be reluctant to enforce its jurisdiction and may take advantage of the jurisdictional uncertainty by "passing the buck" to the provinces.[38] The provinces, on the other hand will be defensive about their jurisdiction even during periods of low public attentiveness of environmental issues because provincial jurisdiction over the environment is closely tied to the provinces' ability to exploit and profit from the development of their natural resources.

It follows then that reluctance to aggressively enforce environmental regulation may be overcome when the public is exceptionally attentive to environmental issues.[39] Other times however, when environmental issues do not capture public attention, governments may decline to impose rigorous environmental regulations in response to interest group and other pressures. As the following chapters illustrate, the diffuse benefits and concentrated costs related to environmental protection also point to a way for 'victims' of development to tip the balance of political costs and benefits for decision-

---

[38] Kathryn Harrison, Passing the Buck.

[39] Ibid, p. 162; see also John S. Dryzek, The Politics of the Earth: Environmental Discourses (New York: Oxford Press, 1997).

makers in their favour by appealing to the general public, especially the end-users of resources and sympathetic sources internationally.

The Challenge of Northern EA

At the project-specific level, EA studies illustrate the challenges associated with evaluating development and making informed choices. These difficulties include coping with uncertainty and risk, dealing with conflicts in interest, the coordination of scientific analysis and public inputs, and the weighing of facts and values for decision-making.[40] In the Canadian North, these challenges are exacerbated by a number of conditions characteristic to these regions. A critical difference for organizations concerned with EA is that a majority of residents in these regions are aboriginal, with needs, value systems, and cultures which are fundamentally different than those of the mainstream Canada. Other challenges to northern EA include the rapidly evolving political structures as a result of land claims, social change, mixed economies characterized by small and mega-scale initiatives, and finally, highly sensitive Arctic and Sub-Arctic ecosystems.

While formulas have been developed to establish what constitutes "nordicity",[41] Kenneth Coates notes that in the North, " boundaries may be useful for scholars for academic tribal reasons, but they are of much less relevance to the people of the North."[42] This debate will not be furthered here, but for the purpose of this study, it is critical to identify what distinguishes northern assessments and why they demand special attention.

---

[40]Barry Sadler and Peter Jacobs, "A Key to Tomorrow," p. 7.

[41] See Louis-Edmond Hamelin, Canadian Nordicity: It's Your North Too (Montréal: Harvest House, 1979); Ken Coates and William Morrison, The Forgotten North: A History of Canada's Provincial Norths, (Toronto: James Lorimer & Company, 1992).

[42] Kenneth Coates, "The Discovery of the North: Towards a Conceptual Framework for the Study of Northern/Remote Regions," The Northern Review, 12/13 (Summer 1993/Winter 1994):16.

Political Change

As several observers have noted, the political map of the north has changed radically in recent years. On April 1 1999, an autonomous Inuit-led government was created to govern the Arctic territory of Nunavut. Despite much progress however, the future settlement of land claims and the transfer of government powers will continue to add complexity to an already complex patchwork of jurisdictions.[43] Some 210 negotiations on land claims are currently under negotiation with federal and provincial governments, while 280 preliminary land claims are presently being researched by the Department of Indian Affairs.[44] In addition to the unsettled land claims of the Innu Nation and the Labrador Inuit Association in Northern Labrador, there are currently six proposed mining developments valued at more than $30 billion in the Arctic, all of which infringe on unsettled native land claims.[45] These agreements between governments and native groups will, and have already amounted to significant political change by according aboriginal people a range of rights, powers, advisory roles, financial compensation and land. With various claims still pending, no one is certain how the agreements will translate into political realities. However, the experience of the James Bay and Northern Québec Agreement (JBNQA) and the Inuvialuit Final Agreement demonstrate that a claim settlement, while signalling the conclusion of formal negotiation, is in fact just the beginning of a long process of

---

43 Peter Royston Mulvihill, Adaptive Environmental Assessment in Canada's North, (Hull, Que.: Canadian Environmental Assessment Research Council, 1990): 5.

44 Andrew Purvis, "Whose Home And Native Land?" Time, Canadian Edition (15 February, 1999): 18-19.

45 Environmental Mining Council of British Columbia, Mining in Remote Areas: Issues and Impacts, (Victoria: Environmental Mining Council of British Columbia, October, 1998): 18.

"experimentation, error, success and redesign."[46]

Social Change

Historically, social change in Canada's North has been shaped by relations between native and non-native people. The gradual colonization by southern Euro-Canadians dating back to the previous century is well documented as are the more recent larger-scale southern influences.[47] Non-native people now inhabit the north in increasing numbers and, to a great extent in many places, dominate political and economic decision-making.

Despite the rapid social change which has taken place, the north remains culturally distinct from Southern Canada and will continue to be defined by the culture of native people. Institutional and organizational arrangements for environmental assessment must be functional in cross-cultural settings, adaptable to local circumstances and able to reflect local values. Clearly Northern Canada's unique social context requires environmental assessment systems which feature capabilities beyond those of standard models which operate in the south.

Economic Change

In a relatively short period of time, Canada's northern economy has changed from being locally-based, small-scale and informal, to being the setting for a much more varied range of activity.[48] Like other rural communities, northern societies are made up of an identifiable group of

---

46 Mulvihill, "Adaptive Environmental Assessment in Canada's North," p. 7; see also Evelyn J. Peters, "Whose North?: The James Bay and Northern Quebec Agreement and its Implementation," in Geographic Perspectives on the Provincial Norths, ed., Margaret Johnston, vol. 3 (Thunder Bay: Copp Clark and Longman, 1988): 279-302.

47 For a revealing account of the historical and more recent impacts of colonization by Euro-Canadians in Northern Québec, see Boyce Richardson, Strangers Devour the Land: The Cree Hunters of the James Bay Area versus Premier Bourassa and the James Bay Development Corporation, (Toronto: Macmillan, 1975).

48 Mulvihill, "Adaptive Environmental Assessment in Canada's North," p. 9.

people linked to one another and the land by their culture and socio-economic systems.[49] As a result of harsh climate and geographical features, northern communities have developed cultural supports what can be described as 'kinship'. Communities have "governed" themselves to ensure stability through internally recognized and accepted processes which are often a combination of traditional and contemporary ways.[50]

As the 'boom and bust' approach to economic development has demonstrated, the northern economy is particularly sensitive to cyclical fluctuations in global commodity markets.[51] Many native northerners entering the wage economy have done so without abandoning their land-based activities. The so-called 'village economy' or 'mixed economy' incorporates elements of both the formal and informal sectors.[52] In contrast to the industrial sector however, a mixed economy fosters economic mutualism characterized by co-operative production and shared consumption.[53] Today, in addition to screening and reviewing smaller projects in a mixed economy, northern environmental assessment systems are challenged by both the potential impact of megaprojects in oil and gas extraction, mining and hydroelectric activity will have on these systems. Contrary to the perceived benefits, an injection of cash may have on a community, there exists the possibility for cash to create disharmony and dislocation in a community that isn't otherwise sufficiently cohesive to deal

---

[49] Canadian Environmental Assessment Research Council, Community Perspectives on Sustainability: Australia-New Zealand-Canada Environmental Workshop (Ottawa: CEARC, 1989): 6.

[50] Ibid.

[51] See for example, Environmental Mining Council of British Columbia, "The Economics of Boom and Bust," in Mining in Remote Areas: Issues and Impacts, (Victoria: Environmental Mining Council of British Columbia, October, 1998): 13.

[52] William Rees, " A Rationale for Northern Land-Use Planning,"1-15

[53] Ibid.

with changes in sharing patterns.

Northern Ecosystems

Finally, predicting the environmental impacts of resource extraction and development in the north is a particularly daunting task for two reasons. First, northern ecosystems are not well understood and baseline data are sometimes non-existent. The northern environment is more susceptible to environmental damage than are other natural ecological systems.[54] Since northern terrestrial and marine ecosystems receive little solar energy for biological processes, their life-forms live "close to the margin of existence."[55] Vegetation grows slowly and therefore the herbivorous wildlife of the region including caribou herds, must migrate great distances to find food. Food chains are also shorter, and the carrying capacity of these systems is less. Northern regions also have a limited ability to recuperate from environmental damage or to absorb pollutants,[56] increasing the potential impacts from industrial activities. As Beanlands and Duinker have noted, there often exist few baseline data for northern ecosystems to make environmental decision-making any easier.[57]

Secondly, as a result of the sheer scale of northern resource development, projects frequently employ new technologies and untested procedures. The potential for the malfunction of technology may be exacerbated in regions with harsh climates and uncertainty about local biogeographical systems.

---

54 Finnish Ministry of the Environment, Guidelines For Environmental Impact Assessment (EIA) in the Arctic: Arctic Environmental Protection Strategy, (Helsinki, Finland: Finnish Ministry of the Environment, 1997).

55 Robert M. Bone, "The Physical Base," p. 157.

56 Ibid.

57 G.E. Beanlands and P.N. Duinker, An Ecological Framework for Environmental Impact Assessment in Canada, (Halifax: Institute for Resource and Environmental Studies, Dalhousie University, 1983).

The Study

Two case studies were chosen to provide substantive examples for this inductive research strategy about the utility of EA for sustainable resource decision-making. The Great Whale Hydroelectric Complex was shelved in 1994 by the Québec government as a result of a flawed environmental impact study, cancelled energy contracts, sagging consumer demand, and strong public opposition to the project. Hydro-Québec, the province's public utility, saw the Great Whale complex as a key component in Hydro-Québec's larger plan to harness rivers flowing through the northwestern edge of the province, and to capitalize on the lucrative U.S. energy market. Both the Cree and Inuit residents of the region strongly opposed any further hydroelectric development after the devastating impacts brought by the La Grande Project in the 1970s. While the Great Whale proposal would also cause serious and irreversible environmental and social impacts, the example demonstrates the reluctance of the federal government to interfere with resource development in Québec, and the provincial government's commitment to its development regardless of the impacts dams would have in the region and on its inhabitants.

The second study describes a proposed mine and mill in Northern Labrador. The Voisey's Bay proposal is the result of the discovery of a massive sulphide deposit in 1994. Toronto based Inco Ltd., the world's largest nickel supplier and its subsidiary, the Voisey's Bay Nickel Company (VBNC), propose to develop both open-pit and underground mines as well as a mill to process the ore. An independent EA panel concluded that the mine and mill could bring much needed economic opportunities to the region without causing serious or irreversible environmental and social impacts. However,

the lack of political commitment to the process by the federal and provincial governments may undermine its potential to deliver both durable and equitable benefits to local residents who stand to be most affected by the construction and operation of the mines and mill. Both these examples illustrate that in light of the diffuse benefits and concentrated costs of environmental protection, governments are likely to be unwilling to sacrifice economic development even when the consequences lead to social and ecological disruption in northern regions.

While these examples proposed different kinds of resource development- one deals with hydroelectric generation, the other with mining- the two examples are well suited for comparison. From a jurisdictional perspective, both are situated in the provincial norths and involve federal, provincial, and aboriginal group interests. Both development projects are also highly sensitive to the provincial development strategies. Hydro-Québec has adopted a commercial, profit-oriented approach to capitalize on newly deregulated energy markets domestically and internationally.[58] The province of Newfoundland and Labrador has actively pursued large-scale resource development for the sake of job creation and revenues. Undertakings include the Terra Nova and Hibernia oil projects, the Voisey's Bay proposal, and the most recent proposals, the Trans-Labrador highway and the Lower Churchill hydro development.

While the Great Whale and Voisey's Bay examples have their own diverse experiences, once penetrated, these differences are mostly superficial. For the purpose of this examination, the shared experiences of the two studies are far more common than different. Thus, the larger questions of process,

---

58 See Neal Burnham, "More Damnation in Quebec," Alternatives, 24.2 (1998): 5-6.

project justification and equity transcend the technological component of the projects.

The previous pages have described the rationale, necessity and utility for this study of EA practice in the Canadian North. The unique cultural and environmental characteristics of the Arctic and Sub-Arctic must be considered in any northern development debate. The imposition of EA places exhaustive demands on aboriginal institutions and communities, both financially and administratively. With increasing pressure on northern resources, this analysis is necessary and timely. If policy directions do not promote environmental and social sustainability, there is an ecological as well as an ethical obligation to rethink the effectiveness of EA. While it is unlikely that the course of political tradition will be swayed by this study, it should be recognized that the path towards sustainability begins with the identification of its potential barriers. It is hoped that this report contributes to this end. The remaining discussion explains the 'nuts and bolts' of how the research was undertaken as well as an overview of subsequent chapters.

Sources

Background research on EA using secondary sources was collected from libraries in three provinces. Sources including documents, books, journal articles and media clippings were assembled in Ontario from Trent University, the University of Toronto, Carleton University and University of Ottawa. In Québec, Concordia and McGill University libraries provided additional sources. While the La Grande project of the 1970s has generated a

substantial amount of material,[59] little has been written about the subsequent push for the Great Whale Complex. As a result, media clippings spanning from 1987 to 1994 helped reconstruct a sequence of events. Additional documentation was obtained from the Canadian Environmental Assessment Agency (CEAA) in Hull, Québec, and from the libraries of Hydro-Québec in Montréal including the 5000-page EIS. Information from the Grand Council of the Cree office in Ottawa further contributed to the analysis. Memorial University library in St. John's Newfoundland provided clippings from local and provincial media relating to the Voisey's Bay project.

In addition, the author visited the Canadian Environmental Assessment Agency (CEAA) in Hull, Québec on several occasions to consult the public registries and to obtain verbatim accounts of community meetings, interviews, correspondence, media clippings, judicial statements, and finally, the environmental impact study (EIS).

For the purpose of original research, fieldwork was undertaken on several occasions. In Québec, the Cree villages of Waswanipi, Mistissini, Oujé-Bougamau, Nemaska (the administrative centre of the region) and Chisassibi were visited. The author also toured Hydro-Québec's electrical generating facility, the La Grande 2 Complex near Radisson, Québec. In April

---

59 Billy Diamond, Highlights of the Negotiations Leading to the James Bay and Northern Quebec Agreement (N.p.:1976); Boyce Richardson, Strangers Devour the Land: The Cree Hunters of the James Bay Area versus Premier Bourassa and the James Bay Development Corporation, (Toronto: Macmillan: 1975); Boyce Richardson, The Plot to Drown the North Woods (Boulder, CO.: Sierra Club, 1972); Fikret Berkes, The Intrinsic Difficulty of Predicting Impacts: Lessons from the James Bay Hydro Project," Environmental Impact Assessment Review, 8 (1988): 201-220; Fikret Berkes, "Some Environmental and Social Impacts of the James Bay Hydroelectric Project, Canada," Journal of Environmental Management, 12 (1981):157-172; Richard Salisbury, A Homeland for the Cree: Regional Development in James Bay, 1971-1981 (Kingston: McGill-Queen's University Press, 1986); Marie-Anik Gagné, A Nation Within a Nation: Dependency and the Cree (Montréal: Black Rose, 1994); Sean McCutcheon, Electric Rivers: The Story of the James Bay Project (Montréal: Black Rose, 1991); Robert Bourassa, Power From the North (Toronto: Prentice Hall 1985); Robert Bourassa, James Bay (Toronto: Harvest House, 1973).

1997, the author attended the scoping sessions of the federal panel for the Voisey's Bay Mine/Mill project in St. John's, Newfoundland. In order to better understand the Canadian Environmental Assessment Act (CEAA), a training compendium was also attended in Vancouver in December, 1997. Finally, three weeks were spent in August 1998 visiting the town of Nain, and the Innu villages of Davis Inlet (Utshimassits), and Sheshashit on Labrador's North Coast. Approval for ethical research was sought and granted by the Trent University Committee on Human Research, the Trent University Aboriginal Education Council, the Labrador Inuit Association (LIA) and the Innu Nation. The author also referred to the Labrador Inuit Association's Research Guidelines for the Labrador Inuit Settlement Area.

Over the course of research, interviews were conducted with aboriginal leaders, consultants, lawyers and residents of affected communities. Appendix 1 describes the methodology used for the research. Appendix 2 lists those interviewed during the course of the research, and Appendix 3 shows the informed consent form provided before all interviews.

Report Overview

The following chapter considers what environmental assessment was originally designed to accomplish. EA, as Lynton Caldwell has argued, establishes a both a principle of policy as well as in its formal application, a technical process.[60] The chapter examines the conceptual foundation, or challenges which EA was originally designed to address. Chapter three then examines the extent to which this principle of policy has been established within the federal administration. Chapters four and five detail the case

[60] Lynton Caldwell, "Understanding Impact Analysis: Technical Process, Administrative Reform, Policy Principle," in Policy Through Impact Assessment, ed., Robert V. Bartlett (Connecticut: Greenwood Press, 1989): 7.

studies of the Great Whale and Voisey's Bay projects respectively. The final chapter then returns to the broad themes introduced in this chapter and considers the future utility of environmental assessment in Canada's northern regions.

Chapter Two

The Principle of Policy: Environmental Assessment and Ecological Rationality

In just under three decades since the invention of formal environmental assessment (EA), its proliferation internationally has been remarkable. Sadler describes EA as one of the more successful policy innovations of the 20th Century. "Thirty years ago, it did not exist. Today, it is a formal process used in more than 100 countries and organizations to help decision-makers consider the environmental consequences of proposed actions."[1] But as Lynton Caldwell, a pioneer architect of the first legislated EA process, the U.S. National Environmental Policy Act (NEPA) suggests, such an approach to mounting environmental pressures was inevitable. "EIA is now a world-wide phenomenon, and had it not been initiated in the United States, it surely would have been invented somewhere else."[2]

Despite the relatively simple underpinnings of EA which seek to anticipate and avoid environmentally damaging activities, Gibson suggests that the potential of EA to force the transformation of policy "toward the cultivation of environmental values has seldom if ever been fully realized."[3] Critics of the process in Canada have gone so far as to suggest that EA

---

1 Barry Sadler, International Study of the Effectiveness of Environmental Assessment (Ottawa: Canadian Environmental Assessment Agency, 1996) : i.

2 Lynton K. Caldwell, "Environmental Impact Analysis (EIA): Origins, Evolution, and Future Directions," Policy Studies Review, 8.1-2 (1988-89): 75-83.

3 Robert B. Gibson, "Environmental Assessment (Canada) " in Conservation and Environmentalism, ed. Robert Paehlke (New York: Garland, 1995): 224.

federally is in a state of crisis.[4] Nikiforuk asserts that EA in Canada has become a "cynical, irrational and highly discretionary federal policy" and a "bureaucratic exercise that is neither cost-effective nor conservation-minded."[5]

Environmental assessment can be examined from several points of view. The undertaking of EA establishes a principle of policy as well as, in its formal application, a technical process.[6] While recently there has been a substantial increase in literature on EA,[7] much of the attention has been given to technique. Some have argued that the substance of EA has suffered as a result of this preoccupation.[8] As Caldwell describes it, the principle of policy relates to the *purpose* of EA, which is to broaden and strengthen the role of foresight in government planning and decision-making. While the improvement of analytic technique is essential to the reliability and credibility of EA, this preoccupation has overshadowed the overarching purpose which EA was originally designed to address.[9] If regulators perceive

---

[4] See Kevin O'Reilly, "Diamond Mining and the Demise of Environmental Assessment in the North," Northern Perspectives, 24. 1-4 (1996): 4. In his article, O'Reilly argues that the progress made for monitoring and benefit agreements related to the BHP mine in the Northwest Territories came not as a result of the EA and the panel recommendations, but despite them through political action and lobbying.

[5] Andrew Nikiforuk, The Nasty Game: The failure of Environmental Assessment in Canada (Toronto: Walter and Duncan Gordon Foundation, 1997): i. While the Canadian Environmental Assessment Agency maintains that the report is fundamentally flawed, other practitioners maintain that the report addressed many key deficiencies of the federal process. Robert Connelly, Vice President- Policy Development, Canadian Environmental Assessment Agency, personal communication, 22 September, 1998 and; Robbie Keith, Executive Director of the Canadian Arctic Resources Committee, personal communication, 16 Nov. 1998.

[6] Lynton K. Caldwell, "Understanding Impact Analysis: Technical Process, Administrative Reform, Policy Principle," in Policy Through Impact Assessment, ed., Robert V. Bartlett (Connecticut: Greenwood Press, 1989): 7.

[7] Barry Sadler, International Study of the Effectiveness of Environmental Assessment, p.11.

[8] J.P. Boggs, "Procedural vs. Substantive in NEPA Law: Cutting the Gordian Knot," The Environmental Professional, 15.1 (1993): 25-33; Lynton K. Caldwell, "Understanding Impact Analysis: Technical Process, Administrative Reform, Policy Principle," p. 7-16.

[9] David P. Lawrence, "The Need for EIA Theory-Building," in Environmental Impact Assessment Review, 17 (1997) : 6-7.

EA as an inconvenience which merits only limited attention, the purpose of EA is defeated, but not as a result of technique. Rather, EA can be defeated because regulators fail to apply the findings of the process to the terms under which a development proposal may be acceptable.

The purpose of this chapter is to examine the principle of policy, or what purpose environmental assessment serves. As a point of departure, an understanding of EAs theoretical potential is significant because it enables a comparison with what the process accomplishes in practice. The chapter begins by defining environmental assessment and its underlying value assumptions. As EA is widely touted by government as a key process through which sustainable development may be realized, it is necessary to unpack this term and how EA may contribute to this end. It is demonstrated that in the federal administration, sustainable development is interpreted broadly by government to support continued economic growth. True ecological sustainability, however, demands that decision-making acknowledge the ecological limits of the economy. Since the global economy is dependent on both renewable and non-renewable resources, sustained growth is untenable from a theoretical perspective, let alone in practice.[10]

It is suggested that a new form of reasoning must replace the existing dominant ideologies which are based in economic and political rationalism. The concept of 'ecological rationality' describes a form of reasoning which takes as its main concern the preservation or enhancement of environmental systems. While the economic argument uses employment and wealth as markers for success, the ecological perspective argues that the health of all systems (including economic) is dependent on the viability of the planet's

10 See for example, William E. Rees, "Sustainable Development: Economic Myths and Ecological Realities," Trumpeter, 5.4 (1998): 133-138.

life-supporting systems. Environmental assessment may be an effective policy strategy because it can force environmental values towards the centre of decision-making without changing or reorganizing present administrative structures. Thus, as the following pages suggest, EA is a process which may contribute to a shift toward ecological sustainability in government decision-making. The discussion begins by characterizing environmental assessment in more detail.

What is Environmental Assessment?

Environmental assessment has been given a multitude of definitions from both practical and ideological perspectives. Lynton Caldwell for example, has described EA as the "reorientation of policy in directions that will improve the human prospect for life on Earth."[11] Wathern uses more concrete terms by describing the purpose of EA for "identifying the likely consequences for the biogeophysical environment and for man's health and welfare... and for conveying this information at a stage when it can materially affect their decision."[12] John Livingston, on the other hand, has bluntly concluded that EA can be "whatever you make it."[13] The disparity between these views has resulted from the uncertainty about how the process can be expected to work, what it can be expected to achieve, and, indeed, what the process should actually comprise.[14] In its brief administrative history, EA has won some victories but has also faced failure and has been the subject of constant reevaluation and adjustment.

---

11 Lynton Caldwell, "Understanding Impact Analysis: Technical Process, Administrative Reform, Policy Principle," p.14.

12 Peter Wathern, "An Introductory Guide to EIA," in EIA: Theory and Practice, ed., P. Wathern (London: Unwin Hyman, 1988): 3-30.

13 John A. Livingston, The Fallacy of Wildlife Conservation (Toronto: McClelland and Stewart, 1981): 33.

14 Thomas Meredith, "Environmental Impact Assessment and Monitoring," in Resource Management and Development, ed., Bruce Mitchell (London, UK: Oxford Press, 1991): 226.

Environmental assessment in Canada was created as an administrative response to ensure that environmental concerns are adequately considered in decision-making. In theory, EA is a planning and decision-making tool which focuses on predicting and assessing the ecological, social, and related consequences of proposed developments, and on identifying ways to mitigate any negative effects.[15] If properly conducted, EA processes should reveal if and how proposed projects can be implemented without what are deemed to be "unacceptable" environmental and social impacts. For affected citizens, the assessment of large projects offers an opportunity to voice concerns about specific development proposals. For proponents, the exercise can contribute significantly to effective planning if conducted early in the design stages.[16] Finally, by bringing to light the full range of potential impacts and alternative ways of carrying out a development before the first bulldozer rolls, EA can help to reduce cost and delays, and minimize future economic and environmental liabilities.

The word "assessment" and the idea come from the legal system of the Roman Empire, where an assessor was a person who served as a legal advisor to a judge, but had no power of making judgments.[17] Today, the process remains an advisory exercise to guide environmental decision-making, and is a point which some practitioners feel contributes to a general misunderstanding of the process.

There is a misconception on the part of many people that if a project is

---

[15] Canadian Environmental Assessment Agency (CEAA), Canadian Environmental Assessment Process: A Citizen's Guide (Hull: Minister of Supply and Services Canada, 1996): 6.

[16] M. Husain Sadar, Environmental Impact Assessment (Ottawa: Carleton University Press for the Impact Assessment Centre, Carleton University, 1996).

[17] E. Fred Roots, "Some Concepts and Issues Surrounding the Place of Science in Assessment of Impacts on the Environment," in The Role of Science in Environmental Impact Assessment, eds., Eric Higgs, Mary Richardson and Rick Riewe, Canadian Circumpolar Institute Occasional Publication #34, (Athabasca, Alta: Athabasca University, 1994) :1.

not stopped, it means that EA has not served its purpose. This is not fair to the process which is advisory only. If the decision-maker still wants to jump, he can.[18]

Generally, the practice of EA consists of several stages. These include screening, scoping, environmental impact statement (EIS) preparation, review, and monitoring. The following briefly describes the stages of evaluation.[19]

Screening The screening process is a form of systematic environmental assessment which determines how to minimize effects, to modify the project, or to recommend a more detailed level of assessment. Criteria used in screening process include significance of effects, and sensitivity of environment in which an activity is proposed.

Scoping is the process which defines the key issues, including the identification of valued ecosystem components (VECs) which should be considered in the environmental assessment.

Preparation of environmental impact statement (EIS) is the analysis of the scale, significance and importance of impacts identified by the proponent of an undertaking.

Review At this stage, a government agency or an independent review panel reviews all information and submissions and then advises the decision-makers.

Monitoring is normally adopted as a mechanism to either check that any conditions imposed on the project are being enforced or to check the quality of the affected environment.

Projects requiring environmental assessment include undertakings as small as a bridge, or as expansive as a northern megaproject which can cause significant environmental disruption. Less attention has been given to

---

18 M. Husain Sadar, professor and Executive Director of the Impact Assessment Centre at Carleton University in Ottawa, personal communication, 23 July 1998.

19 Adapted from Brian D. Clark, "Environmental Impact Assessment (EIA): Origins, Evolution, Scope and Objectives," paper presented at the 11th International Seminar on Environmental Impact Assessment and Management, 8-21 July 1990, University of Aberdeen, Scotland and; Canadian Environmental Assessment Agency (CEAA), The Canadian Environmental Assessment Act: Training Compendium, (Ottawa: Minister of Supply and Services Canada, 1996).

policies and regulations which may also have adverse impacts on the environment. While the federal government currently has guidelines for its departments on policy assessment (known as strategic environmental assessment, or SEA), there is no legal requirement to undertake such a procedure.[20] As a result, the overwhelming number of EAs carried out to date have been at the project level.[21]

Early approaches to EA were largely confined to economic and engineering feasibility studies. Environmental impact assessment (EIA) was primarily focused on description and the creation of biophysical inventories. Some provisions were made for public participation in the review process, but because of the highly scientific and technical nature of information, EIA largely remained an inaccessible exercise for 'experts' only. Through its evolution however, public participation and the incorporation of social impact assessment (SIA) have been established as fundamental and necessary components of an environmental review. The shift from environmental impact assessment (EIA) to environmental assessment (EA) reflected the new multi-dimensional nature of assessment methodology, acknowledging the importance of socio-economic factors in the assessment process.

What Environmental Assessment Is *Not*

As necessary as is it is to define what EA is, it is just as important to recognize what EA is *not*. As a way to understand the implicit assumptions and limitations of environmental assessment, Beattie suggests that practicioners and participants acknowledge in the initial stages, several issues

---

[20] Canadian Environmental Assessment Agency (CEAA), "The Environmental Assessment Process for Policy and Program Proposals," (Hull: CEAA, 1990).

[21] Sandy Scott, Environmental Considerations in Decision Making: A Role For EIA at the Policy Level?, Master's Thesis, Dalhousie University (1992): 44.

which are at the forefront of many public disputes regarding EA.[22] Firstly, EAs are *not* science. Whereas science involves observation, experimentation, and hypothesizing, EAs have more in common with urban planning, economic forecasting, and corporate planning than they do with what the public and most scientists think of as 'science'. Though the results and techniques of science are used throughout the EA process, assessments are not created to test and refine explanations; they are created to *predict* potential impacts. In these endeavours, data of varying degrees of validity and 'robustness' are applied to the data, and projections for different scenarios of action are created. Each of these steps requires the practitioner to make assumptions, select certain approaches, and to limit the inquiry. These actions, even if based on the best professional judgment, are inherently *unscientific.* By claiming that EAs are science, however, the public is encouraged to expect and search for a certain level of precision. When they do not find it, they are justifiably frustrated and angry.

Environmental assessments invariably contain unexamined and unexplained value assumptions.[23] Since EAs are applied to evaluate the impacts of project-specific proposals, the scope of investigation is narrow and therefore may not consider possible alternatives to construction. For example, the scope of an EA study for a hazardous waste facility would not likely consider the alternative of a nationwide reduction in hazardous waste. The recommendations following the study would likely not question the more fundamental concerns of society's consumption and waste generation. Thus, the narrow scope will likely favour the values inherent in the treatment, and

---

22 Robert B. Beattie, "Everything You Already Know About EIA (But Don't Often Admit)," Environmental Impact Assessment Review, 15 (1995):109.

23 Ibid, p. 111.

ignore the possibility of reducing the need for treatment in the first place.

The environmental assessment process is also inherently political. No matter how small a project, the distribution of impacts and benefits will likely be spread amongst the population unevenly. All projects are therefore a legitimate focus and concern for public, and political debate in a democratic society. EA, by virtue of being part of a decision-making process that has distributional impacts is, has been, and always will be political.[24]

Environmental assessment then, is largely a trans-scientific and value-laden process because it is composed of both scientific and political dimensions. But as Beattie suggests, anyone who has had a personal experience with EA already knows this. A problem with EA is that it is often presented to the public as a rational and 'objective' process to address environmental concerns; As Amy notes, clearly it is not:

> The EIS approach presumes, for example, that decision-making in bureaucracies is a rational process based on the detailed analysis of information and options. But in reality project decisions are usually more the product of politics than scientific analysis."[25]

As such, Paul Emond has described the important role of the public to the EA process:

> Neither the environmental assessment nor the review are value-free scientific documents. They depend very much on someone's interpretation of the data. There may be more than one reasonable interpretation, yet this will never surface unless all interested persons have access to all relevant information upon which the environmental assessment and review are based.[26]

These characteristics do not make EA any less useful. As a way to improve the

---

24 Ibid, p. 112.

25 Douglas J. Amy, "Decision Techniques For Environmental Policy: A Critique," in Managing Leviathan: Environmental Politics and the Administrative State, eds., Robert Paehlke and Douglas Torgerson (Peterborough: Broadview Press, 1990): 62.

26 D.P. Emond, Environmental Assessment Law in Canada (Toronto: McClelland & Stewart, 1978): 98.

process however, EA must be stripped of all claims of objectivity in order to avoid false expectations on the part of the public and of decision-makers.

The necessity and potential for EA as a method to address environmental concerns in decision-making has been recognized globally. The report of the World Commission on Environment and Development (WCED), Our Common Future[27] cited formal EA as a legal means to achieve sustainable development.[28] More recently, the Canadian Environmental Assessment Act (CEAA), proclaimed in 1995, became the first federal initiative to adopt in principle, the concept of sustainable development as described by the Brundtland Commission.[29]

While this report does not allow for an in-depth examination of the concept, determining how sustainable development is interpreted by regulators reveals much about how the EA process is likely to be used towards achieving this goal in practice. As Sadler has noted, sustainable development has become a deceptively familiar term; while there is general agreement on its broad definitions and principles, concepts continue to elude precise specification despite a major effort by policy analysts and others to "nail them down".[30] Often, the Brundtland version of sustainable development proves to be what Colby calls a 'pseudo-political consensus'. That is, it tends to break

---

27 WCED, Our Common Future: The World Commission on Environment and Development, (New York: Oxford, 1987).

28 In Annex 1 of its report, "Summary of Proposed Legal Principles For Environmental Protection and Sustainable Development Adopted by The WCED Experts group on Environmental Law," the WCED identified EA as a legal means of promoting sustainable development. Recommendation five notes that "States shall make or require prior environmental assessments of proposed activities which may significantly affect the environment or use of a natural resource." Our Common Future, p. 349.

29 The Canadian Environmental Assessment Act is the first federal act to adopt this principle.The Government of Canada, The Canadian Environmental Assessment Act, ch. 37, preamble.

30 Barry Sadler, "Sustainability Strategies and Green Planning: Recent Canadian and International Experience," in Achieving Sustainable Development, eds., Ann Dale and John B. Robinson (Vancouver: UBC Press, 1996): 24.

down quickly along conventional lines when specific policy issues are at stake or when strategies and action plans are drafted.[31] Implementation of the concept has, among other reasons, been hindered by widely varying interpretations of the concept- developed nations use the term as a justification for continued economic growth,[32] while critics of the term have stressed that indefinite growth is an oxymoron.[33]

Sustainable Development

The concept of sustainable development, made popular by the report of the World Commission on Environment and Development (WCED),[34] was an initiative to reconcile both development and environmental protection. Our Common Future, argues for the unifying of interests, environmental and economic, both of which have been pursued along separate and usually conflicting paths. On one level, the idea of sustainability is reasonably straightforward. It means first of all, living within our ecological means. By adjusting economic activities to the long-term capabilities of the resource base, a continued flow of benefits and services can be maintained. Sustainable development is equated with notions of inter and intra-generational equity; that is, "meeting human needs and aspirations, in particular those of the world's poor, and doing so without foreclosing the options for future generations."[35] Sustainable development is therefore best conceived as a

---

31 B.E. Colby, "Environmental Management in Development," Discussion paper no. 80. (Washington, DC: World Bank, 1990) cited in Barry Sadler, "Sustainability Strategies and Green Planning: Recent Canadian and International Experience," in Achieving Sustainable Development, p. 24.

32 Robert Paehlke, "Sustainable Development," Conservation and Environmentalism, ed., Robert Paehlke (New York: Garland, 1995): 616.

33 Lester W. Milbrath, "Sustainability," Conservation and Environmentalism, ed. Robert Paehlke (New York: Garland, 1995): 613.

34 WCED, Our Common Future.

35 Ibid, pp. 43-46.

commonwealth of goals and of the value systems and policy concepts that give them definition and force. Figure 2.1 is an attempt to illustrate this notion.

Critics of sustainable development have noted the ambiguity of the term. Some have referred to the concept as a "slippery" one which may be interpreted widely to serve particular interests; environmentalists use the term to support respect for intrinsic values in nature, while industry has equated sustainable development with economic growth.[36] Consequently, disagreements about the salient elements of the concept hamper determination of appropriate responses for achieving sustainability.[37] The concept has been described by some as an oxymoron; while it connotes the preservation and maintenance of necessary support systems, at the same time "development" implies change and growth.[38] How can these two seemingly contradictory terms be complimentary?

One of the crucial insights underlying the concept of sustainable development is the realization that there are severe environmental costs associated with the absence of economic development.[39] Regardless of long-term implications, desperate and hungry people will cut wood for cooking and heat if the only alternative is cold. This insight is the crux of the argument put forward by the Commission; the concept implicitly asserts that both development and environmental protection are essential. In the view of sustainable development advocates these are not contradictory objectives.

---

[36] Sharachchandra M. Lélé, "Sustainable Development: A Critical Review," in Green Planet Blues: Environmental Politics from Stockholm to Kyoto, second edition, eds. Ken Conca and Geoffrey D. Dabelko (Boulder, Colorado: Westview Press, 1998): 252.

[37] See for example, Michael A. Toman, "The Difficulty in Defining Sustainability," in Resources, 106 (Winter 1992): 3-6.

[38] Robert Paehlke, "Sustainable Development," Conservation and Environmentalism, p. 615.

[39] Ibid, p. 616.

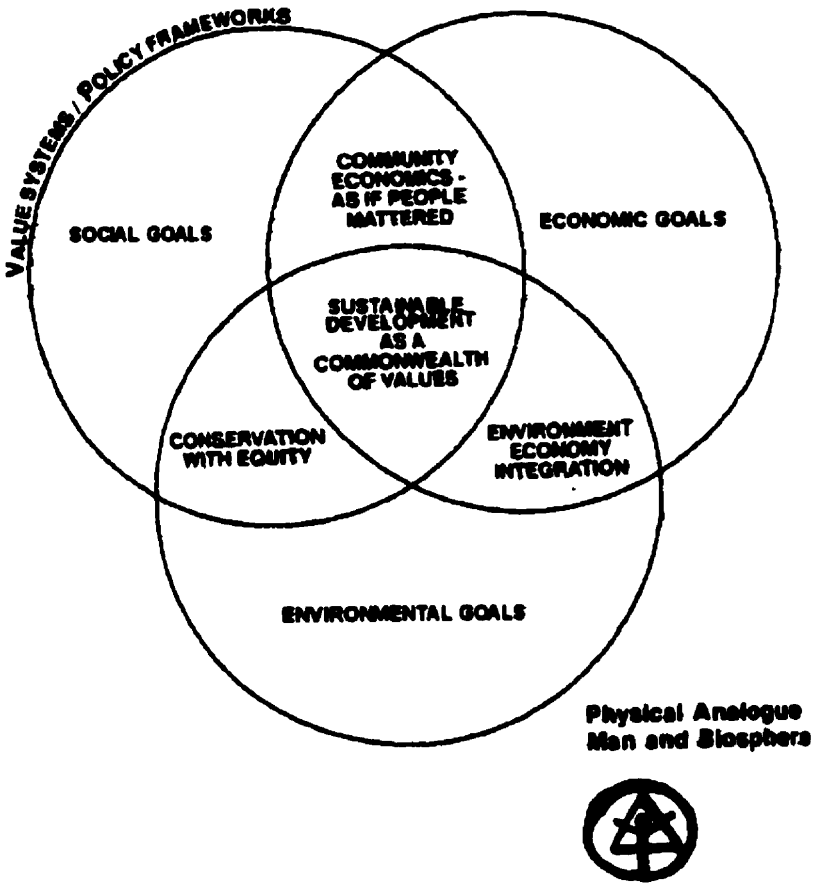

Figure 2.1 A Systems Perspective on Sustainable Development

Source: Barry Sadler, "Sustainable Development, Northern Realities and the Design and Implementation of Regional Conservation Strategies," in Achieving Sustainable Development Through Northern Conservation Strategies (Calgary: University of Calgary Press, 1990).

Sustainable development has been used by many governments, including the Canadian government, and corporations as an argument for continued economic growth, albeit growth mindful of environmental protection and resource conservation. In 1986, the National Task Force on Environment and Economy (NTFEE) was established to recommend action on environment-economy interaction in Canada. In its report, the Task Force interpreted sustainable development as "development which ensures that the utilisation of resources and the environment today, does not damage prospects for their use by future generations."[40] The report suggested that "Sustainable development does not require the preservation of the current stock of natural resources or any particular mix of assets." Nor does it place "artificial" limits on economic growth, provided that such growth is "economically and environmentally sustainable".[41] From this perspective, the definition of sustainable development can be used to defend almost any pattern of economic activity.

As Rees has noted however, there are problems with the sustained growth argument.[42] First, the expanding economic system is inextricably linked to the biosphere. Every economy draws on the physical environment for non-renewable resources and on ecosystems for renewable resources, and all the products of economic activity are eventually discharged back into the biosphere as "waste".[43] The interpretation of sustainable development by the

---

40 Canadian Council of Resource and Environment Ministers (CCREM), Report of the National Task Force on Environment and Economy (Ottawa: CCREM, 1987).

41 Ibid, p. 3.

42 William E. Rees, " Economics, Ecology, and the Role of Environmental Assessment in Achieving Sustainable Development," in Sustainable Development and Environmental Assessment: Perspectives on Planning for a Common Future, eds., Peter Jacobs and Barry Sadler (Hull: Canadian Environmental Assessment Agency Research Council, 1990): 123-141.

43 Ibid.p. 125. See also William E. Rees, "Sustainable Development: Economic Myths and Ecological Realities," p. 134.

NFTEE which would allow development so long as it did not diminish the possibility of its future use is therefore, self-contradictory. The present generation cannot use any resource stock such as oil or natural gas without totally eliminating the possibility for its future use. Additionally, the Task Force was reluctant to admit the possibility that living standards for some may have to be reduced so that others might live at all.

The 'regulator' of this activity, and one that economic theory ignores, is the second law of thermodynamics, or the entropy law which states, "in any closed isolated system, available energy and matter are continuously and irrevocably degraded to the unavailable state."[44] In other words, when energy is used, its 'quality' is lowered, and therefore more difficult to use. Entropy is a measure of the energy unavailable to do useful work. When energy is used and is converted to a less useful form, we say the entropy of the system has increased. Since stocks of material and energy sources are- for the most part fixed, the second law dictates that economies consume and degrade the very resource base that sustains them. The substitution of one depleting resource for another can only *delay* scarcity. Thermodynamic law therefore sets an absolute limit on the material growth of the world economy. National economies, having depleted or lacking resources can only be sustained by continuous resource imports from elsewhere, and as global limitations dictate, only in the short term.[45]

A second problem with a growth-dependent economy is that ecological productivity is limited by the rate of energy input, which for ecological systems is the sun. Ecosystems, therefore, can not grow indefinitely as energy

---

[44] N. Georgescu-Roegen, "Energy and Economic Myths," Southern Economic Journal, 41.3 (1975): 347-381, cited in William E. Rees, " Economics, Ecology, and the Role of Environmental Assessment in Achieving Sustainable Development," p. 126.

[45] Ibid.

from the sun remains constant. Unlike the economy, which expands through positive feedback, ecosystems are held in dynamic equilibrium, regulated by limiting factors and negative feedback.[46] Since economies are growing and the ecosystems upon which they are dependent are not, the consumption of ecological resources everywhere threatens to exceed sustainable rates of biological production.[47] This situation is exacerbated by pollution which further impairs the remaining productivity of ecosystems.

Therefore, as Rees has argued, modern industrial economies directly undermine the potential for sustainable development through over-harvesting, and indirectly compromise future production through pollution and discharge. While the Canadian interpretation of sustainable development, as described by the Task Force Report, suggests policy directions which include equity and distribution of wealth amongst its population, the generation of such wealth is predicated on continuous economic growth. By increasing economic wealth, this strategy relieves the pressure on government for the less appealing prospect of "redistributing" existing economic wealth through policy mechanisms. The obvious problem, is that wealth built upon indefinite growth is not ecologically sustainable. Thus, sustainable development, as a framework for policy direction is just as easily used for justifying 'sustained' development (or the status quo), as it is for achieving more sustainable approaches to resource use.

This chapter so far has characterized environmental assessment, and to

---

[46]Positive feedback occurs when an increase in output leads to a further increase in output. This is sometimes known as 'a vicious cycle' since the more you have, the more you get. Negative feedback in ecology is, contrary to how it sounds, a good thing. Negative feedback is a type of feedback that occurs when the system's response is in the opposite direction of the output. Therefore negative feedback is self-regulating. Daniel Botkin and Edward Keller, Environmental Science: Earth as a Living Planet (New York: John Wiley & Sons, 1995): G-12, G-10.

[47] William E. Rees, " Economics, Ecology, and the Role of Environmental Assessment in Achieving Sustainable Development," p. 127.

an extent, the multidimensional nature of sustainable development and the imperative for policies which promote ecological sustainability. Earlier, it was suggested that EA can be viewed as both a technical process and one which establishes a principle in administration. The principle of EA is to bring environmental concerns into the decision-making arena, whereas the technical side of EA is concerned with its methodology. The discussion thus far has led to a critical point: if the principle of EA is interpreted by policy makers and those with authority over decisions about resource development as one which seeks to support and encourage economic growth, albeit more mindful of environmental concerns, then tinkering with the technical features of EA will have little effect on its overall policy direction. If true sustainability is to be realized, ecological concerns must supplant the economic imperative as central in the decision-making process. This is not to suggest that concern for ecological systems will, or must wholly replace economic and political concerns. As suggested, people who are starving or living in squalor are unlikely to be sympathetic to environmental problems when their short-term survival is at stake. Further, it would be irresponsible for an administration to ignore the basic needs of the people it serves. What is plain however, is that if true sustainability is to take place, then it must be recognized that there are ecological limits to economic growth.

The designers of the world's first formal EA process, the U.S. National Environmental Policy Act (NEPA) acknowledged that while administrative institutions are largely inadequate to address the modern environmental predicament, they are a permanent feature in governance. Therefore, as Bartlett suggests, if environmental problems are to be solved at all, they must

be solved in part administratively.[48] The formal application of EA presents a strategy which draws environmental concerns to the centre of administrative decision-making. By doing so, it is argued that EA can change the criteria by which environmental decisions are made and therefore make governments 'think' ecologically. The remaining pages in this chapter describe how EA may be a subversive strategy by which to promote ecologically sustainable decision-making. In contrast to administrative initiatives which are mostly concerned with economic efficiency and political expediency, the underlying logic of environmental assessment is anchored in a distinctive form of reasoning, namely ecological rationality.

Foundations: Ecological Rationality

As previously discussed, all policy recommendations are grounded in a system of beliefs. In order to possess any degree of persuasive power, a policy recommendation must be reasonable; it must be produced by some recognisable form of reasoning.[49] Ecological rationality is a form of reasoning which takes as its primary concern the maintenance of ecological systems. The persuasive power behind this form of reasoning, is that ecological systems provide value as a life-support system by providing the basic needs of life, and to assimilate wastes. Ecological rationality differs greatly from other forms of reason including economic, social, legal and political rationalities, each having its own distinctive goals. As a point of departure, ecological rationality is best understood in the context of a larger body of work on the general concept of rationality in decision-making.

---

[48] Robert V. Bartlett, "Ecological Reason in Administration: Environmental Impact Assessment and Administrative Theory," in Managing Leviathan: Environmental Politics and the Administrative State, eds., Robert Paehlke and Douglas Torgerson (Peterborough, On.: Broadview Press, 1990): 81.

[49] John S. Dryzek, "Ecological Rationality," International Journal of Environmental Studies, 21 (1983): 5.

Put simply, rationality can be defined as a form of practical reasoning. The rationality of an action is derived by "logical processes from valid premises."[50] Ecological rationality can be conceived as a form of 'functional' rationality. An organization is functionally rational when it is structured to "produce, or increase, or preserve, some good in a consistent, dependable fashion."[51] Functional rationality may be identified by its coordination of the various *parts* of a system. For example, a rational company produces a profit, just as a rational legal system solves disputes and creates a legal framework. Functional rationality is therefore the rationality of systems rather than individual decisions. Ecological rationality is a form of functional rationality which constitutes a standard for design and evaluation according to ecological concerns.[52] This form of reason may be thought of as the "rationality of living systems or an order of relationships among living systems and their environments."[53]

Dryzek has identified four forms of functional rationality applied most often in social choice systems: economic, social, legal and political.[54] Economic rationality refers to the dominant form of reason in applied in industrial societies. Using economic rationality, the basic kind of relationship is based on calculation, and the prime value is economic efficiency. Social

---

50 Herbert A. Simon, "Rationality," in A Dictionary of the Social Sciences, Julius Gould and William L. Kolb, eds., (New York: Free Press of Glencoe, 1964) : 573-574, cited in Robert V. Bartlett, "Ecological Rationality: Reason and Environmental Policy," Environmental Ethics, 8.3 (1986): 223.

51 Paul Diesing, Reason in Society (Urbana, Illinois: University of Illinois Press,1962) qtd. in John S. Dryzek, "Ecological Rationality," p. 6.

52 John S. Dryzek, Rational Ecology:Environment and Political Economy (New York: Basil Blackwell, 1987): 25.

53 Robert V.Bartlett, "Ecological Rationality: Reason and Environmental Policy," p. 229.

54 John S. Dryzek, Rational Ecology; Robert V. Bartlett, "Ecological Reason in Administration," pp. 81-96. Diesing identifies three forms of practical reasoning analogous to technical and economic rationality: social, legal and political rationality. See Paul Diesing, Reason in Society: Five Types of Decision and Their Social Conditions (Urbana: University of Illinois Press, 1962).

rationality on the other hand, seeks social harmony and integration. Legal rationality is characterized by a set of formal rules guided by goals of conflict resolution and the construction of a system of rights and rules. Political rationality can be described as a principle for all significant decisions made in a political system. In discourse about public policy, economic and political rationality are the two forms of reason appealed to most often.[55]

An ecologically rational structure is one which consistently produces the good of life support for its components. The order of low entropy, which it maintains represents its ability to cope with stresses on the ecosystem.[56] Entropy is the measure of the amount of energy that is unavailable for useful 'work' in a system. This capability is what is meant by the stability of an ecosystem, or homeostasis. As the 'disorder' of a system increases, the entropy in a system also increases.[57] Economic activity including the consumption of resources, contributes to a constant increase in global net entropy- or disorder- through the continuous dissipation of free energy and matter. Ecologically rational behaviour may be defined as behaviour which promotes or protects the functional rationality of ecosystems, or their stability or homeostasis. Ecological rationality as a decision-rule for public policy specifies that low entropy of an ecosystem be the first concern in any decision with any implications for it.[58]

Ecological rationality is not a precise and exact way of thinking. Rather, it is a process which draws logic largely from the processes of ecology and other sciences. The reason that ecological processes must be considered in

---

55 John S. Dryzek, "Ecological Rationality," p. 5.

56 Ibid.

57 Daniel Botkin and Edward Keller, Environmental Science: Earth As a Living Planet (New York: John Wiley & Sons, 1995): G-6. See also p. 152.

58 John S. Dryzek, "Ecological Rationality," p. 6.

social choice considerations is for the productive, protective, and waste-assimilative value of ecosystems. In other words, the aspects which provide basic requirements for human life need to be preserved. While there are other important arguments to be made for the value of the environment (aesthetic value for example) an anthropocentric argument for the life-support provided by ecological systems can be made because it ensures human survival. By restricting the argument to some basic human interest, one can meet competing forms of functional rationality- economic, political, social, legal- on their own ground: that of human interest.[59] But as the human population grows exponentially, any consideration of ecology must account for the omnipresence of humans and their dominance over, and dependence on, ecosystems.

As suggested, the primary concern of this analysis is the capability of ecosystems to consistently and effectively to provide *human* life support. The way this will be accomplished over the long term is by conserving low-entropy. By not disrupting and depleting the capacity of ecosystems to produce energy, we pass on to our successors as much 'order' as we ourselves started with.[60] This interpretation was subsequently echoed, albeit in different words, by the Brundtland Commission. In its definition of the term of sustainable development, the Brundtland Commission stated that "...humanity has the ability to make development sustainable- to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs."[61] Therefore principles of ecologically rational decision-making, such as the maintenance of low-entropy in ecological systems, when

---

59 John S. Dryzek, Rational Ecology, p. 35.
60 Ibid, p. 36.
61 WCED, Our Common Future, p. 8.

applied to policy, satisfy the core element of sustainable development: living within our ecological means. It is critical to note as well that decision-making based on these criteria could also address the other core elements of sustainable development, including adequate living standards and the equitable distribution of wealth. As Dryzek suggests, "humans need not be master over nature, nor its slave, only that the environment be affected positively to maintain survival."[62]

Ecological rationality suggests that non-interventionism in natural systems is untenable. In order to support increasing global populations and increasing pressure on ecosystems, human intervention in ecosystem function is necessary. As Dryzek notes, "ecological rationality requires a degree of intervention in natural systems, but falls short of extreme ecological engineering."[63] Stable, yet productive human-created and human-maintained systems or "anthropogenic subclimaxes" create stable ecological states different from the climax of biomass which would be obtained in the absence of human intervention.[64] Examples of anthropogenic subclimaxes like the agro-ecosystems of Western Europe and rice paddies of Eastern Asia would not only ensure ecological sustainability, but provide residents with a sustainable source of food and income.[65] It should be noted that these examples are the product of slow and incremental human intervention and consequently, speak to how other sustainable systems should be created.[66]

---

[62] John S. Dryzek, Rational Ecology, p. 46.
[63] Ibid, p. 46.
[64] Eugene P. Odum, Basic Ecology, (Philadelphia: Saunders, 1983).
[65] John S. Dryzek, Rational Ecology, pp. 45-46.
[66] John S. Dryzek, "Ecological Rationality," p. 7.

The Priority of Ecological Reasoning

Clearly, ecological rationality represents a unique form of functional rationality, differing from other forms such as economic or political rationality. It is obvious, however, that the various forms of rationality are at least partially incompatible, and they may fundamentally conflict. For example, it may be economically rational to pave over a corn field for a drive-in theatre rather than to leave it for the production of food. Ecological rationality would suggest that the life-support which the field provides for humans and other members of the biotic community is of considerable value to the ecosystem of which it is a part. In the event of conflict, which form of rationality should take priority? Diesing and Wildavsky argue that political rationality should always be the primary concern in any collective decision, because if a decision has broad support, then "decision structures will gain support and legitimacy."[67] Dryzek, on the other hand, argues convincingly that ecological rationality is a more fundamental kind of reason and should therefore take precedence over all others:

> The preservation and enhancement of the material and ecological basis of society is necessary not only for the functioning of societal forms such as economically, socially, legally, and politically rational structures, but also for action in pursuit of *any* value in the long term. The pursuit of all such values is predicated upon the avoidance of ecological catastrophe. Hence the preservation and promotion of the integrity of the ecological and material underpinning of society -ecological rationality- should take priority over competing forms of reason in collective choices with an impact on that integrity.[68]

Dryzek suggests that any trade-off between ecological rationality and other forms of reason would involve accepting some risk to life-support for a

---

[67] Aaron Wildavsky, "The Political Economy of Efficiency," Public Administration Review, 26 (1966): 292-310; Paul Diesing, Reason in Society (Urbana: University of Illinois Press,1962) cited in Dryzek, Rational Ecology, p. 58.

[68] John S. Dryzek, Rational Ecology, pp. 58-59.

gain in some other value. If a majority of choices are made to treat ecological concerns as secondary in importance, each individual decision will eclipse those concerns. Spanning across all decisions, the result will be widespread ecological *irrationality*. Dryzek states that this kind of consideration indicates that the priority of ecological rationality should be "lexical". This is to say that lower values come into play only when the higher values are satisfied. In this case, the higher value is environmental sustainability. It is important to note however, ecological rationality does not fully supplant other forms of rationality, as it is rarely completely determinative and has little relevance to many dimensions of human activity.[69]

As previously suggested, both values and modes of behaviour contribute to the attainment of specific goals. The previous discussion highlighted the values inherent to a distinct form of rationality which takes the health of ecosystems and their capacity for the maintenance of human life as its primary concern. The focus now turns to modes of rationality to demonstrate how these values are integrated into decision-making and its relationship to environmental assessment. The examination of modes of rationality is critical because it describes how EA can be 'subversive' of present forms of competing values including economic and political rationalities.

Modes of Rationality

All forms of reason can be viewed at three different modes, or levels of rationality: functional, substantive and procedural.[70] Functional rationality refers to the rationality inherent in societies, systems, or organizations. Substantive rationality applies to individual decisions or actions. Substantive

---

[69] Robert V. Bartlett, "Ecological Rationality: Reason and Environmental Policy," pp. 235-236; John S. Dryzek, Rational Ecology, pp. 59-60.

[70] Robert V. Bartlett, "Ecological Reason in Administration," p.84.

rationality refers to individual behaviours made in order to achieve those goals.[71] Procedural rationality, in turn, refers to the actual processes of reasoning, or the cognitive procedures used to choose actions.[72] Procedural rationality describes a system's ability to discover appropriate 'adaptive' behaviour. Rationality in this sense is not an attribute of an action or behaviour but an attribute of a procedure used to choose action.[73]

As several authors have noted, the relationships among functional, substantive and procedural rationality are problematic.[74] For example, individual actions may be nonrational (substantively) in the context of a society or organization that is highly rational (functionally). Similarly, functional ecological rationality does not require substantive ecological rationality, but substantive ecological rationality across all individual actions will almost always result in functional ecological rationality.[75] Likewise, substantive ecological rationality does not require procedural ecological rationality, but the probability that decisions will be substantively rational is always greater to the extent that humans and human systems reason ecologically before acting.[76]

As Bartlett has noted, the connections among functional, substantive, and procedural rationality are especially useful in relating ecological rationality to environmental pressures and how they are ultimately

---

71 Robert V. Bartlett, "Ecological Rationality: Reason and Environmental Policy," p. 224.

72 Herbert Simon, "Rationality as Process and as Product of Thought," American Economics Review, 68:2 (1978): 9, cited in Robert V. Bartlett, "Ecological Reason in Administration," p. 85.

73 Robert V. Bartlett, "Ecological Reason in Administration," p. 85.

74 Conflict between ecological rationality and other forms of rationality is discussed at length by Dryzek and Bartlett. See also Lynton K. Caldwell, "The Contextual Basis for Environmental Decision Making: Assumptions are Predeterminants of Choice," The Environmental Professional, 9 (1987): 302-308.

75 For a more detailed discussion, see Bartlett, "Ecological Reason in Administration," p. 85.

76 Robert V. Bartlett, "Ecological Reason in Administration," p. 85.

addressed by government.[77] The ultimate concern of course, is with the functional ecological rationality of a society. It is not necessary for ecological principles be understood, or even that some form of reasoning occur to achieve functional ecological rationality; ecosystems devoid of humans have managed to survive throughout the years without knowing exactly 'how'. The only known examples of functionally rational human societies have been certain traditional cultures lacking Western scientific understanding of ecological relationships.[78] Traditional societies would demonstrate functional rationality simply because the ones that did not, ceased to exist. The challenge, as Bartlett has identified, is that functional rationality provides little in the way of guidance for action. "A trial and error approach for humans is less than desirable as extinction is not an attractive option."[79]

Dryzek has analyzed and evaluated seven major existing social choice mechanisms according to a functional ecological rationality standard: markets, administered systems, law, moral persuasion, polyarchy, bargaining, and armed conflict. His standard comprises five criteria: negative feedback, coordination, flexibility, robustness, and resilience.[80] His conclusion to this analysis is that "any winner among the seven types of social choice would be little more than the best of a poor bunch."[81] The only alternative way to achieve functional ecological rationality then, excluding trial and error, is through the institutionalization of substantive and procedural rationality, which together produce functional rationality.[82] The challenge, identified by

---

77 Ibid, p. 86.

78 Ibid, p. 86. See also Thomas Meredith, "Environmental Impact Assessment and Monitoring," pp. 224-245.

79 Ibid.

80 John S. Dryzek, Rational Ecology.

81 Ibid, p.181.

82 Robert V. Bartlett, "Ecological Reason in Administration," p. 88.

Dryzek, is to select forms of social choice that will perform better than existing institutions with respect to the functional ecological rationality standard. While not suggesting any ways about how to get there, his recommendations for institutional reconstruction include local autonomy, self-sufficiency, and a reduction of hierarchy to facilitate collective decision-making.[83]

As Bartlett notes, if the social choice structures that Dryzek recommends are to prevail, it will be because they turn out to be the kinds that best institutionalize substantive and procedural ecological rationality and because "predecessor mechanisms have paved the way, transforming or subverting older established structures and mechanisms through earlier efforts to institutionalize substantive and procedural ecological rationality."[84] Environmental assessment is one way of accomplishing such subversion. By serving as a form of 'appendage' to already established procedures for decision-making, EA forces individuals to consider environmental concerns before decisions are made.

Ecological Rationality Through Environmental Assessment

As Bartlett notes, the U.S. National Environmental Policy Act (NEPA) of 1969 was an experiment in institutionalizing ecological rationality in government.[85] NEPA did this in several ways, but most importantly, by statutorily endorsing the criteria of functional and substantive ecological rationality by requiring that all federal agencies use procedural ecological reasoning in all planning and decision-making.[86] The potential of EA to institutionalize environmental values into decision-making is accomplished

---

[83] Ibid, p. 87.

[84] Ibid, p. 88.

[85] Robert V.Bartlett, "Rationality and the Logic of the National Environmental Policy Act," in Environmental Policy and NEPA, eds., Ray Clark and Larry Canter (Boca Raton, Fla.: St. Lucie Press, 1997).

[86] Robert V.Bartlett, "Ecological Reason in Administration," p. 89.

by statutorily establishing environmental goals, and by encouraging political actors to consider ecological values in decision-making, EA embeds procedural ecological rationality in political institutions. This process in turn, affects individual decisions by establishing, reaffirming, and legitimating environmental values and ecological criteria as standards by which decisions are structured and ultimately made.[87]

As Bartlett suggests, EA can be a very powerful mechanism for influencing social choice- but not through coercion. Rather, EA is a 'catalytic' control. That is, EA offers opportunities and incentives for political individuals who want to affirm in EA, their own environmental values.

> Catalytic controls require the bureaucracy to act and direct the bureaucracy towards certain goals but do not rob it of the capacity for creative problem-solving....They prod, stimulate, and provoke bureaucrats but also allow them to be both innovative and efficient.[88]

There are formal and informal pressures for decision-makers within administration to undertake EAs. Firstly, the failure to conduct an EA on the part of decision-makers would likely be perceived negatively by the general public. The result, Wandesford-Smith suggests, is that "formal structures can tap the powerful, informal incentives that operate inside every administrative agency, and which link it to the external world, so as to produce agencies that continuously and progressively think about environmental values."[89] The failure of government to undertake a required action relating to environmental protection may have serious political

---

87 Ibid, p.91.

88 William T. Gormley, "Institutional Policy Analysis: A Critical Review," Journal of Policy Analysis and Management, 6 (1987): 153-169, cited in Bartlett, "Ecological Reason in Administration," p. 91.

89 Geoffrey Wandesforde-Smith, "EIA, Entrepreneurship, and Policy Change," in Robert V. Bartlett, ed., Policy Through Impact Assessment, pp. 155-166.

consequences. The threat of litigation and the related administrative costs, political embarrassment as well as inter and intra departmental pressures to undertake assessments, all constitute pressures which may, depending on the project, be enough to press government to undertake the most stringent of assessments.

Successful EA can therefore change the criteria by which choices may be shaped and made in administrative decision-making. It does so by requiring the consideration of environmental values before decisions about development are made. EA is successful in this capacity because it does not require radical changes or structures to the administration. Rather, EA may be a strategy which involves changing individual values and patterns of thinking from within existing administrative structures. It creates powerful incentives, formal and informal, for compliance with the environmental criteria it establishes, and therefore may be a policy strategy of great significance for guiding environmentally-sound decision-making. But as the following chapter demonstrates, its short administrative history EA has often been used merely as symbolic window dressing for environmental protection. Environmental assessment will have little influence on decision-making when it is 'frozen out' of the ways problems are identified, structured, and addressed.

Discussion

The concept of sustainable development, popularized by the Brundtland Commission, has become one of the most important concepts in environmental thought.[90] The notion however, suggests little in the way of precise structures or measures to achieve its desired outcomes. Since Our

[90] John S. Dryzek, The Politics of the Earth: Environmental Discourses (New York: Oxford University Press, 1997):123.

Common Future, the concept has been equated by business and government with continued economic growth. The inherent problem with this strategy is that ecological systems, on which all economic and political systems are dependent, are limited by fixed stocks of material and energy. The extent to which national and world economies can grow is therefore limited by the capacities of ecological systems. Since economies are growing and ecosystems are not, the consumption of ecological resources threatens to exceed sustainable rates of biological production.

Clearly, new criteria for environmental decision-making are needed to achieve true ecological sustainability. While the Brundtland version of sustainable development breaks down quickly when specific policy issues are at stake, the necessity for green planning outweighs the challenges it poses. Environmental assessment, as a predictive exercise to inform decision-makers about the likely environmental and social impacts development activities and policies may bring, has been recognized internationally as a key exercise which may guide environmentally sustainable decision-making.

Environmental assessment can be examined from several points of view: EA establishes a principle of policy, as well as in its formal application, a technical process. The principle, or purpose of EA is intended to internalize environmental and social concerns, and to broaden and strengthen the role of foresight in government planning and decision-making. The process, unlike other administrative initiatives concerned with economic efficiency, is anchored in the rationality of living system, or ecological rationality. The potential of EA as a policy strategy is that it may undermine the basis, or decision-making criteria traditionally used in the administrative state, such as political, legal, and economic forms of reason. When environmental

assessment is successful, it changes the formal and informal rules and premises on which decisions are made. The process does so by requiring by law, the consideration of factual and value-based environmental concerns. Formal and informal incentives within the administrative system make EA difficult for decision-makers to ignore. EA also serves as a forum for public discussion about development proposals. Decision-making based on ecological rationality would therefore reject development activities which are determined to reduce the long-term life-support capability of ecological systems, regardless of the short-term benefits which are generated by such activities, including the creation of jobs and revenues.

This chapter has described what environmental assessment should, and can, achieve in theory. In its practical application however, environmental assessment is neither anti political, neutral, or value-free. While it has been noted that analytic technique is essential for evaluating the reliability and credibility of EA, the purpose of EA can be defeated if regulators see the process as an inconvenient exercise to which they need only give limited recognition. Environmental assessment in Canada has often suffered from what Weale calls "implementation deficit"- a substantial gap between what legislation high-level executive decisions declare will be achieved and what is actually achieved in terms of attainment of environmental standards.[91] This point is significant, as previous experience in the Canadian North has demonstrated, concern for local aboriginal and environmental interests have for the most part, been incidental, and dependent more on the intentions of the proponents than on the proficiency of those conducting the

91 Albert Weale, The New Politics of Pollution (Manchester: Manchester University Press, 1992) qtd. in John S. Dryzek, The Politics of the Earth: Environmental Discourses (New York: Oxford University Press, 1997):79.

impact assessments.[92] Thus, as Meredith has suggested, the local utility of EA is primarily a question of context and only secondarily a question of technical skill.[93] The uncritical acceptance about whether a development proposal should proceed, or the reluctance of government to undertake EA with any sincerity, undermines its potential to guide and support sustainable decision-making.

As will be argued in the following pages, resource development in the North is undertaken on economies of scale, where the priorities of job creation, combined with massive direct and indirect revenues for government may 'freeze-out' a process which is concerned with longer-term environmental protection. As Paehlke has suggested, any project "that involves many, many billions of dollars, may by nature pose a potential threat to the democratic character of decision-making and to the ecological integrity of its site."[94] In its short administrative history, EA has often been used as symbolic window dressing for environmental protection.

To what extent has the principle of environmental assessment been adopted by the Canadian administration? This chapter has described the direction policy must take and the priority ecological rationality demands in social decision-making. The following chapter considers the extent to which environmental assessment has been successful at institutionalizing ecological rationality within the Canadian administration.

---

92 See for example, Fikret Berkes, "The Intrinsic Difficulty of Predicting Impacts: Lessons from the James Bay Hydro Project," Environmental Impact Assessment Review, 3 (1988): 201-220; H.J. Dirschl, The Lancaster Sound Region: 1980-2000 (Ottawa: Ministry of Indian and Northern Affairs, 1982).

93 Thomas C. Meredith, "Environmental Impact Assessment, Cultural Diversity, and Sustainable Rural Development," Environmental Impact Assessment Review, 12 (1992):125.

94 Robert Paehlke, "James Bay Project: Environmental Assessment in the Planning of Resource Development," in Resources and the Environment: Policy Perspectives for Canada, ed., O.P. Dwivedi (McClelland & Stewart, 1980): 133-149.

Chapter Three

The Bias of Policy: Environmental Assessment in the Canadian Administration

One basic weakness in a conservation system based wholly on economic motives is that most members of the land community have no economic value.

-Aldo Leopold[1]

The previous chapter demonstrated that environmental assessment (EA) establishes a principle of policy as well as, in its formal application, a technical process. The principle, or *purpose* of EA is to strengthen the role of foresight in government planning and decision-making, especially in regard to environmental concerns. By successfully institutionalizing ecological rationality through EA as a decision-rule for public policy, environmentally damaging and non-sustainable actions would be rejected, regardless of the economic potential. To what extent has this principle been established in the Canadian administration?

Canada has more than 25 years experience with environmental assessment (EA). In this time, EA has clearly affected decisions about resource development. Some proposals have been altered significantly, while others

[1] Aldo Leopold, "The Land Ethic," A Sand County Almanac, 1989 Commemorative ed. (New York: Oxford University Press, 1949): 210.

have been halted over concern for the environment.[2] As chapter one affirmed, the basic conditions for creating 'good' environmental assessment have been known for over 20 years: adequate time for review, thorough information gathering and analysis, inclusive and accessible procedures for public participation, strategies for monitoring impacts, and finally, enforcement of recommendations. Since unfettered economic growth is untenable from the perspective of ecological sustainability, decisions about resource development must reflect the ecological limits to economic growth.

Nevertheless, decision-makers have routinely approved projects determined to have significant environmental consequences.[3] Moreover, throughout its brief administrative life, both government and industry have consistently resisted full and comprehensive implementation of EA.[4] Prior to the landmark Rafferty-Alameda and Oldman lawsuits in the late 1980s, few federal agencies applied EA with any consistency to projects falling within their jurisdiction. Some departments such as Foreign Affairs and Industry,

---

[2] Perhaps the best known of these examples was the decision of the Berger Inquiry into the construction of a pipeline in the Mackenzie Valley. In 1977, after three years study, Justice Thomas Berger concluded that the environmental damages and social impacts resulting from the pipeline would be irreparable and the economic benefits limited. In 1979, the Lancaster Sound Panel recommended in 1979 a "no-go" for drilling in the Arctic Ocean as a result of a lack of information. A federal Environmental Assessment Review Panel in 1980 also recommended against Eldorado Nuclear Ltd.'s proposal to build a uranium concentrate refinery in Saskatchewan due to the uncertain social impacts it would bring.

[3] One of the most recent examples was the 1990 Northumberland Strait Crossing Project in Prince Edward Island. The proposal was initially determined to have unacceptable environmental impacts by the appointed EA panel, so a second panel was appointed and subsequently rendered a go-ahead recommendation. See Rodney Northey, The 1995 Annotated Canadian Environmental Assessment Act and EARP Guidelines Order (Toronto: Carswell): 493-576; and Andrew Nikiforuk, The Nasty Game: The Failure of Environmental Assessment in Canada, (Toronto: Walter and Duncan Foundation, 1997): 39-43.

[4] Rodney Northey and John Swaigen, " Environmental Assessment," in Environment on Trial, eds., David Estrin and John Swaigen (Toronto: Emond-Montgomery, 1993): 185-202.

ignored their responsibilities to carry out EA entirely.[5] As a consequence, the courts have played, and continue to play, a significant role in determining the environmental responsibilities of both the federal and provincial governments, and their obligations for undertaking EA.

In 1995, the Canadian Environmental Assessment Act (CEAA) was proclaimed, creating the country's first legislated environmental assessment process. Since its proclamation, a number of challenges have emerged. The most damaging has been the perceived lack of government commitment to the process as the result of a November 1996 decision by the Ministers of International Trade and Finance not to conduct an environmental assessment for the sale of two CANDU nuclear reactors to China, which required a $1.5 billion loan by the Government of Canada.[6] The Sierra Club of Canada has since challenged the federal government's decision not to conduct an EA by filing a motion for judicial review.

It is argued in this chapter that decision-making about major resource proposals or environmentally damaging activities in Canada remains 'disconnected' from the purpose and principle for which environmental assessment was designed. In practice, decisions about the way large-scale development activities may proceed, or whether they should proceed at all may be influenced less by the environmental assessment process than by the broader political and economic context in which development activities are undertaken. The degree to which the principle of EA may be undermined or subverted by competing political and economic motivations may, in large

---

5 Federal Environmental Assessment Review Office, "Initial Assessment Decisions Bulletin, Edition 5, June 1, 1988-December 31, 1989" ; Federal Environmental Assessment Review Office, "Bulletin of Initial Assessment Decisions and Panel Reviews, Edition 6, January 1- March 31, 1990," qtd. in Stephen Hazell, Canada v. The Environment: Federal Environmental Assessment, 1984-1998, in print.

6 Andrew Nikiforuk, The Nasty Game: The Failure of Environmental Assessment in Canada, p. 1.

part, be explained by the diffuse benefits and concentrated political costs environmental regulations present to regulators.

As previously suggested, the extent to which administrators perceive EA as an inconvenient exercise to which they need only give limited recognition, the purpose of EA is defeated, but not by technique. While the debate over how to improve the technical and procedural aspects of EA is critical, these improvements are of no consequence if regulators have no interest in, and are not bound to incorporating the results of EA in resource decision-making. It remains that the problem is one of values and perceptions. While the government of Canada claims to have 'embraced' the concept of sustainable development and promoted EA as a policy strategy to contribute to this end, the dominant values within the Canadian administration still accept private profit and economic growth as the major factors in project and policy approval.[7] Environmental assessment is controversial because it represents an alternative view to what Hazell has identified as the 'single vision' of government and industry who deal with human activities piecemeal, and in isolation from each other.[8] Environmental assessment represents a strategy which may give way to an ecosystems approach that is more holistic, and recognizes that decisions for one project or policy are cumulative, and will likely have an effect on others.

While current EA practice reflects an improvement over predecessor EA systems, CEAA remains a policy characterized by principles which favour

---

[7] P.S. Elder, "Environmental and Sustainability Assessment," Journal of Environmental Law and Practice, 2 (1992): 2.

[8] For a comprehensive examination of the creation and deficiencies of the Canadian Environmental Assessment Act (CEAA), see Stephen Hazell, Canada v. The Environment: Federal Environmental Assessment, 1984-1998, in print.

economic growth over environmental sustainability.[9] From this perspective, environmental concerns are weighted against, but do not take precedence over, political and economic considerations. In its most progressive form, environmental assessment speaks in terms of the 'integration' of environment and economic development in resource planning.[10] If true sustainability is to be realized at all, concern for the environment must take precedence over other competing values. More than just narrow definitions and procedures however, CEAA allows for considerable political discretion in the determination of what level of assessment projects will receive, the level of public participation an EA will allow, and for panel reviews, the scope and guidelines an EA study must follow.

The purpose of this chapter is to identify the bias of federal environmental assessment for its application in northern regions. While the political and jurisdictional boundaries in the Canadian North are evolving, it remains that federal EA systems will continue to play a major role in regions where comprehensive land claims do not provide for the creation of new EA regimes, and where the federal government has jurisdictional responsibilities. Moreover, federal EA systems serve as a benchmark for the equivalency standards which new EA regimes must meet. This analysis challenges claims that federal EA policy in its present form and political context is likely to contribute to sustainable approaches to resource use.

---

[9]Steven Penney, "Assessing CEAA: Environmental Assessment Theory and the Canadian Environmental Assessment Act," Journal of Environmental Law and Practice, 3 (1994) : 243-269. William E. Rees also uses the concept of an "eco-paradigm" to describe the economic viability of an environmentally-responsible shift in practice. See, William E. Rees, "Sustainable Development: Economic Myths And Ecological Realities," in Trumpeter, 5.4 (1988):133-138.

[10] Canadian Council of Resource & Environment Ministers (CCREM), Report of the National Task Force on Environment and Economy, (Ottawa: CCREM): 2.

As a point of departure, the chapter describes the diffuse political benefits and concentrated costs associated with environmental regulation and the ambiguous jurisdiction of environmental matters under the Canadian Constitution. This dynamic is important for understanding why, in the case of large-scale development in the provincial Norths, environmental jurisdiction will likely be fiercely defended by the provinces, while at the same time, ceded by the federal government. The chapter describes early forms of EA and its evolution within the Canadian administration to its present form. Finally, by critically examining some basic principles of CEAA, this chapter establishes that the process favours development activities over actions which contribute to environmental sustainability. A 'sustainability model' EA can be differentiated from one which favours development because it is based in ecological rationality. From this perspective, environmental concerns drive decision-making. Such a differentiation is necessary for the subsequent application of EA in Canada's Northern regions because it exposes a policy bias for resource development and helps to identify the underlying value assumptions which are often at odds with those held by aboriginal populations living in hinterland regions.

The Bias of Environmental Assessment

As previously discussed, environmental assessment can be an invaluable process for providing decision-makers with information in order to make environmentally-minded decisions. The process can also benefit private industry by bringing to light alternative and more efficient ways of carrying out proposals, by helping to reduce costs and delays, and by minimizing any future economic and environmental liabilities. It follows that several authors have questioned why both sectors have resisted

consistent and comprehensive use of environmental assessment. As Northey and Swaigen have noted:

> Considering the close relationship of environmental assessment to sustainable development, a concept embraced by both governments and industries throughout Canada, it is unclear why both of these sectors continue to oppose full and consistent implementation of EA laws.[11]

As a way to conceptualise how public policies are shaped and influenced, the concept of diffuse benefits and concentrated costs, especially in the area of environmental regulation and law is useful. As Mancur Olson has argued, organizations established to pursue collective goods and information about public goods are themselves public goods.[12] Individuals who are diffusely affected by a public policy, whether winners or losers, are unlikely to organize to pursue their shared political goals, or even to inform themselves about the nature of the costs and benefits they bear. In contrast, individuals with a great deal at stake are more likely to overcome the obstacles to collective action so that they may influence policy directions. As Harrison suggests, democratic governments, motivated to claim credit and avoid blame from voters, will pursue policies with concentrated benefits and resist policies with concentrated costs.[13]

Environmental regulation, and for the purpose of this analysis, environmental assessment, presents a classic case of diffuse benefits and concentrated costs. In general, the public benefits from the improvements of environmental quality, while the costs are borne by a smaller number of regulated firms or individuals. An Olsonian view would suggest that

---

11 Rodney Northey and John Swaigen, " Environmental Assessment," in Environment on Trial, p. 187.

12 Mancur Olson, The Logic of Collective Action (Cambridge: Harvard University Press,1965) cited in Kathryn Harrison, Passing the Buck: Federalism and Canadian Environmental Policy (Vancouver: UBC Press, 1996): 12.

13 Ibid.

opponents of environmental protection are likely to be better organized and better informed than the beneficiaries. Moreover, those most affected by environmental regulation tend to hold 'privileged' positions in society. That is to say, regulated industries can offer politicians more than just votes or even campaign contributions; they create jobs, and therefore offer valuable direct and indirect benefits such as royalties from resource development and revenues from taxation. As a result, governments may be more responsive to the concentrated interests of polluters or developers. Thus, as Harrison suggests, "The logic of collective action is heavily weighted against strong environmental policy."[14]

To explain why environmental regulations have been developed despite the concerted resistance to them, Harrison suggests that a combination of "effective political entrepreneurship and unusual events can capture the media's attention and can cause even those diffusely affected to sit up and take note, which prompts electorally-minded politicians to do the same."[15] While they may be poorly informed, the beneficiaries of environmental protection may nonetheless outnumber the victims. Therefore, even small changes in levels of public awareness can tip the balance of political costs and benefits.[16]

These insights have important and direct implications for the practice of EA within the political context of the federal system. The crux of Harrison's argument is that this dynamic occurs not only between regulators and the private sector, but on an intergovernmental basis as well. While constitutional jurisdiction entitles government to make and implement

---

[14] Ibid, p. 14.
[15] Ibid, p. 16.
[16] Ibid.

policy, it does not require a government to take any particular course of action, or for that matter, any action at all. Just as some policies are more politically appealing than others, some fields of jurisdiction are worth fighting for, while others are willingly vacated. As Harrison offers, governments will value jurisdiction that allows them to pursue politically attractive policies, and to disregard or even concede jurisdiction associated with electoral blame.[17] Thus, the distribution of costs and benefits can help to explain the inclination of governments to "exercise, enlarge, defend or surrender" their constitutional resources.[18]

Just as the constitution charges the provincial governments with the authority to protect the environment, it also provides authority to exploit natural resources, and to promote strategies for economic growth or diversification. Historically, provincial governments have relied heavily on Crown resources to pursue economic development and provide an important source of revenue. The provinces, therefore, are likely to remain protective of environmental jurisdiction, even during periods of public inattentiveness, since their authority to protect the environment is directly related to their ownership and control of natural resources. The intent of the provinces would likely be to defend their authority to direct and profit from the exploitation of natural resources rather than conserve and protect them. In northern contexts, provincial jurisdiction over natural resources is jealously guarded. As O'Reilly has observed, when native people assert rights over a territory and contest provincial jurisdiction and the rights of the province to develop natural resources, there is a clash of "gigantic proportions."[19] O'

[17] Ibid, pp. 18-20.

[18] Ibid, p. 18.

[19] James A. O'Reilley, "The Courts and Community Values: Litigation Involving Native Peoples and Resource Development, Alternatives, 15.2 (1988): 40.

Reilly notes that for the provinces, what is at issue is jurisdiction, powers, money and even basic sovereignty; for native people, it is a question of conserving ancestral lands, the natural environment, preserving a way of life, and the recognition of fundamental rights and being dealt with in an equitable manner.[20]

Conversely, federal authority over the environment is indirect and less closely tied to the exploitation of natural resources. Thus, the federal government would be expected to take a narrow view of its own jurisdiction and to 'concede' the environmental field to the provinces. Trends in public interest in environmental issues, however, can be expected to prompt shifts in the roles of the federal and provincial governments. While federal involvement is more likely to emerge during periods of heightened salience when voters are paying attention, the balance of federal and provincial roles is likely to shift back toward the provinces during periods of public apathy.

Since there is no explicit provision in the constitution that relates directly to environmental matters, the responsibilities of the federal government and the provinces are overlapping and ambiguous.[21] This situation provides an opportunity for either level of government to avoid responsibility for environmental protection by claiming inadequate authority and to 'pass the buck' to the other level. Yet, for the reasons discussed above, the federal government is more likely than the provinces to take a narrow view of its environmental jurisdiction and create opportunities for

---

[20] Ibid.

[21] See for example, David VanderZwaag and Linda Duncan, "Canada and Environmental Protection: Confident Political Faces, Uncertain Legal Hands," in Canadian Environmental Policy: Ecosystems, Politics, and Process, ed. Robert Boardman (Toronto: Oxford University Press, 1992): 3-23; Grace Skogstad and Paul Kopas, "Environmental Policy in a Federal System: Ottawa and the Provinces," in Canadian Environmental Policy: Ecosystems, Politics, and Process, ed. Robert Boardman (Toronto: Oxford University Press, 1992): 43-59.

interjurisdictional buck-passing. Rather than merely conceding the field by default, the federal government may actively surrender the lead role to the provinces in order to avoid electoral blame.[22]

Northern development activities, often involving high levels of international financing, or initiated by government to fulfil political obligations (in the case of military activities), also underline a trend where environmental buck-passing is not limited by domestic borders. The increasing transnationalization of resources generates benefits for end-users living outside the northern regions while local residents are affected by the environmental impacts of these activities. For regulators, the benefits of these activities, including investment, employment, and revenues, outweigh the diffuse benefits of environmental protection for hinterland regions which are not only geographically isolated from the industrialized southern centres, but culturally distinct as well. As Barker and Soyez have noted, many no longer expect their concerns to be addressed appropriately within their own nation-state, and so, throughout the last few years have appealed to the international public, media, and to international organizations in order to provoke a shift in public attentiveness.[23] Thus, the catch phrase of sustainable development- 'think globally, act locally'- has been reversed as populations seek outside support for their causes to 'think locally, act globally.' As chapter four demonstrates, international lobbying and campaigning can generate widespread support for local populations, and thus tip the balance of political costs in favour of environmental protection and equitable development strategies.

---

22 Daniel A. Farber, "Politics and Procedure in Environmental Law," Journal of Law, Economics, and Organization, 8 (1992): 59-81 cited in Kathryn Harrison, Passing The Buck, p. 19.

23 See Mary L. Barker and Dietrich Soyez, "Think Locally, Act Globally? The Transnationalization of Canadian Resource-Use Conflicts," in Environment 36.5 (1994): 12-36.

Environmental Assessment: The Beginnings

Prior to the adoption of formalized environmental assessment systems by government, project proposals were primarily evaluated in terms of economic and engineering feasibility studies. As such, early EA systems can be viewed as an outgrowth of economic decision-making theory and cost-benefit-analysis (CBA).[24] In a CBA, the economic benefits of proceeding with a proposal are compared to its costs of construction and operation. While the price mechanism allows for the quantification of the benefits of a project, social and environmental costs- absorbed by the public and difficult to quantify- are largely discounted.[25] This form of 'objective' analysis has in the past, been used to free regulatory boards from making value judgments about ecological damage or the rights of native people.[26] The only costs inhering from environmental degradation to the developer were those associated with compliance to regulatory standards. Therefore, a CBA contains a built-in bias in favour of the developer. While the proponent may profit from the sale of natural capital (which begins as a public resource), the social and environmental impacts are externalized and are borne by the general public. Public participation was also largely excluded from CBA analysis.

It soon became clear that this form of project assessment was no longer acceptable. The late 1960s and early 1970s was characterized in the United

---

[24]Steven Penney, "Assessing CEAA," p. 246.

[25] For a discussion on the use of the bias of the cost-benefit-analysis and the early days of the National Energy Board (NEB), see Robert Page, Northern Development: The Canadian Dilemma, (Toronto: McClelland and Stewart,1986): 46.

[26] Robert Page, Northern Development: The Canadian Dilemma, (Toronto: McClelland and Stewart, 1986):46.

States by a surge of public concern for environmental issues.[27] Explosive growth of population, technology, and economic development following World War II brought environmental consequences which, by early 1960's, began to arouse public apprehension.[28] Among the events which led to public concern about environmental problems was Rachel Carson's Silent Spring,[29] a book which served to mobilize action against the use of chemical pesticides. As Robert Cahn suggests, Carson's work served as "making ecology a household word, and... a major catalyst of the modern environmental movement..."[30]

By the 1960s in Canada, a growing awareness of chronic environmental problems, coupled with a series of dramatic and devastating environmental disasters led many to question the value of unchecked industrial progress.[31] Part of this new-found consciousness was the realization that some of the most severe environmental damage was being caused not only by individual pollutants, but the cumulative effects of polluting activities.[32] These events occurred at the end of a period of sustained economic growth, and faced a generation that had grown up amid relative affluence. The combined result

---

[27] Kathryn Harrison, Passing the Buck: Federalism and Canadian Environmental Policy, (Vancouver: UBC Press, 1996) :56. For a discussion on the relationship between public opinion on environmental issues and environmental policy agenda-setting, see Melody Hessing and Michael Howlett, Canadian Natural Resource and Environmental Policy: Political Economy and Public Policy (Vancouver: UBC Press,1997): 105-134.

[28] Lynton K. Caldwell, "Environmental Impact Analysis (EIA): Origins, Evolution and Future Directions," Policy Studies Review, 8 (1988-1989) : 76.

[29] Rachel Carson, Silent Spring, (Boston: Houghton Mifflin, 1962).

[30] Robert Cahn, "Books (Not Thneeds) Are What Everyone Needs," Media and the Environment, eds., Craig L. LaMay and Everette E. Dennis (Washington D.C.: Island Press, 1991): 225-244.

[31] See Doug MacDonald, The Politics of Pollution, (Toronto: McClelland &Stewart, 1991): 80-99 for an overview of the origins of the Canadian environmental movement.

[32] Robert B. Gibson, "Basic Principles of Environmental Assessment Process Design: Lessons from the Canadian Experience" The Environmental Professional, 15 (1993): 15; Steven Penney, "Assessing CEAA," p. 247.

was a dramatic surge at the end of the decade in the level of public awareness and concern about pollution.[33]

The U.S. National Environmental Policy Act (NEPA) of 1969 is generally recognized as the pioneer of formalized impact assessment.[34] On January 1, 1970 the National Environmental Policy Act (NEPA), was signed into law with little opposition and only perfunctory attention paid to it.[35] Because NEPA did not create provisions for public participation, however, litigation became the only means for environmental groups and private citizens to ensure the U.S. government would adhere to its own law.[36] It did not take long for environmental advocates to challenge various proposals using the legalistic nature of NEPA. By the mid-1970s, it became clear that the courts would be adding shape to the intent of the legislation. By June 1975, 654 NEPA cases had been filed in U.S. courts, resulting in 119 injunctions.[37] As Clark has observed:

> The pattern of viewing NEPA compliance as a defensive exercise rather than an aid to decision-making was established in many agencies. This situation has been and still is one of the most difficult barriers to making the EIA process more effective in achieving the fundamental purposes of NEPA.[38]

While the courts have played a large role in determining what NEPA legislation actually means, the courts' interpretation has been that while an

---

33 Harrison, Passing the Buck, p. 56.

34 Thomas Meredith, "Environmental Impact Assessment and Monitoring," in Resource Management & Development, ed. Bruce Mitchell (London, UK: Oxford University Press, 1991): 227.

35 Brian D. Clark, "Environmental Impact Assessment (EIA): Origins, Evolution, Scope and Objectives," Paper presented at the 11th International Seminar on Environmental Impact Assessment and Management, 8-21 July 1990, University of Aberdeen, Scotland, p. 2.

36 G. Bruce Doern and Thomas Conway, The Greening of Canada: Federal Institutions and Decisions, (Toronto: U of T Press, 1994): 193.

37 R.B. Smythe, "The Historical Roots of NEPA," in Environmental Policy and NEPA: Past, Present, and Future, eds, Ray Clark and Larry Canter Boca Raton, Fla.: St. Lucie Press, 1997): 18.

38 Ibid, p.19.

impact statement must be prepared before any project be allowed to proceed, NEPA does not require its use in final decision-making. In the case of the Trans-Alaska Pipeline proposal soon after the passage of NEPA, Congress exempted the project from NEPA requirements due to the pressures of the energy crisis and the 1973 Organization of Petroleum Exporting Countries embargo.[39]

Prior to the formation of Canada's Environmental Assessment Review Process (EARP) in 1973, Canada, like other industrialized countries had largely avoided taking the environment into account in project planning and implementation.[40] Since Canada had not yet accumulated a pool of experience with EA, the world's first EA process, NEPA, served as an example for the Canadian model.

While the development of EA in Canada was based largely on the experience of NEPA, the context in which it functions differs significantly from that of the United States. The power to conduct environmental assessments in inherently linked to the power to legislate over matters of an environmental nature.[41] In the Canadian constitutional context, responsibility for environmental matters is not unequivocally attributed to either of the two levels of government. Rather, jurisdiction over environmental matters is inferred from varying heads of power, and as a result, the exact limits of federal and provincial environmental jurisdiction continue to be a source of disagreement. No discussion of EA in Canada is complete without first considering Canada's constitutional framework. Table

---

39 John S. Dryzek, The Politics of the Earth: Environmental Discourses (New York: Oxford University Press, 1997): 68.

40 G. Bruce Doern and Thomas Conway, The Greening of Canada, p.192.

41 Monique Ross, "An Evaluation of Joint Environmental Impact Assessments," in Growing Demands on a Shrinking Heritage: Managing Resource-Use Conflicts, eds., Monique Ross and J. Owen Saunders, (Calgary: Canadian Institute of Resources Law, 1992): 322.

3.1 provides an overview of the historical trends in Canadian and international environmental assessment.

Constitutional Framework

While Canadian governments make public policy, the Constitution determines which actors are entitled to make policies and decisions within the Canadian system. The Constitution created a 'Westminster' model of parliamentary democracy, derived from that of Great Britain.[42] The most significant characteristics relating to how policies are created lies with the strength of the Executive, which includes the Prime Minister and the Cabinet. Unlike many countries, most notably the United States, where the powers of the executive are offset by powerful legislatures, the Westminster-style government in Canada merges the legislature and the executive into a single body which is Parliament. The result is that the executive has more latitude in ensuring that its wishes become law. From this perspective, Canada has a strong form of executive government in which major decisions are made by political leaders and administrative officials. The Canadian Westminster system differs from that of Britain in that the Constitution also provides for a federal system, allowing for two levels of government, federal and provincial rather than a centralized state. This division of powers is significant for policy because it determines which government is entitled to make policy decisions in a particular area. This is especially complex when it comes to environmental policy.

When the Fathers of Confederation crafted the political form that Canada would take in 1867, little consideration was given to defining

[42]For a detailed discussion on the institutional context of environmental decision-making in Canada, see, Melody Hessing and Michael Howlett, "Canadian Natural Resource and Environmental Policy, pp. 47-70.

Table 3.1

Canadian and International Trends in Environmental Assessment and Review

Approximate Date	Innovations in Technique and Procedure
1. Pre- 1970	Analytical techniques largely confined to economic and engineering feasibility; no real opportunity for public review.
2. c. 1970	Multiple objective benefit-cost analysis; emphasis on systematic accounting of gains and losses and their distribution; environmental and social consequences not formally incorporated.
3. c. 1970-1975	Environmental impact assessment (EIA), primarily focused on description and "prediction" of ecological/land use change; formal opportunities for public scrutiny and review established; emphasis on accountability and control of project design and mitigation.
4. c. 1975-1980	Multi-dimensional environmental assessment (EA) incorporating social impact assessment (SIA) of changes in community infrastructure, services, and lifestyle; public participation becomes integral part of project planning; increasing emphasis on project justification in review process; risk analysis of hazardous facilities and unproven technology in frontier areas.
5. c. 1980-1986	Attention given to establishing better linkages between impact assessment and policy-planning and implementation-management phases; research focus on effects monitoring, post-project audit and process evaluation; search begins for more disciplined scoping and focusing procedures and less protracted forms of consultation based on negotiation and mediation.
6. c. 1986-1990	Scientific and institutional frameworks for environmental assessment, planning and management begin to be rethought and restructured in response to report of the Brundtland Commission; cumulative impacts of industrial development is new imperative for policy reform and process adaptation.
7. 1990-present	EA is entrenched into law with the Canadian Environmental Assessment Act, 1995; emergence of regional EA regimes with the settlement of comprehensive land claim agreements in Northern Canada; establishment of public registry for federal EA documentation.

Source: Adapted from Barry Sadler, in "A Key to Tomorrow: On the Relationship of Environmental Assessment and Sustainable Development," in Sustainable Development and Environmental Assessment: Perspectives on Planning for a Common Future, eds., Peter Jacobs and Barry Sadler (Ottawa: CEARC,1990):18.

responsibilities for environmental issues. The British North America Act did not apportion clear jurisdiction for the protection of the environment, which is not surprising, since at the time environmental issues were not of paramount concern.[43] A century after Confederation, environmental problems have exploded in a fashion that was both incomprehensible and unforeseeable at the time. The result, as VanderZwaag and Duncan note, is that the relationship between the environment and policy remains elusive.

> The Canadian Constitution makes no direct reference to the environment. Furthermore, the Constitution provides no enshrined guarantee to a clean, healthy environment. No clarification is provided on which level of government bears environmental responsibility. Resolution of the matter is made complex by the distribution of powers between federal and provincial governments in a myriad of areas or fields of power which potentially touch on the matter of environmental protection and sustainable development.[44]

Clear authority over jurisdiction would be easier if it were based strictly on ownership, but legislative rights and proprietary rights can differ substantially.[45] In many areas, federal and provincial jurisdiction also overlap which, in the case of the environment, can cause significant difficulty as the environment itself 'spills over' from one area of jurisdiction to another. The following paragraphs briefly describe the proprietary and legislative areas of responsibility for the federal and provincial governments.

Proprietary Rights

The terms of Confederation gave the federal government the right to control resources on its lands which included Indian reserves, military

---

[43] While it has often been said that the Fathers of Confederation gave no consideration to questions of pollution of the environment in drafting the British North America Act of 1967, research has shown that the lumbering industry had caused environmental problems that were recognized by legislatures prior to Confederation. See, Judith B. Hanebury, The Federal Role in Environmental Assessment,"diss., University of Calgary, Faculty of Law, 1991, 77; Judith Hanebury, "The Environment in the Current Constitution," Alternatives, 18.4 (1992):14-17.

[44] David VanderZwaag and Linda Duncan, "Canada and Environmental Protection," p. 4.

[45] Judith B. Hanebury, "The Federal Role in Environmental Assessment," p. 78.

installations, and transferred to the federal government certain public works and property in each province including canals, harbours, lighthouses and piers, river and lake improvements, railways, and land set aside for public purposes.[46] The federal Crown has rights with respect to Canada's northern territories over which it has both legislative and proprietary powers, although many governmental functions have been delegated to the territorial governments.[47] Additionally, the federal government has proprietary rights over national parks and lands registered in the name of the federal crown.[48] Exclusive federal powers in the area of trade and commerce and in the area of taxation have limited provincial constitutional supremacy in many resource matters.

Provincial proprietary rights include lands within the provincial boundaries, including natural resources. Pursuant to a 1982 amendment, the provinces are assigned exclusive jurisdiction over the development, conservation and management of non-renewable resources in the province including forest and hydroelectric facilities.[49]

Legislative Rights

Section 91 of the Constitution Act, 1867 establishes various federal levers of power relating to aspects of environmental protection. Under this section, the federal government has power over sea-coast and inland fisheries. The Navigable Waters Protection Act (NWPA) allows for controls over navigation and shipping. The Arctic Waters Pollution Prevention Act regulates activities affecting federal lands and waters in northern regions. The

---

46 Melody Hessing and Michael Howlett, Canadian Natural Resource and Environmental Policy, p. 54.

47 Hanebury, The Federal Role in Environmental Assessment, p. 82.

48 Melody Hessing and Michael Howlett, Canadian Natural Resource and Environmental Policy, p. 54.

49 Ibid.

federal government also maintains some (albeit controversial) authority over environmental regulation under 'Peace, Order and Good Government' (POGG). Courts have relied on the national concern doctrine in granting the federal government authority over matters excluded from the listed heads of power, but considered by the courts to be "beyond local or provincial concerns or interests."[50]

In summary, the proprietary and legislative rights of a province do not insulate it from the potential of federal involvement through EA 'triggers'. The legislative rights of the federal government can trigger a federal EA even if it a development takes place within a province's borders. While these provisions offer the federal government a substantial amount of leverage in environmental protection, Charter limitations, legal uncertainty, "interjurisdictional immunity", and extensive provincial proprietary powers have served as both real and perceived barriers to limit federal involvement in the field of environmental protection, especially with regard to environmental assessment.[51]

Although the scope of this discussion does not allow for a detailed overview, it is important to note that all provinces have invariably developed some form of environmental assessment. The emergence of EA within the constitutional framework is now discussed.

The Emergence of a Canadian Environmental Assessment Process

The gradual development of an environmental assessment process in Canada began with the report of an Environment Canada Task Force in August of 1972.[52] The potential scope and legal requirements of NEPA were a

50 Kathryn Harrison, Passing the Buck, p. 43.

51 For further explanation, see Harrison, Passing the Buck, pp. 52-53.

52 Environment Canada, Task Force on Environmental Impact Policy and Procedure, (Ottawa: Environment Canada, 1972).

concern for Canadian policy-makers. While American assessments were to consider "environmentally significant" effects of specific development projects, they could also include legislative proposals and major programs. Moreover, assessments were not only required by law to consider 'environmental effects' but also the 'aesthetic, historic, cultural, economic, social and health effects' associated with development activities.[53] The goal with the Canadian response was to be more cautious in order to avoid the problems encountered south of the border. The final report of the interdepartmental Task Force recommended the establishment of a comprehensive, statutory environmental assessment process.[54] Ignoring the recommendations, the government instead established the non-binding Environmental Assessment and Review Process (EARP), through a series of Cabinet Directives.[55]

In announcing the initiative, Environment Minister Jack Davis stated, "We will not follow the highly legalistic approach developed in the U.S. and be found wanting. Canada is striking out on its own. We are more flexible."[56] In particular, Department of the Environment (DOE) officials wanted to avoid the unpredictability and costs associated with litigation.[57] The federal government was determined that the coverage and scope of the process should not be such that major development initiatives could be "unnecessarily detained through bureaucratic red tape."[58]

---

53 G. Bruce Doern and Thomas Conway, p. 193; Lynton K. Caldwell, Science and the National Environmental Policy Act: Redirecting Policy Through Procedural Reform, (Alabama: University of Alabama Press,1982):153-154.

54 Environment Canada, Task Force on Environmental Impact Policy and Procedure.

55 Steven Penney, "Assessing CEAA," p. 257.

56 M.K. Vincent, "The Citizen as an Obstacle to Efficiency," Northern Perspectives, 3.3 (1975) :1.

57 G. Bruce Doern and Thomas Conway, The Greening of Canada, p. 193.

58 Ibid, p.195.

Under the EARP, federal government departments and agencies developed their own screening procedures and were often charged with applying them to their own proposals. Projects determined to have 'significant' environmental impacts were to be referred to the Minister of the Environment (MOE) for review. The membership of panels created for these assessments comprised only of bureaucrats from the DOE and the initiating department. This 'self-assessment' approach to project screening left many decisions about the application of the process with responsible authorities (or RAs) who were often the proponents of the projects being assessed.

From early on, EARP under administration of the Lands Directorate, lacked necessary funding and presence in different regions. There were also widespread criticisms of the process by environmental groups who claimed the EARP process was too arbitrary and did not constitute a legitimate process. The basis for concern about the susceptibility of EA to political interference was justified as an early example illustrates. When the first major report by the Lands Directorate regarding a bridge over Vancouver's Burrard Inlet recommended the project not proceed, Minister Davis buried the report because the project was simply 'too sensitive' in his own riding in British Columbia.[59] In 1974, the Federal Environmental Assessment and Review Office (FEARO) was formed to provide administrative support for EARP, but was given no executive power over its implementation.

A subsequent round of reforms to the EARP process came pursuant to the Government Organization Act of 1979, and a 1984 order-in-council which allowed the process to be formally established as the Environmental

---

59 Ibid, p.195.

Assessment and Review Process Guidelines Order (EARPGO).[60] After ten years, EARP had remained largely unwritten and vague. The intent of the Guidelines Order was to create a compromise between those in the bureaucracy who opposed a statutory basis for environmental assessment, and those who were seeking a formal administrative code of practice.[61]

The 1984 EARP guidelines order (EARPGO) was a result of a frantic push to get the order through during the last meeting of the Trudeau Cabinet before the Turner Liberal Cabinet took office. A series of hastily-prepared drafts were submitted and subsequently returned for clarification. The result was an order with a character and sound which went beyond even the original proposal.[62] Despite the oxymoron of 'Guidelines' juxtaposed with 'Order,' the EARP Guidelines Order was assumed to be, like its predecessor, non-binding.[63]

Regardless of having a codified EARP process for all governmental departments, prior to the 1990s, many federal departments did little to understand how development projects under their control affected the environment.[64] As Stephen Hazell notes, the government's rules for studying environmental impacts of dams, uranium mines and the like were widely flouted.[65] Paul Brown characterized the tentativeness of government toward environmental concerns. He has suggested that "No government dared politically to eliminate 'environment' from the federal departmental

---

60 See Environmental Assessment and Review Process Guidelines Order, SOR/84-467, 22 June, 1984[hereinafter Guidelines Order].

61 G. Bruce Doern and Thomas Conway, The Greening of Canada, p.195.

62 Ibid.

63 Steven Penney, "Assessing CEAA," p. 257.

64 Stephen Hazell, Canada v. The Environment: Federal Environmental Assessment 1984-1998, in print.

65 Ibid.

nomenclature, but neither did any feel obliged to give it other than perfunctory attention."[66] Major projects such as the Darlington Nuclear generating facility on Lake Ontario, and the La Grande hydroelectric dams in Quebec were built without public review.[67]

Throughout its administrative life, the EARP process was heavily criticized not only for this lack of enabling legislation, but also for its weak institutional arrangements, lack of commitment to public participation and participant funding, narrow definition of environment, limited application, and most importantly, "its propensity for exemption owing to its adherence to the concept of proponent self-screening."[68] EARP did not require departments nor public review panels to examine the need for a given project, nor alternatives to such undertakings. The failure to include the power to make a 'no go' recommendation in the terms of reference of EARP panels for the 1985 Hibernia offshore oil project[69] and the 1986-1995 Labrador-Quebec low-level military flying panel[70] led to accusations that EARP was merely a public relations exercise with little impact on decision-making.[71]

Another serious flaw with EARP was that it was not linked to decision-making. When an initial environmental evaluation (IEE) was completed, or

---

66 M. Paul Brown, "Organizational Design as Policy Instrument: Environment Canada in the Canadian Bureaucracy," in Canadian Environmental Policy: Ecosystems, Politics, and Process, ed., Robert Boardman (Toronto: Oxford University Press, 1992):27.

67 Stephen Hazell, Canada v. The Environment, in print.

68 L.G. Smith, "Canada's Changing Impact Assessment Provisions," Environmental Impact Assessment Review, 11 (1991): 8 cited in Steven Penney, "Assessing CEAA," p. 257.

69 Federal Environmental Assessment Review Office, Report of the Hibernia Environmental Assessment Panel, Hibernia Development Project, December 1985 (Ottawa: Minister of Supply and Services, 1986): Appendix B, Terms of Reference.

70 Federal Environmental Assessment Review Office, Report of the Environmental Assessment Panel: Military Flying Activities in Labrador and Quebec, February 1995 (Ottawa :Minister of Supply and Services Canada, 1995): Appendix C, Terms of Reference and Clarification of the Terms of Reference.

71 Stephen Hazell, Canada vs. The Environment, in print.

a public panel review reported, recommendations or other information were not required to be incorporated into the terms and conditions of any federal licence that might be issued. There was no obligation for the decision-maker to even refer to the environmental assessment in arriving at the decision, or in any follow-up activities. Further, there was no obligation on the part of the federal departments to carry out recommended mitigation measures, or to evaluate the success of any measures that may have been carried out. Environmental assessments were thus isolated events from the management of the projects. Consequently, EARP was segregated from government decision-making with the exception of a few controversial projects. A 1985 study by Ron Wallace, an independent consultant, concluded that while panel reviews did result in significant adjustments in the projects assessed, the discretionary nature of government decisions whether or not to accept panel recommendations meant that public confidence in EARP waxed and waned from project to project.[72]

A comprehensive reassessment of EARPGO was undertaken by the government in 1987 and 1988. This review considered a study of the public hearing process,[73] the recommendation of the Royal Commission on the Economic Union and Development Prospects for Canada (the Macdonald Commission) that the EARPGO be given a statutory basis,[74] and the realization by government officials that the Guidelines Order might have

---

[72] Ron Wallace, "Assessing the Assessors: An Examination of the Impact of the Federal Environmental Assessment Review Process on Federal Decision Making," Arctic, 39. 3 (1986): 240-246.

[73] See A. Walsh, Chairman, Public Review: Neither Judicial, nor Political, but an Essential Forum for the Future of the Environment, (Ottawa: Minister of Supply and Services Canada, 1987). The Walsh Report recommended the adoption of a statutory basis for the review process.

[74] See the Royal Commission on the Economic Union and Development Prospects for Canada Report, Vol. 2 (Ottawa: Minister of Supply and Services, 1985), cited in Doern and Conway, p. 207.

more legal weight than was first perceived. The work of the Brundtland Commission provided further impetus for stricter EA legislation. The final push came in April 1989 however, when a decision by Justice Muldoon of the Federal Court of Canada forever changed the way EA was perceived by governments in Canada. While an in-depth analysis is beyond the scope of this chapter, it is necessary to acknowledge both the Rafferty-Alameda and the Oldman River cases as pivotal to the practice of EA in Canada.

The Rafferty-Alameda and Oldman Decisions

The Souris River and its tributary, Moose Creek, were first impounded in 1989, with construction of the Rafferty dam being completed in 1993, and the Alameda dam in 1995. The Souris River, when there is water at all, flows in a horseshoe-shaped path south from Saskatchewan into North Dakota and then northward to Manitoba. Because the river is entirely dependent on precipitation, the Souris has highly variable flows from season to season, which sometimes barely qualifies it as a creek.[75] Other times, the Souris could flood communities including Minot, North Dakota, built too close to its banks. In order to protect communities affected by flooding along the river, the American government agreed to pay US $41.1 million to Canada for the flood protection the Rafferty-Alameda dams would provide.[76]

Following public hearings as part of a provincial environmental review, the provincial Minister of the Environment granted approval for the project in February 1988. Despite requests that he conduct an assessment and review under the EARP Guidelines Order when considering the licence

---

75 Steven Hazell, Canada vs. The Environment.
76 Ibid.

application, the federal Environment Minister refused,[77] and in June 1988, issued a licence allowing the project to proceed.[78] The Canadian Wildlife Federation (CWF) launched a case opposing the Rafferty-Alameda dams on the grounds that the Minister of the Environment had not complied with the federal government's own EARP Guidelines Order. The federal government argued that since the project was a provincially-funded initiative, located on provincial lands, and subject to a formal provincial review, a federal review would be an "unwarranted duplication."[79] The Court held that because a federal licence was required for the project, and the Souris being an international waterway, the federal government was required by the terms of its own EARP Guidelines Order to perform an environmental review.[80] While the federal government had previously assumed it could exercise discretion in interpreting its own regulation, the appearance of the word 'shall' throughout Guidelines Order was the basis for the court's more forceful interpretation. In effect, the Guidelines Order took the form of an 'order' rather than a 'guideline'. As the Minister had not complied EARP, the licence was quashed until the federal government fulfilled its environmental

---

77 Judith Hanebury, "The Federal Role in Environmental Assessment," p.164; In Against the Flow, George N. Hood describes a clear gulf between the ideologies and objectives of the elected federal officials of the Conservative Party and the federal bureaucracy, namely the FEARO which encouraged a federal assessment of the project. He documents a lack of coordination between them which results in the Rafferty-Alameda being acknowledged within the federal government as a "major federal screw-up" and the" most embarrassing situation that an environment minister has ever been in." This situation was acknowledged by a federal judge who described the actions of the federal government as "silly and inattentive". George N. Hood, Against the Flow: Rafferty-Alameda and the Politics of the Environment (Saskatoon, Sask.:Fifth House Publishers, 1994).

78Stephen Hazell recounts that the same summer, Elizabeth May resigned as special policy advisor to then Environment Minister Tom McMillan. She revealed later that she had resigned because McMillan had issued the Rafferty-Alameda licence against her advice. For a detailed account of the Rafferty-Alameda case study see Stephen Hazell, Canada v. The Environment. Hood has quite a different interpretation of these events. See Hood, Against the Flow, pp.170-174.

79 David VanderZwaag and Linda Duncan, "Canada and Environmental Protection," p.11.

80 Kathryn Harrison, Passing the Buck, p. 48.

obligations.[81]

In a similar case, the Supreme Court of Canada rendered a decision which reinforced the legislative responsibilities of the federal government for the construction of a dam on the Oldman River, one of the last free-flowing rivers in Alberta. As in Saskatchewan, the federal government issued approvals without referring the project to public review.[82] The Friends of the Oldman River Society (FOR), opposed the construction of the dam and the Federal Court of Appeal subsequently quashed a licence for its construction.[83] Despite the ongoing litigation, the Alberta government proceeded with dam's construction, and by the end of March 1989, it had been 40% completed.[84] In 1992, the Supreme Court narrowed the scope of the EARP Guidelines somewhat, but upheld their binding legal character.[85]

In both these cases, the courts found the EARP Guidelines Order was not just a set of non-binding administrative guidelines, but an instrument that had the force of law, creating judicially enforceable obligations on the part of the federal government.[86] The uncertainty created by these decisions, coupled with the fear of more litigation, not to mention costly federal-provincial conflicts, supported the idea of new EA legislation. Resistance to legislation within the federal government was substantially diminished by the court cases as the rulings decreased the extent of administrative discretion

---

81 David VanderZwaag and Linda Duncan, "Canada and Environmental Protection," p.11.

82 The Minister of Transport had issued approval pursuant to the Navigable Waters Protection Act, and the Minister of Fisheries and Oceans, responsible for protecting fish habitats under Section 39(1) of the Fisheries Act, did not invoke his authorization for study powers. Cited in David VanderZwaag and Linda Duncan, "Canada and Environmental Protection," p.12.

83 Ibid.

84 Ibid.

85 Melody Hessing and Michael Howlett, p.163.

86 Ted Schrecker, "The Canadian Environmental Assessment Act: Tremulous Step Forward, or Retreat into Smoke and Mirrors," Canadian Environmental Law Reports, 5 (1991): 192-246.

involved in EARP's application.[87] Growing public concern over the environment also helped bolster DOE's renewed promotion of legislation for EARP.[88]

The Canadian Environmental Assessment Act

In January, 1995, the Canadian Environmental Assessment Act became law and with it, the federal government, after more than 25 years, committed itself to a legislated EA process. Upon its introduction in the House of Commons in 1990 as Bill C-78, the Minister of Environment, Robert de Cotret stated that the Bill:

> [W]ould go much further than the original [EARP] Guidelines. In fact, this legislation [would] result in an environmental assessment process which [was] more powerful in its impact on decision-making than any other environmental assessment legislation in the world.[89]

Nevertheless, initial opposition to the proposed legislation was fierce. Many, including environmental groups, both opposition parties, and concerned members of the public maintained that the government was trying to enact a piece of legislation which fell below the standards established by the courts through EARP.[90] Opposition to the law's regulations even came from Ottawa's economic departments and their industrial clientele, in part because such interests believed that many of the discretionary features were being

---

87 G. Bruce Doern and Thomas Conway, The Greening of Canada, p.209.

88 Ibid.

89 Robert de Cotret, Statement of the Honourable Robert de Cotret, Minister of the Environment, introducing the Canadian Environmental Assessment Act, 18 June, 1990. Cited in Alison Delicaet, "The New Canadian Environmental Assessment Act: A Comparison With the Environmental Assessment Review Process," Environmental Impact Assessment Review, 15 (1995): 500.

90 Ted Schrecker, "Of Invisible Beasts and the Public Interest," in Canadian Environmental Policy: Ecosystems, Politics, and Process, ed. Robert Boardman (Toronto: Oxford University Press, 1992): 83-105 Stephen Hazell, Canada vs. The Environment, in print.

reintroduced through the regulations.[91] As introduced, Bill C-78 would have drastically limited the scope of federal EA requirements, and the extent to which discretionary decisions about their application would be judicially reviewable.[92] Further, as Gibson notes, the implementation of the process would have been virtually "immune from independent supervision and enforcement through the courts."[93]

In response to these criticisms, Environment Minister Jean Charest proposed a set of amendments, amongst them the inclusion of the phrase 'sustainable development' in the preamble to the Act. More changes were made by the legislative committee established to consider the Bill, which further strengthened the legislation. In particular, many discretionary openings that would have allowed responsible authorities (RAs) to avoid their assessment obligations and to disregard assessment findings, were eliminated.[94]

Few had expected any controversy leading to the third reading of CEAA, because it had been under active discussion for almost two years. This assumption, however, proved to be wrong. Opposition to the EA legislation this time came came from the provinces, especially from Alberta and Quebec which viewed CEAA as an infringement on provincial jurisdiction.[95] Pierre Paradis, the Quebec Minister of Environment attacked the federal government for proceeding with the legislation, claiming their strategy was one of "totalitarianism".[96] Paradis' primary allegation was that the federal

---

91 G. Bruce Doern and Thomas Conway, The Greening of Canada, p. 209.

92 Ted Schrecker, "The Canadian Environmental Assessment Act," pp.192-246.

93 Robert B. Gibson, "The New Canadian Environmental Assessment Act: Possible Responses to its Main Deficiencies," Journal of Environmental Law & Practice, 2 (1992): 225.

94 Ibid.

95 "Judicial warfare promised," Globe and Mail, 24 June 1992, A4.

96 Rhéal Seguin, "Ottawa accused of totalitarianism," The Globe and Mail, 18 March, 1992, A6.

government would use its spending power to make grants or loans to businesses regulated by the provincial government solely to give the federal government authority to carry out its own EAs.[97] Even Robert Bourassa, the Premier of Quebec, was enlisted to derail Bill C-13, calling on federal Liberal MPs to kill the legislation.[98] In the end, the New Democrats and Bloc Québécois voted against the Bill, which passed on its Third Reading in March 1992 by a margin of 172 in favour to 27 opposed.[99]

Many commentators agree that CEAA is an improvement over the EARP Guidelines Order.[100] The integration of environmental considerations into decision-making is required in the Act, and the definition of 'environment' is clearly intended to include ecosystems. The requirement that any cumulative environmental effects likely to result from a project in combination with other projects or activities further suggests an attempt at a more holistic approach to EA. Additionally, the inclusion of the Brundtland Commission's definition of sustainable development in CEAA's preamble also suggests a shift towards concern for sustainability and intergenerational equity.[101]

Nevertheless, these improvements to EA do not guarantee that environmental values in decision-making will be internalized, or that practices will reflect a process which may contribute to environmental

---

97 Stephen Hazell, Canada vs. The Environment.

98 Ibid.

99 Ibid.

100 As do Robert Gibson, "The New Canadian Environmental Assessment Act: Possible Responses to Its Main Deficiencies," Journal of Environmental Law and Practice, 2 (1992): 223-255; Steve Penney, "Assessing CEAA," p. 243-269; Alison Delicaet, "The New Canadian Environmental Assessment Act: A Comparison With the Environmental Assessment Review Process," Environmental Assessment Review, 15 (1995): 497-505; Ted Schrecker, "The Canadian Environmental Assessment Act: Tremulous Steps Forward, or Retreat into Smoke and Mirrors," pp. 192-246.

101 Stephen Hazell, Canada vs. The Environment.

sustainability. CEAA still allows for considerable political discretion and a potentially narrow scope. As critics have suggested, the purpose of drafting CEAA was not to improve environmental protection through tougher legislation, but so that the federal government could restore much of the discretion it had lost through judicial review.[102] Rather than the use of non-discretionary language to direct government action as had been the case with EARP (the government 'shall'...), the new legislation relies upon language which leaves considerable room for discretionary application of the process, thereby removing the most significant grounds for judicial review.[103]

No attempt will be made in this chapter to review comprehensively the structure and operation of CEAA[104] or its manifold deficiencies; this has been done elsewhere.[105] Rather, the purpose of the remaining discussion is to underline the main characteristics of CEAA which can undermine the principle of policy and the extent to which ecological rationality can penetrate the Canadian administrative system through environmental assessment.

Steven Penney has argued that there are essentially two competing theories of EA, the 'development' paradigm and the 'sustainability' paradigm.[106] The development paradigm, which evolved from economic decision-making theory, compels proponents to identify environmental costs and to employ that information to help mitigate the damaging effects of development. In it most progressive form, this model seeks to integrate environmental and economic considerations in long-term planning. In this

---

[102] John Edward Glen, Decision-Making Regimes Covering EA in Canada (Hull: Canadian Environmental Assessment Research Council, 1992): 6.

[103] Ibid.

[104] For such a review, see Meinhard Doelle, "The Canadian Environmental Assessment Act: New Uncertainties, but a Step in the Right Direction," Journal of Environmental Law and Practice, 4 (1994):59-91.

[105] See Robert Gibson, "The New Canadian Environmental Assessment Act." pp. 223-255.

[106] Steven Penney, "Assessing CEAA," pp. 243-269.

model, the commitment to economic growth remains unquestioned, providing no guarantee that the process will ensure environmentally responsible decisions. In contrast, the sustainability paradigm places environment values at the centre of the decision-making process. This model assumes that the long-term sustainability of economic activity is dependent on the productive capacity of ecosystems. Thus, in a sustainability model, principles of ecological integrity drive decision-making and the levels of economic activity which will be allowed to proceed.[107] The sustainability model, therefore, employs ecological rationality in its decision-making about development activities as it is concerned with the maintenance and health of ecological systems.

Though CEAA incorporates some aspects of the sustainability model as described by Penney, it closely follows the development paradigm of EA. While the Act represents an improvement over EARP Guidelines Order which it replaces, from the perspective of ensuring that ecological rationality forms a basis for decision-making, it has many shortcomings. These general areas include a narrow and limited scope for what may be considered in an assessment or review, as well as a considerable amount of political discretion with regard to what projects will be assessed, the contents of these studies, public participation, and final decision-making.

Scope

Penney notes that, from the standpoint of the sustainability paradigm, perhaps CEAA's most "egregious" shortcoming is its excessively narrow scope.[108] 'Environment' is defined narrowly to include only biophysical components. The accompanying definition of 'environmental effects' is also

---

107 Steven Penney, "Assessing CEAA," p. 252.

108 Penney, "Assessing CEAA," p. 260.

narrowly defined to exclude the consideration of socioeconomic and cultural effects unless they result indirectly from biophysical disturbances.

Similarly, the definition of 'project' under CEAA limits assessments to physical works. Activities not related to physical works are covered only insofar as they are prescribed in the 'Inclusion List' of regulations. This definition represents a retreat not only from the EARPGO which applied to 'proposals' and could have included both physical and policy initiatives,[109] but also from Bill C-78, which did not limit assessments of physical activities to those prescribed by regulation.[110] As a result, CEAA makes no provision for the assessment of government policies, programs or budgetary decisions. The policy document states that while "public consultation is normally an important component of effective environmental assessment... the need to protect Cabinet confidentiality [makes it] very difficult for policy or program assessments."[111]

Discretionary Powers

An environmental assessment process committed to sustainability would require mandatory, automatic assessments for all proposals and activities.[112] Under CEAA, the concept of 'self-assessment' has been maintained, and many decisions relating to the process are left with a responsible authority, or the department with responsibilities triggering the Act. Political discretion exists as to when environmental assessment is required, the determination of the content of reviews, in permitting and facilitating public participation, and also in final decision-making.

---

109 EARP Guidelines Order, s.2. It should be noted that although the EARP potentially captured a myriad of proposals, both physical works and policy initiatives, its scope was never tested in court so its legal breadth as implied here remains uncertain.

110 Bill C-78, s.2.

111 Ibid, 5.

112 Steven Penney, "Assessing CEAA," p. 253.

When environmental assessment is required

Section 5 of CEAA requires that an EA be performed for projects where a federal authority is the proponent, provides funding, disposes of an interest in federal land, or issues an approval under legislation specified in regulations.[113] If a project is not exempted by the exclusion list, or described in the comprehensive study list, it is 'screened' for its potential environmental effects. In most cases, screening is undertaken by the RA (who may also be the proponent). Where it is determined that significant environmental effects are not likely, a project may proceed. Similarly, if adverse effects are likely and 'cannot be justified in the circumstances,' a project will not proceed. If there is uncertainty however, or where significant and non-mitigable adverse effects may be justified, or public concerns warrant, the case must be referred to the Minister of the Environment for mediation or a panel review. Because the crucial terms such as 'feasible', 'significant' 'justified in the circumstances,' 'uncertainty,' and 'public concerns warrant' are undefined, the RAs are given considerable room for interpretation.[114]

Moreover, the problem of RA bias in screening decisions is compounded by provisions that allow these authorities to favour a narrow scoping of the project and screening considerations, and to deny public participation. RAs alone determine the scope of the project,[115] and the scope of factors to be taken into consideration in screening.[116] Additionally, RAs may determine whether public participation in the screening of a project is appropriate in the circumstances.[117]

---

113 s. 5(1) (a)-(d).
114 Robert B. Gibson, "The Canadian Environmental Assessment Act," p. 235.
115 s. 15(1).
116 s. 16(3).
117 s. 18(3).

In determining which projects will undergo environmental assessment, the Cabinet is empowered to make exemptions and to vary procedures to meet time limitations. Unless a project is included in the comprehensive study list, the RA is responsible for deciding whether a project is to receive further review. Perhaps the most important area of political discretion within CEAA, however, lies in final decision-making.[118]

Discretion in determining the content of assessments and reviews

While CEAA identifies factors which must be considered for an EA including the consideration of cumulative effects, public comments, and measures for mitigation,[119] these are nevertheless subject to the discretion of the RA in the case of a screening, or the Minister of the Environment in the case of a panel review or mediation. For a panel review, the Minister of the Environment is responsible for setting the terms of reference. As Gibson notes, in past cases under the Guidelines Order, the setting of terms of reference has appeared to favour the views of RAs, which generated considerable controversy.[120] CEAA contains no provisions for public involvement in setting the terms of reference, and no provisions for review or appeal of these terms after they have been issued.

Discretion in Public Participation

Inherent to the early developmental paradigm of assessment is what Dryzek describes as "administrative rationalism" wherein decision-making is highly centralized and emphasizes scientific and technological expertise over broad consultation with the public.[121] The increase in public concern over

---

[118] See Robert B. Gibson, "The Canadian Environmental Assessment Act," 233-244.
[119] s. 16 (1) and (2).
[120] Robert B. Gibson, "The Canadian Environmental Assessment Act," p. 237.
[121] John S. Dryzek, The Politics of the Earth: Environmental Discourses, (New York: Oxford, 1997):63.

environmental issues however, prompted a change for environmental assessment to be part of a broad public decision-making process where citizen involvement was encouraged.[122] Public involvement in EA serves a number of purposes including a redistribution of political power,[123] and a way to reveal the implicit value choices which underlie decisions.[124] As several observers have noted, historically public involvement in environmental decision-making was conceived in terms of "public information, education, public relations or simply 'getting a project through'."[125] Within a developmental paradigm, public participation is not initiated until after a considerable part of the planning process has been completed and is limited to levels of "tokenism" where the public has little influence over the decision-making process.[126]

Public participation within a sustainability paradigm affords citizens a meaningful level of power. Given the importance of public participation in the assessment process, provisions must be made to ensure all interested groups are identified, and that they receive adequate notice and are

---

122 Ibid, p. 249.

123 Ibid, p. 255.

124 Public participation is a way to reveal implicit value choices of experts which may conflict with those of citizen participants.See Christina Chociolko, "The Experts Disagree: A Simple Matter of Facts Versus Values?" Alternatives, 21.3 (1995): 18-25. It should noted however, that the involvement of the general public may not result in consensus among participants. Rather, the opposite may occur.

125 See J. Gardner, "The Elephant and the Nine Blind Men: An Initial Review of Environmental Assessment and Related Processes in Support of Sustainable Development," in Sustainable Development and Environmental Assessment: Perspectives on Planning for a common Future. (Ottawa: Canadian Environmental Assessment Research Council, 1989). As Gardner points out, under the development paradigm of environmental assessment, "ecological values, while central to the approach, are not expected to *drive* decision-making, but to compete with non-ecological values."

126 For an interesting discussion on the evolution of citizen participation in Canadian resource conflicts, see Frank J. Tester, "Reflections on Tin Wis: Environmentalism and the Evolution of Citizen Participation in Canada," Alternatives, 19.1 (1992): 34-41.

guaranteed access to information at all stages of the assessment process.[127] Additionally, adequate intervener funding must be made available.

The permitting and facilitation of public participation is highly discretionary under CEAA. Public involvement in screening, the first level of assessment, is at the discretion of the RA and is anticipated only after a screening report has been completed. There is no provision for participant funding in deliberations at the screening stage. For the next level of assessment, a comprehensive study, the Canadian Environmental Assessment Agency is required to provide public notice "in any manner it considers appropriate to facilitate public access to the report".[128] For panel reviews and mediations, involvement of the public is left to the discretion of the Minister and the panels. A panel must "ensure that the information required for an assessment by a review panel is obtained and made available to the public".[129] A panel is not required to consult the public about what specific information is to be required. Presumably a panel may seek such consultation; whether it chooses to do so is left to the panel's discretion. Only in panel reviews and mediations are there provisions for participant funding.

Discretion in Final Decision-Making

Like its predecessor, CEAA allows the final decision about whether a project may proceed with the RA. While much of the discretionary language of EARP has been replaced, an RA may still decide to proceed with a project that is likely to cause significant impacts where these can be "justified in the circumstances," even if an independent panel recommends against such a

---

127 See A.P. Grima, "Participatory Rites: Integrating public involvement in environmental assessment," Environmental assessment: The Canadian Experience, eds., J. Whitney & V. Maclaren, (Toronto: Institute for Environmental Studies, University of Toronto, 1985): 33

128 CEAA, s. 22(1).

129 CEAA, s. 34(a).

decision.[130] Further, there is no requirement to explain what circumstances justify the approval of potentially damaging activities.

As suggested, many departments within the federal bureaucracy have a development mandate, and frequently view the industries they regulate sympathetically, and refer to them as 'clients'.[131] The inclination therefore, is for the approval of projects even when they may have adverse environmental impacts. Such decisions may be justified because they are in line with their economic growth imperatives. The implicit assumption underlying CEAA's decision-making process is that economic and political factors will in many cases be given higher priority than environmental considerations. Thus, as a result of the discretionary nature of CEAA, ecological rationality is subverted by competing values, in most cases either economic or political.

Follow-up

Environmental assessment requires the preparation of voluminous and detailed studies on environmental conditions in the region of a proposed activity. In a developmental paradigm, no provisions for a follow-up on predictions and provisions are necessary. This front-loading of an EA process fails to account unanticipated conditions and the effectiveness of mitigation measures. Monitoring must be required to evaluate progress made toward achieving provisions outlined in the EIS so protection plans may be altered or adjusted during their implementation should the need arise.

CEAA requires that after making a decision on a project, RAs shall design any follow-up program it considers 'appropriate' and arrange for

---

130 CEAA, s. 27(1).

131 G. Bruce Doern and Thomas Conway, The Greening of Canada, pp. 60-82.

implementation of that program.[132] The purpose of such a program would be to verify the accuracy of the assessment and determine the effectiveness of any mitigation measures. The adoption of a follow-up program is not mandatory however, and the legislation does not require adherence to such a program even where one is established.[133]

As Sadar has noted, while the conceptual frame of EA keeps expanding, the follow-up remains the weakest link in the EA process. Without a mechanism to check the validity of predictions, especially after investing time and resources and public consultation, the prediction of impacts and suggested measures for their mitigation, are a "wasted effort."[134]

In Canada, only a few major projects have had provisions to follow-up and monitor major development projects. In the case of the Rafferty-Alameda project, Sask Power, the provincial utility, decided to require post-project monitoring possibly as a response to the notoriety of the project. In the case of Low-Level Military Flying, a monitoring program was implemented only because the NATO allies demanded that one be established, and not because one was required under Canadian law.[135]

EA in Practice: The Case of Low-Level Flying

The extent to which the EA process is amenable to political influence and discretion is illustrated by the case of military flying activities in Labrador and Québec. The Guidelines, issued by the federal government, defined the scope of the review so narrowly as to eliminate any possibility for the independent panel to recommend against military flights, even if the social

---

[132] CEAA, s. 38.

[133] Steven Penney, p. 268.

[134] M. Husain Sadar, "EIA Without Follow-up is a Wasted Effort," Text of the Rose-Hulman Acceptance Speech, Christchurch, New Zealand, April, 1998; M. Husain Sadar, personal communication, 22 July, 1998.

[135] M. Husain Sadar, personal communication, 23 July, 1998.

and environmental impacts of these activities were determined to be significant.[136]

The Canadian Forces base at Goose Bay, Labrador, is currently used for low-level training flights by the North Atlantic Treaty Organization (NATO) members. NATO training began in 1979, and expanded in 1986 when Canada signed a 10-year agreement with its German, British, and Dutch partners. Under the agreement which expired in 1996, 6000-7000 flights were carried out per year over 100,000 square kilometres in Québec and Labrador. The Department of National Defence (DND) proposed to negotiate a new agreement that would more than triple the number of flights per year, extend the flying season, and increase the training area. Under the plan, all flights would take place below a ceiling of 1000 feet, with some as low as 50 feet at speeds in excess of 700 kilometres an hour.[137] While flights were to be restricted to corridors within two zones, one located in Northern Labrador and one in Southern Labrador, a significant amount of land was to be alienated for use as bombing ranges.[138] The DND submitted two packages of mitigation measures, and indicated its preference for option 'B'. The review panel was asked to examine the environmental, social and economic effects of the flying activities, and to make recommendations accordingly.[139] The main environmental issues considered by the review were the impacts of aircraft noise on human health and on wildlife, particularly on caribou

---

136 Similarly, in the case of the Hibernia offshore oil project, the terms of reference did not allow for a 'no go' decision. See Federal Environmental Assessment Review Office, Report of the Hibernia Environmental Assessment Panel, Hibernia Development Project, December 1985 (Ottawa: Minister of Supply and Services, 1986): Appendix B, Terms of Reference.

137 Judy Rowell, "Northern Labrador's Biggest Developer: The Department of National Defence," in Northern Perspectives, 18.2 (1990): 11.

138 Ibid.

139 Canadian Environmental Assessment Agency (CEAA), Military Flying Activities in Labrador and Quebec : Report of the Environmental Assessment Panel, (Ottawa: Ministry of Supply and Services, 1995).

(otherwise know as the 'startle effect'), and the effects of night flights on nocturnal animals, and pollutant discharges on vegetation and water bodies. Additionally, the social impacts of the base on the local communities was to be considered.

The aboriginal peoples affected by the overflights are the Innu in Québec and Labrador, as well as Inuit living on the Labrador coast and more distantly, a small Naskapi band near Schefferville.[140] These groups actively engage in wildlife harvesting activities within the two flight training areas. Proponents for the flight training argued that there was no 'permanent' population living within the designated areas and that the potential impacts on the estimated 600,000 caribou of the George River herd and on local resource users could be mitigated by an 'impact avoidance program.'[141]

A controversial issue underlying this EA process was whether or not the panel could recommend *against* continuation of the flights. In response to a request for clarification from the panel itself, the Environment Minister wrote that:

> [B]ecause of commitments to its allies, the Government of Canada could not accept such a recommendation at this time.... It follows that those participating in the review ought not to think that the work of the Panel could reasonably result in such a termination."[142]

The Minister stated that while "the independence of a Panel is a key component of the Environmental Assessment and Review Process," he asked that these "limitations...be taken fully into account when the Panel decides on the wording of its recommendations."[143] For this and other reasons, the three aboriginal groups affected by the flights withdrew from the EA process, as did

---

140 Mary L. Barker and Dietrich Soyez, "Think Locally, Act Globally," p.17.
141 CEAA, Military Flying Activities in Labrador and Quebec, p.18.
142 Ibid, p. 79.
143 Ibid.

a number of environmental groups. Consequently, the Panel acknowledged that the participation at the hearings was weighted in favour of groups and individuals who "derived direct benefits from the Project."[144]

In its recommendations, the Panel noted that the effects of the flights and the operation over the longer term were uncertain, and as a result, long-term conclusions about the impacts of the flights on the natural systems could not be made.[145] Under the narrow terms of reference, the Panel had no choice but to recommended the project proceed subject to 58 specific recommendations.

The concept of diffuse benefits and concentrated costs, as discussed at the beginning of this chapter is useful for explaining why a 'no-go' decision for low-level flying was unacceptable to the federal government. Northern Québec and Labrador have low-population densities covering a large geographic area, and were thus regarded by the federal government as well as NATO members (whose own citizens rejected low-level flights in their respective countries)[146] as an ideal site for training. The military base also represents a significant contribution towards the Canadian government's NATO membership obligations. The proponent, the federal Department of National Defence (DND), the provincial government of Newfoundland and Labrador, and regional business interests (especially in Happy Valley-Goose Bay, which is almost completely dependent on the military presence) all occupy 'privileged' positions of influence on regulators within the federal administration. By approving the project, the federal government gained valuable direct and indirect benefits including revenues and jobs.

---

144 Ibid, p.11.

145 Ibid, p. 3.

146 Mary L. Barker and Dietrich Soyez, "Think Locally Act Globally?" p. 32.

guarantee that the process will ensure environmentally-responsible decisions. In contrast, a sustainability paradigm is one in which principles of ecological integrity drive decision-making and determine acceptable levels of economic activity.

As this chapter has demonstrated, decisions about resource development or industrial activities can be 'disconnected' from the final decision-making about environmental and resource development. The disconnection between the purpose of EA and what it accomplishes in practice is enabled by EA practice which allows political discretion as to when EAs are required, and what they should take into consideration during their course of investigation. Further, EAs in Canada are not required by legislation to be used as a basis for final decision-making. Thus, there exists the likely possibility for competing values- economic, political or other- to override environmental concerns.

Notwithstanding the inherent weaknesses of federal EA however, the process remains necessary and valuable. Environmental assessment is one of the few institutionalized processes that have been developed to anticipate and prevent environmental degradation. The undertaking of EA in northern, predominantly aboriginal contexts, presents formidable challenges. These challenges include the distinct political, socio-cultural, economic and environmental characteristics of northern regions. In order for EA to be relevant to local communities, it is necessary to involve residents in the decision-making process. EA processes must take into consideration local values and aspirations through meaningful public participation, the incorporation of different knowledge systems including the incorporation of aboriginal knowledge. All of these factors contribute to the empowerment of

local communities, which, as Harvey notes, is central to establishing conditions which favour sustainability.[149]

The unique characteristics of northern regions demand flexible EA systems which go beyond the confines and developmental characteristics embedded in CEAA. As Shapcott has noted, conventional environmental assessment is of limited relevance to aboriginal people because "its agenda contravenes the spirit of their values and concerns."[150] Past EA systems have failed to integrate aboriginal values and concerns into the process. As the following case studies demonstrate however, broad mandates, and sensitive panels with local representation may begin to address the challenges of northern assessment. The results include structures which cultivate conditions whereby the potential of EA is more likely to be realized. Yet, if administrators view EA as an inconvenience, the purpose of EA is defeated, but not because of faulty technique. The improvements which have been made to the conceptual foundation of EA are of no consequence if regulators have no interest in, and are not bound to, incorporating the results of EA in resource planning. As the case of low-level flying demonstrated, the degree to which the principle of policy may be subverted by competing values may be, in large part, explained by the diffuse benefits and concentrated political costs associated with environmental regulation. As northern development requires economies of scale to ensure profitability, the concentrated costs to governments for refusing development on environmental grounds are compounded as a result of the potential for massive economic spinoffs. As

---

149 Janice Harvey, Sustainable Development and Small Communities: Tools for Analysis and Action (Hull: Canadian Environmental Assessment Research Council (CEARC), 1989).

150 Catherine Shapcott, "Environmental Impact Assessment and Resource Management, A Haida Case Study: Implications for Native People of the North," in Canadian Journal of Native Studies, 9.1 (1989): 79.

suggested earlier, this dynamic favours weak environmental legislation.

The case of the Great Whale Project illustrates the potential for EA to contribute to sustainable resource decision-making in a northern context. While the terms of reference for the study (created with significant aboriginal participation) were described as precedent-setting, the case also illustrates that the process is amenable to political discretion and interjurisdictional wrangling.

Chapter Four

The Fire that Shakes the Land

So.
In the beginning, there was nothing. Just the water.[1]
-Thomas King

Water is one of this planet's greatest treasures. but water is also elusive and unpredictable; taming it requires patience, respect and finesse. Once harnessed, water becomes a priceless renewable resource.[2]
-Hydro-Québec

About 1200 kilometres north of Montreal in Québec's subarctic wilderness, the Great Whale River (Rivière Grande Baleine) flows into Hudson Bay, just to the north of James Bay (Figure 4.1). The settlement of Great Whale at the mouth of the river is virtually unique in Canada in that it is home to two native cultures. Approximately 500 Cree live in Whapmagoostui, beside some 450 Inuit living in Kuujjuarapik. Although a relative unknown to most people living south of the James Bay region, the Great Whale River gained international notoriety as the focal point in a controversy over large-scale hydroelectric development. Hydro-Québec, the province of Québec's $45 billion utility, planned to spend over $13 billion to tap the Great Whale River for the production of electricity beginning with the construction of roads in the spring of 1990, with power coming online in 1999. The Great Whale Complex was to be the second of three major projects with the eventual goal of harnessing the energy of almost every drop of water in the rivers flowing through 350,000 square kilometres of northwestern Québec.

1 In Thomas King 's satiric novel Green Grass, Running Water, "Grand Baleen" Dam symbolizes settler society and its oppressive tactics; just as the dam holds back the river (which, after prolonged damming will die), so settler society restrains and attempts to annihilate First Nations. Thomas King, Green Grass, Running Water (Toronto: Harper Collins, 1993).
2 Societe d'Énergie de la Baie James, Environment First, Fourth Quarter, 1991.

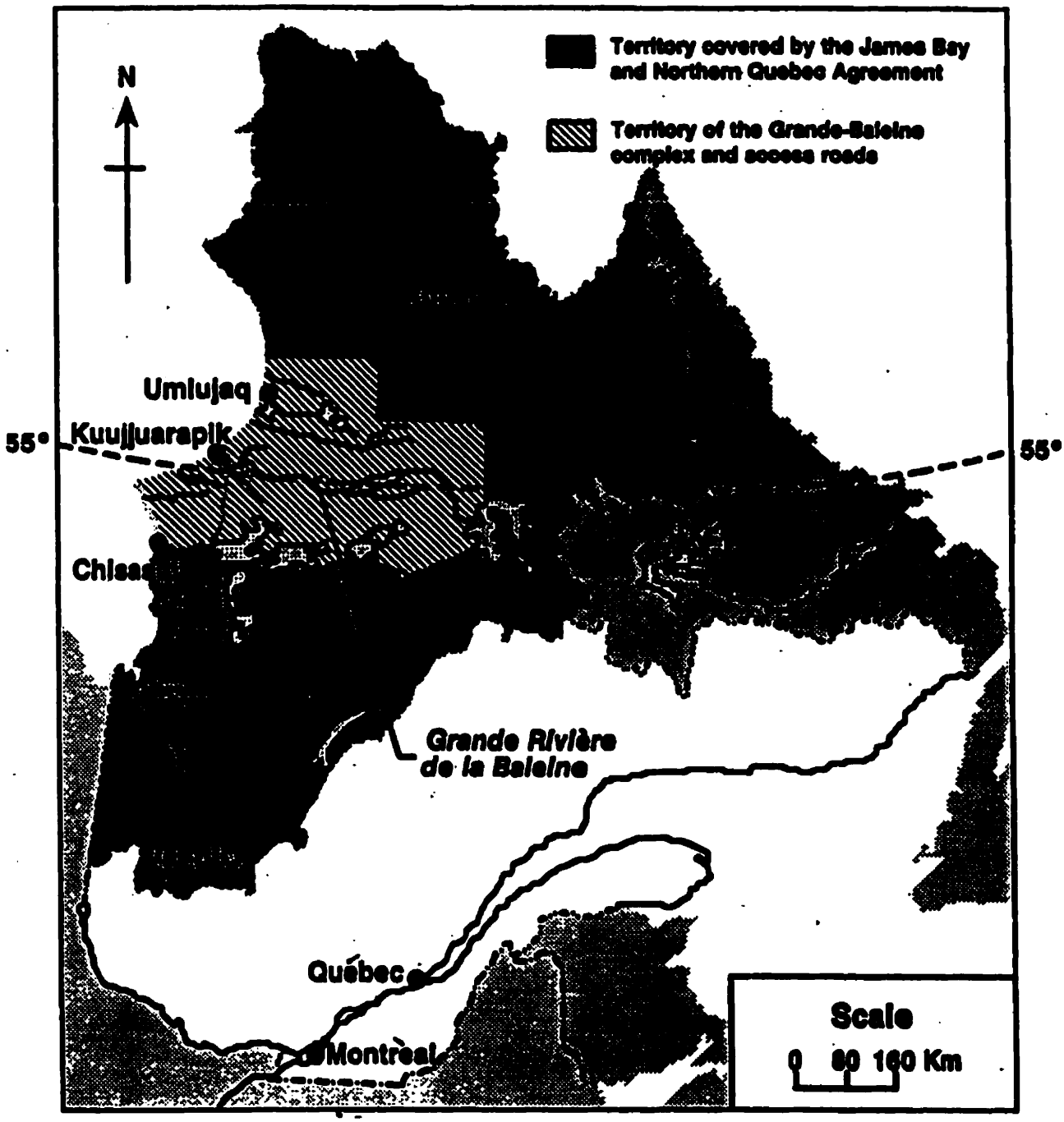

Figure 4.1 Map of Northern Québec and the Great Whale

Source: Canadian Environmental Assessment Agency (CEAA), Public Registry, Hull, Québec.

Cascading rivers were to be dammed and diverted to create reservoirs, flooding a combined area bigger than the surface of Lake Ontario. Some rivers would be reduced to a trickle; others simply submerged. The first phase Hydro-Québec's 3-phase plan, the La Grande Complex, was completed in 1985 with a price tag of $16 billion.[3] Hydro-Québec planned to commission the second phase, the Great Whale Complex, and soon after, begin construction of the largest piece in their megaproject puzzle, the Nottaway, Broadback, Rupert (NBR) Complex around the year 2010. Since the Great Whale project, no planning or proposals have been submitted to develop the NBR complex.

According to Hydro-Québec's forecasts in the late 1980s and early 1990s, the Great Whale project was essential to supply the province's growing demand for energy. During the summer of 1990, one journalist identified Québec's aggressive pursuit of the project by describing Liberal Energy Minister Lise Bacon as waging a "campaign of psychological terror", as she warned that Québecers would likely grovel by candlelight unless Hydro-Québec began the first phase of the project on schedule.[4] Four years later, on November 19, 1994, after countless delays, a flawed environmental impact statement (EIS) costing hundreds of millions of public dollars, media and court battles, and quarrels between aboriginal groups and governments, the newly-elected Parti Québécois headed by Jacques Parizeau, abruptly shelved plans for Great Whale stating that Québec "just didn't need Great Whale" after all.[5] But while Parizeau publicly 'shelved' the undertaking, and no work continues, the provincial government has yet to produce an order-in-council

---

3 Peter Gorrie, "The James Bay Power Project," Canadian Geographic (February/March 1990): 23.

4 William Johnson, "Québec-Ottawa agreement fails," Montreal Gazette, 28 Nov. 1990: B3.

5 Philip Authier and Graeme Hamilton, "Québec shelves Great Whale," Montreal Gazette, 19 Nov. 1994: A1.

officially halting any preparation for the project.[6]

The environmental assessment of Great Whale, while largely uncompleted, broke new ground for EA in Northern Canada. The Guidelines, created under the unique provisions of the James Bay and Northern Québec Agreement (JBNQA) and a four-party memorandum of understanding (MOU), in perhaps the first time since the Berger Inquiry, subscribed to fundamental precepts of sustainable development and recognized the need to take into account the unique characteristics of the region and its multicultural context. As was the case in the Mackenzie Valley, the Guidelines for the Great Whale assessment acknowledged that the choices made during the study would have resounding consequences in shaping the future of energy policy for the region.[7]

An examination of the Great Whale project is important for a number of reasons. First, the Great Whale served as an example of where an EA process surpassed the limited potential of a development model of EA, to one which may be considered a 'sustainability' model of EA. The case study also illustrates the powerful competing interests and political nature of large-scale resource development. In practice, decision-making related to the project was motivated not by concern for the environment, but by economic, political, and consumer pressures. The EA process was thus 'disconnected' from government decision-making. It is suggested the the reason for this disconnection, is that in light of the diffuse benefits and concentrated costs of environmental protection, the federal government tried to 'pass the environmental buck' to Québec which was fiercely protective of its control of

---

[6] "Great Whale may be beached, but it's not dead," editorial, Windspeaker, 18 Dec., 1994: 4.

[7] Great Whale Public Review Support Office, Guidelines for the Environmental Impact Statement for the Proposed Great Whale River Hydroelectric Project, Background Information (October, 1992): 1-6.

the project and its control over the right to develop its hydro electric potential. An important component to this case was the highly effective lobby and information campaign opposing the project. While it was not enough to tip the balance of power, it served as an important catalyst for the subsequent demise of the Great Whale project.

While the underlying debate over resource development had not changed since the development of the La Grande complex, the outcomes and decision-making context for the Great Whale project had changed dramatically. The discussion begins with an overview of the La Grande development as well as the James Bay and Northern Québec Agreement (JBNQA) and its implications for Great Whale. The chapter then turns to its principal focus- the Great Whale environmental assessment and environmental impact study (EIS). A geographic description begins the discussion.

Description of James Bay and its People

The James Bay territory extends over some 350,000 square kilometres between the 49th and 55th parallels of north latitude. The region, which is equal to two-thirds the surface of France and twice that of England, extends for as much as 700 kilometres to the interior. Its limits are James Bay and the Ontario border on the west, the 49th parallel on the south, the James Bay and St. Lawrence River watersheds in the east, and the 55th parallel on the north.[8] Part of the Canadian Shield, the territory constitutes about one fifth of the province of Québec. Nearly 15 percent of the territory is covered by water naturally. The taiga consists of small, scattered forests composed mainly of black spruce but also jack pine and larch, and an undergrowth dominated by

[8] Jean-Guy Vaillancourt, "James Bay" in Conservation and Environmentalism: An Encyclopedia, ed., Robert Paehlke (New York: Garland Publishing, 1995): 375-376.

willow, alder, Labrador tea, lichen and moss.[9]

The Cree

Approximately 12,000 Cree live in nine communities in the James Bay region.[10] The Cree have lived in the area for over 4,000 years as small nomadic groups living off game and fish. The first contacts with Europeans occurred in 1610 during the explorations of Henry Hudson, and later with French and English traders when the fur trade boomed with the Hudson's Bay Company. A second wave of contact with outsiders resulted from the settlement of missionaries during the second half of the 19th century when individuals came to convert the Crees and bring them formal education and medical care. The federal government took over these services during the 1950s. Until then, the Cree way of life remained almost unchanged, but with the introduction of mandatory schooling, the construction of permanent housing and the decline in the price of furs, many Cree found themselves leading a sedentary life.[11] The most significant changes for Cree communities however, came in the 1970s as a result of the Government of Québec's large-scale hydroelectric development projects and the subsequent James Bay and Northern Québec Agreement (JBNQA).[12]

The Grand Council of the Cree (GCCQ) is the political organization which represents the Cree in dealings with the various governments. The

---

9 Société d'énergie de la Baie James, Environment First, Fourth Quarter, 1991.

10 Matthew Coon-Come, "Clearing the Smokescreen," in On the Land: Confronting the Challenges to Aboriginal Self-Determination in Northern Québec and Labrador, eds., Bruce W. Hodgins and Kerry A. Cannon (Toronto: Betelgeuse with Frost Centre for Canadian Heritage and Development Studies, 1995): 6.

11 Department of Indian Affairs and Northern Development, Québec Indian Community Guide (Québec: Communications Section, Québec Regional Office, 1995).

12 For a discussion of the impact of hydroelectric development on the Cree lifestyle, see Boyce Richardson, Strangers Devour the Land: Cree Hunters of the James Bay area versus the James Bay Development Corporation (Toronto: Macmillan, 1975) and; Richard Salisbury, A Homeland for the Cree: Regional Development in James Bay, 1971-1981 (Kingston: McGill-Queen's University Press, 1986).

Cree Regional Authority (CRA) manages the services and programs offered to the communities, such as housing, education, and environmental issues.

The Inuit

Approximately 8,600 Inuit live in Québec's far north, primarily in 14 villages along the coasts of Hudson Bay, the Hudson Strait and Ungava Bay. Another 50 or so Inuit live in the mostly Cree community of Chisasibi on the coast of James Bay. In contrast to the Cree who generally hunt, trap and fish inland, the Inuit rely primarily on coastal wildlife.[13] The Makivik Corporation, created in 1978, represents the Nunavik Inuit with respect to matters of social, cultural, economic, and political nature including areas related to treaty amendments and negotiations, environmental assessments, research and other local and regional economic development activities.[14]

For Hydro-Québec, the government of Québec, and related business interests, Northern Québec has long represented the region with all of the province's remaining energy generating capacity. Premier Bourassa made his views on the northern megaprojects patently clear in a 1985 book, Power From the North. In the book he states, "Québec is a vast hydroelectric plant in the bud, and every day, millions of potential kilowatt hours flow downhill and out to sea. What a waste!"[15] The potential of Northern Québec to satisfy the goals of its southern industrial centre became an obsession for Bourassa. In the early 1980's the Premier began to promote the GRAND (Great Recycling And Northern Development) Canal scheme, whereby 160 kilometres of dikes would be built across James Bay, cutting it off from Hudson Bay, turning it

---

13 Susan Williams, Hydro-Québec and the Great Whale Project, (Washington, U.S.A.: Investor Responsibility Research Center, 1993): 44.

14 Makivik Corporation, "Report on Adequacy Analysis of Voisey's Bay Nickel Company Environmental Impact Statement," March, 1998.

15 Robert Bourassa, Power From the North (Scarborough, On.:Prentice-Hall, 1985):18.

into a freshwater reservoir the size of Lake Superior. Under the plan, originally devised by Montreal engineer Thomas W. Kierans in the 1930s,[16] water would be pumped over the height of the land to drain down into the Great Lakes where the water would be channelled through connecting waterways and canals, to the Canadian prairies and to the American Midwest and Southwest.[17]

Until the mid 1990s however, Hydro-Québec's primary focus had been on the development of the three-phase megaproject scheme, which combined would add 27,000 megawatts (MW)[18] of power to its energy grid- only about 3,000 MW short of Ontario Hydro's total capacity.[19] Each phase would concentrate on a different area with the eventual goal of harnessing the water-power of every river draining into James Bay. The water would be collected in reservoirs behind powerhouses on the main rivers. Because water would be released year-round in order to spin turbines and generate electricity, the system would reverse the seasonal river flows by releasing more water in winter when demand for energy peaks.

Phase 1: The La Grande Project

In June 1971, construction of phase 1 of the La Grande complex began with bulldozers clearing roads northward at a rate of one kilometre per day beginning at Matagami, the most northern point of the Québec highway

---

16 Ibid, p.146.

17 Sean McCutcheon, Electric Rivers: The Story of the James Bay Project (Montreal:Black Rose, 1991):137; Canadian Arctic Resources Committee, "Of Gigawatts and GRAND Designs," Northern Perspectives 15.3 (1987): 1; Donald J. Gamble, "The Grand Canal and the National Interest: When Should Rational Thinking Apply to Water Policy?" Northern Perspectives 15.3 (1986): 2-7.

18 A megawatt is equal to one million watts of power. One megawatt produced by a power station can provide electricity for up to 200 households during peak periods in winter. Hydro-Québec's power grid has the potential to generate 34,250 megawatts of electricity a year.

19 Wayne Skene, Delusions of Power: Vanity, Folly and the Uncertain Future of Canada's Hydro Giants, (Vancouver: Douglas & McIntyre, 1997): 95.

system. Roads linking the rest of Québec to the La Grande-2 (LG2) dam site were completed in 1973, and were soon crowded with trucks and bulldozers headed north carrying fuel, food, and building supplies.[20] The complex was the largest construction site in the world, spanning 1,000 kilometres from east to west, and 200 kilometres from the north to the south.[21] The development was named after the river which is the third longest in Québec, dwarfed only by the Ottawa and St. Lawrence rivers. In this phase, five smaller rivers were diverted into the La Grande to increase its power. Its average flow into James Bay has now doubled and is four times the previous rate in winter. Three large power stations- La Grande 2, La Grande 3, and La Grande 4 are linked along the 800 kilometres of the La Grande River. In order to supply the power stations with a steady flow, the utility created five reservoirs which together are larger than the state of Connecticut,[22] resulting in the creation of Québec's largest lake. Approximately 206 dykes and nine dams make up the La Grande Phase 1, which flooded more than 10,000 square kilometres. The La Grande-2 dam, is as high as a 50-storey building and the reservoir which sits behind it took well over a year to fill.[23] The combined increase in production resulting from the La Grande development was 10,282 megawatts.[24]

The La Grande was completed in 1985 after 12 years of construction and at a cost of about $16 billion.[25] A recent expansion, the LG2-A, is a 1,998-megawatt powerhouse which alone produces more power than the combined output of Québec's single nuclear-powered generating station and its 25 plants

---

20 Marie-Anik Gagné, A Nation Within A Nation: Dependency and the Cree (Montreal: Black Rose, 1994): 112.

21 McCutcheon, Electric Rivers, p. 73.

22 Williams, Hydro-Québec and the Great Whale Project.

23 Marie-Anik Gagné, A Nation Within a Nation.

24 Ibid.

25 Gorrie, "The James Bay Power Project".

fuelled by coal or oil.[26] The La Grande Phase two came on-line for power production in late 1996. It includes the main powerhouse, LG1, near the mouth of the river, and five more- Brisay, Eastmain 1 and 2, and Laforge 1 and 2- constructed on rivers diverted during the initial construction.

While construction began 1971, representatives of the eight Cree communities of the region met and unanimously decided to oppose the project through the Indians of Québec Association.[27] The Cree took the case to the provincial Supreme Court seeking an injunction on construction, not because they were rejecting development, but because, as the Cree themselves said, they wanted some control over the land on which they were dependent. After one year of testimony and five months of deliberation, Justice Albert Malouf recognized that the subsistence and culture of the Cree and the Inuit were inextricably tied to the land.[28] Malouf also found that the Québec government had not yet honoured its obligations to the territory's Natives as required under the Québec Boundaries Extension Act of 1912, which obligated the government of Québec to settle the question of aboriginal title.[29] Malouf ordered Hydro-Québec and its subsidiaries to "immediately cease, and refrain from carrying out works, operations, and projects in the area... and to refrain from interfering in any way with petitioners' rights, from trespassing in the said territory and from causing damage to the environment and the natural resources of the said territory."[30] For the first time in Canadian legal history, aboriginal rights were the legal foundation for an injunction to delay resource

---

26 Marie-Anik Gagné, A Nation Within a Nation.

27 Ibid 119.

28 Marie-Anik Gagné, A Nation Within a Nation.

29 Government of Canada, Minister of Indian Affairs, James Bay and Northern Québec Assessment Implementation Review, (Ottawa: Minister of Indian Affairs, 1984): 8.

30 Ibid.

development temporarily.[31]

The day after the Malouf judgment, Hydro-Québec entered two appeals to the Québec Court of Appeal. One week later, the Appeals Court overturned the injunction, allowing on-site construction to resume. While Malouf had invested more than a year and a half before making his decision, it had taken just one week to overturn it. In order for the Cree and Inuit to appeal the latest decision, they would have been required to wait eight months while construction continued at full pace.

Premier Bourassa, anxious to settle out of court and dodge scrutiny from his investors, offered among other things, payment of $100 million in compensation to the Cree and Inuit.[32] At this time, the Indians of Québec Association was replaced by the Grand Council of the Cree of Québec, (GCCQ) with Billy Diamond as the Grand Chief, and the Northern Québec Inuit Association with Charlie Watts as leader. Both organizations refused the compensation plan with Diamond bluntly stating that "Indian lands are not for sale, not for millions and millions of dollars."[33]

However, the construction of the La Grande complex continued unimpeded, and given the ease with which Malouf's decision was overturned, the judicial route was one fraught with uncertainty. The Cree and Inuit felt that given the considerable investment by Hydro Québec, their chances of stopping the James Bay Project from becoming a reality were narrowing. The Cree and Inuit decided to settle out of court, but only after federal Indian Affairs Minister, Jean Chrétien threatened to cut all funds to the two groups if they did not sign an agreement. Finally, after one year and

---

31 James A. O'Reilly, "The Courts and Community Values: Litigation Involving Native Peoples and Resource Development," Alternatives, 15.2 (1988): 44.

32 Sean McCutcheon, Electric Rivers.

33 Marie-Anik Gagné, A Nation Within a Nation.

eight months of negotiations, in November 1975, representatives of the Cree, Inuit, the Québec and Canadian governments, Hydro-Québec, the James Bay Energy Corporation and the James Bay Development Corporation, signed the 455-page James Bay and Northern Québec Agreement (JBNQA). Appendix 3 lists chronologically the events leading to the agreement.

The James Bay and Northern Québec Agreement

The intent of the JBNQA was to settle Native claims in Northern Québec and to establish ground-rules for the development of relations between Québec's Natives and non-Natives. The affected territory under the agreement covers two-thirds of the province of Québec, an area eight times the size of New York state. [34] In addition to the James Bay territory, the agreement covers land north of the 55th parallel to the Hudson Strait- land primarily occupied by the Inuit. But as Bartlett has suggested, the Agreement is more about spelling out the rights of the province with respect to water resources in northern Québec than a settlement of aboriginal claim for the Cree and Inuit.[35]

Under the JBNQA, the Québec government retains ownership of most of the land and all lakes and rivers. The Agreement provides the basis for Native control of government, education, health, and social services funded by both the provincial and federal governments. The Agreement also provided an income guarantee for Cree involved in traditional activities and defined Native land-use rights, including some exclusive hunting, fishing and trapping rights by establishing three land categories within the territory. Category I land is reserved for the exclusive use of Cree and Inuit except

---

[34] Susan Williams, Hydro-Québec and the Great Whale Power Project, p. 41.

[35] Richard H. Bartlett, Aboriginal Water Rights in Canada: A Study of Aboriginal Title to Water and Indian Water Rights (Calgary: Canadian Institute of Resources Law, 1988): 220.

control of "the seashore, beds and shores" of major lakes and rivers in the region, along with 200 feet in depth along the shores of lakes and rivers (except for one mile in either direction from the centre of a community).[36] On Category II land, Aboriginal people hold exclusive fishing and hunting and trapping rights. Category III land is open to the general public, subject to Québec laws and regulations governing public lands. Native people, however, retain exclusive rights to use freshwater seals, fur-bearing animals, and some species of fish.[37] The only areas over which the Cree and Inuit exercise a real measure of control, Category 1 lands, constitute a fraction of the region and their boundaries are designed to reduce native control over major waterways.[38] Thus Bartlett's statement that "the Agreement is more a statement of the rights of the James Bay hydro project than it is of the rights with respect to water of the Cree and Inuit," hardly seems exaggerated.

The Agreement also granted $255 million in compensation to the roughly 11,000 Cree and Inuit living in the area over a 21-year period.[39] In return, the Agreement called for the Cree to "cede, release, surrender and convey all their Native claims, rights, titles and interests, whatever they may be, in and to land in the Territory and in Québec, and Québec and Canada accept such surrender."[40]

The Agreement also created environmental and social protection agencies with substantial Cree and Inuit representation. Section 22 stipulates that any development proposal must be justified by its economic, financial,

---

36 Claudia Notzke, Aboriginal Peoples and Natural Resources in Canada, (North York: Captus Press, 1994): 27.

37 Hydro-Québec, Grande Baleine Complex, Bulletin 6 (1993): 14.

38 Claudia Notzke, Aboriginal Peoples and Natural Resources in Canada, p. 27.

39 Susan Williams, Hydro-Québec and the Great Whale Power Project, p. 41.

40 Ibid.

social and environmental necessity.[41] With regard to environmental assessment, although the province's EA process as defined by Québec's Environment Quality Act continues to apply in the region, it is applied in conjunction with an Inuit organization known as the Kativik Environmental Quality Commission (KEQC) north of the 55th parallel, and a Cree Review Committee south of the 55th parallel. While the Review Committee only provides for advisory, consultative and administrative functions, the KEQC has decision-making powers.[42] Though Québec's Minister of the Environment could conceivably overrule a KEQC decision, such an action would likely cause a public outcry. Since its creation, no KEQC decision has been overturned by the Province.[43] The KEQC was considered a victory for Northern Québec by many because it gave the Commission decision-making powers. As Keith and Mulvihill suggest, the outcome arose through a miscalculation on the part of the drafters of the Agreement who envisaged the KEQC as basically a negotiating mechanism that pitted four Kativik members against the four Québec commissioners.[44] Appendix 4 describes the committee structures.

While many have touted the first modern-day treaty as a model for land claims agreements and co-operative management, the Cree maintain the Québec and Canadian governments have not fulfilled many of the promises agreed to under the Act.[45] Brian Craik, an advisor to the Grand Council of the

---

41 JBNQA, s. 22.

42 Québec Ministry of the Environment, Environment Quality Act, Updated to 3 Sept. 1996, (Québec: Éditeur officiel du Québec, Sept. 1996): chapter 2, Div. 2-3.

43 Robert Keith and Peter Mulvihill, "Organizational Development and Environmental Assessment in Canada's North," Environments, 23.1 (1995): 76.

44 Ibid.

45 Brian Craik, Anthropologist, Grand Council of the Cree of Québec, personal communication, 22 July, 1998.

Cree, suggests that neither the federal or provincial governments like the JBNQA because of its potentially broad scope. He notes that if the JBNQA "was implemented in its true spirit, it could reverse the situation of discrimination and racism."[46] Although implementation went relatively smoothly in the early years of the Agreement, the Cree began identifying what they perceived as major problems with implementation in the early 1980s. The failings included an environmental protection regime that they say does not work; direct and indirect employment opportunities that have not materialized;[47] a shortfall of housing; and only partial implementation of Native control over areas such as schooling.[48] Billy Diamond, a Cree negotiator and signatory of the JBNQA, wrote that if he knew then how the commitments of the Agreement would be "interpreted, twisted" and ignored, he would never have signed the agreement.[49] Matthew Coon-Come has suggested that in the light of the social and environmental problems which persist, "the approach is still mostly one of government handouts and not genuine partnership."[50]

The Great Whale Complex

Hydro-Québec argued the Great Whale Complex was an "indispensable project" with which to meet the growing demand for electricity both

---

46 Ibid.

47 While there are approximately 750 people operating the La Grande project, there are no Cree employees. According to Craik, an advisor and sitting member of the provincial/Cree review board (COMEX), Cree do take jobs from time to time, but don't stay long because they are invariably passed over for promotion. Cree workers traditionally get what are referred to as "rock-washing" jobs where hydraulic hoses are used to wash rock before cement is poured. Crees also get jobs planting trees and in the bush clearing lines for power lines. Brian Craik, personal communication, 22 July, 1998.

48 Williams, Hydro-Québec and the Great Whale Power Project, p. 43.

49 Billy Diamond, "Villages of the Dammed: The James Bay Agreement Leaves a Trail of Broken Promises," Arctic Circle, 1.3 (1990): 24.

50 Matthew Coon-Come, "Treaty Promises Block Québec grab of vast Cree lands," Canadian Speeches, 10.2 (May, 1996): 35-43.

domestically, and in new markets.[51] Originally proposed in the early 1980s, with feasibility studies dating as far back as 1964, the project was delayed as a result of low demand for electricity. By the end of the decade, Hydro-Québec's medium-range forecasts estimated a 2.2% annual increase in demand for the 1992-2012 period. Conservation measures would offset this growth, but the average increases in energy demand would still grow by 1.8% annually within this period.[52] The Great Whale complex would become absolutely essential to respond to this energy demand and to balance energy supply and demand between the years 2000 and 2005.

The hydroelectric development concept for the Great Whale River was designed to exploit almost all of the 391-metre gradient running down from Lac Bienville, at its extreme eastern point, to the river's mouth at Hudson Bay. Three underground generating stations were proposed: the Grande Baleine 1 (GB1), 6 kilometres from the coast of Hudson Bay and about 40 kilometres from Kuujjuarapik-Whapmagoostui and the largest of the three stations; the Grande Baleine 2 (GB2), approximately 225 kilometres from the coast and the smallest generating facility at 546 MW; and Grande Baleine 3 (GB3), only slightly bigger than GB2 and 295 kilometres from the coast. Each generating station would require a reservoir and the creation of a regulatory reservoir at Lake Bienville, flooding a combined area of over 4000 square kilometres. The diversion of 94% of the flow from the Little Great Whale River and 17% of the Nastapoka to the reservoir of the GB1 station, would make this facility the most powerful. The generating facilities of the complex would have had a total installed capacity of 3212 megawatts and could have produced an average of 16.2 terawatt hours (TWh) annually. After passing

---

[51] Hydro-Québec, Grande Baleine Complex, Bulletin 5 (1991):1.
[52] Hydro-Québec, Grande Baleine Complex, Bulletin 6 (1993): 2.

through the turbines, the water would flow through two underground tunnels (tailrace tunnels) and be discharged into the Passage de Manitounuk. The flow of the Great Whale river would have been reduced by 83%.[53]

The construction and operation of the Great Whale Complex also called for the creation of permanent transportation and accommodation infrastructures and the installation of support facilities and transmission lines. The transportation infrastructure would have included approximately 600 kilometres of road linking the generating stations, an airport in Kuujjuarapik, a permanent airfield to service GB1 and GB2, and another temporary airfield. Workers would be lodged in six campsites set up on the GB1, GB2, GB3 and Bienville reservoir construction sites. Four other campsites would be set up on the sites designated for construction of the Little Whale River diversion facilities. The accommodation infrastructure was also to include two family villages. In total this infrastructure would be able to accommodate 5000 workers during the peak year of construction.

Finally, a collector system would be built to transport the electricity produced by the three Great Whale complex stations to the La Grande complex transmission network. A total of six networks of 315-kv circuits would have linked the Great Whale complex generating stations to the La Grande complex transmission network.

The JBNQA and Great Whale

There was no question the James Bay and Northern Québec Agreement allowed Hydro-Québec to develop Phase 1 on the La Grande hydroelectric complex. The major dispute was whether the JBNQA also allowed for development of the Great Whale project. The moment Robert Bourassa

---

53 Hydro-Québec, Grande Baleine Complex: Feasibility Study: Summary, (August, 1993): 35.

proudly announced the relaunching of the Great Whale project in Québec's National Assembly in 1989, there was immediate opposition by aboriginal people to the project. Along with this announcement came a radical change in the Cree approach to development in the James Bay region. Approximately 120 Cree met in Montréal for discussions on their course of action. As with previous experience, the Cree opposition to this project was steadfast. This time however, the Cree decided that they would not participate in a process they could not win.[54] The La Grande project did not produce the benefits that were promised. Rather than continue the cycle of going to court and eventually reaching a compensation settlement outside while the project goes ahead unimpeded, the Cree would fight Hydro-Québec and the the province by other means.

In 1989, the Cree informed Hydro-Québec that they would no longer enter into dialogue with the utility due to the constraining methodology used in Hydro's review process. The Cree maintained that they did not refuse to be consulted, but refused a quantitative fill-in-the-box questionnaire which did not take into account their perceptions and values. But as Craik suggested, it was not so much the methodological shortcomings of these surveys as Hydro Québec's arrogance and disregard for the results of such 'consultation'.[55] In 1980 for example, Cree from Chisasibi and Whapmagoostui were consulted on the alignment of a proposed road from the La Grande Complex to the communities at Great Whale. Local hunters met with Hydro-Québec engineers with maps in order to seek the best route. The group requested that the road stay clear of specific harvesting areas. After deliberating, Hydro decided that construction would go ahead as originally proposed, and none of

[54] Brian Craik, personal communication, 22 July, 1998.
[55] Ibid.

the Cree requests would be incorporated into the road's design. In April 1990, the Cree filed for a permanent injunction to stop all development in Northern Québec in the Superior Court of Québec.

After the relaunching of Great Whale, the federal government engaged Québec in negotiations which would see a joint-assessment to take into account their legislative responsibilities as outlined in Section 91 of the Constitution. Federal responsibilities included the ecology of Hudson Bay, fisheries, migratory birds and marine animals. In June 1990, an agreement-in-principle was approved between Québec Minister of Environment, Pierre Paradis, and Federal Environment Minister, Robert de Cotret, which set out a formula for combining three different processes: a review involving the Kativik Environmental Quality Commission, the environmental review body of the Makivik Corporation under the JBNQA, and the Review Committee, an environmental review for south of the 55th parallel with Cree membership, and a panel created by the Federal Environmental Assessment Review Office (FEARO).

After Ottawa announced its involvement, Québec Energy Minister Lise Bacon, worried about delays to construction, announced Québec would split the overall assessment of the project in two, to allow construction of the infrastructure to get underway. The first EA would analyze the impact of the infrastructure on the area, including the network of roads and the three airports. The second assessment, to be carried out while construction of the infrastructure was underway, would assess the impact of the dams and reservoirs on the environment. Ottawa claimed that under the JBNQA, it had no jurisdiction over hydro-electric development in Québec and "even if it wanted to" could not stop the province from beginning construction on the

infrastructure.[56] Ironically, the previous Environment Minister, Lucien Bouchard, who would later become leader of the Parti Québécois, a separatist provincial party, firmly stated that the utility's Great Whale project fell under both provincial and federal jurisdictions. The Montreal lawyer who represented the Cree in negotiations for the 1975 JBNQA attributed the federal shift to "extra-legal" reasons, saying "the political climate made it difficult for Ottawa to adopt a position that could allow it to turn down Great Whale for environmental reasons."[57]

In the subsequent months after the agreement-in-principle was discussed in Ottawa, Paradis was unable to pass it through the Québec Cabinet which clearly felt threatened by the perceived jurisdictional infringement of the federal government. The Cabinet denied that Ottawa had any jurisdiction over the construction of roads and airports and planned to press forward with construction. Further, the Cabinet was stalling because it appealed to the courts a decision by the federal National Energy Board (NEB) to give Québec a licence to export electricity to the United States on the condition that any development project must meet federal environmental standards. Québec maintained that hydro development was a provincial matter over which it was proving to be fiercely protective. Both the Québec government and Hydro-Québec believed that passing its EA through the Review Committee and especially the Kativik Commission would pose no problem for its development plans.

In November 1990, four months after the agreement-in-principle was discussed in Ottawa, Paradis announced that the federal government's legal

---

[56] Graeme Hamilton, "Ottawa gives Québec the go-ahead on Great Whale," Montreal Gazette [Montreal] 20 Nov. 1990: A1.

[57] Graeme Hamilton, "Ottawa reversed its position on hydro project, letters show," Montreal Gazette [Montreal] 21 Nov. 1990: A5.

power operating under the 1984 EARP Guidelines Order was much weaker than the 1975 JBNQA, and Québec would no longer sign the agreement-in-principle. The following month on December 15, Hydro-Québec submitted its six-volume environmental impact assessment for the $600-million infrastructure to Minister Paradis who then distributed copies to the Kativik Environmental Quality Commission and the Review Committees. Peter Jacobs, chairman of the Kativik Commission noted that the review could take up to six months- twice the time allowed for by Hydro-Québec's development schedule. Jacobs commented that while the Environment Department was under "vicious pressure" to get the assessment done and to clear the way for construction, the Committee would undertake a thorough analysis. Jacobs, illustrating the mounting pressures surrounding the project stated that, "The integrity of the environmental review process is at stake when Hydro-Québec invests millions of dollars of advertising to persuade typical Québecers (that they need the Great Whale hydro dams), when it formulates deadlines that are non-negotiable, and when it insists that there are no alternatives but to proceed, even in advance of an environmental review."[58]

In their bid to secure popular support for the project, Hydro-Québec launched a $6 million public information campaign through local media. The ads stated that although public environmental assessment hearings were yet to get under way, "hundreds of environmental studies have shown that the Great Whale project will not have a major effect on the environment."[59] Critics attacked the campaign, describing the ads as tenacious propaganda. Bacon defended the campaign stating, "I think it is normal that we give

---

58 Paul Wells, "Great Whale review under pressure, Watchdog's integrity at stake, Kativik chairman says," Montreal Gazette [Montreal] 5 Jan. 1991 : A1-A2.

59 Philip Authier, "Great Whale ad campaign defended by Bacon," Montreal Gazette [Montreal] 11 Dec. 1990: A11.

information because there's misinformation being created on the project." When asked by reporters who was responsible for this 'misinformation', Bacon replied, "Everyone who's against the project. Hydro-Québec is giving proper information that the population deserves."[60] The same article describes developing discussion between Hydro-Québec and the Inuit which dealt exclusively with compensation for Great Whale. These proceedings were unknown to either the Cree or the federal government. For the utility, securing a deal with the Inuit would have heavily influenced the nature of the debate in Southern Québec. The rationale for the Inuit to enter into discussion with the utility was to seek compensation which would give the Inuit more autonomy. The Inuit did not receive a large settlement from the La Grande project, and since the Great Whale would only affect three villages, for most of the membership, the money would be welcome.

Two months later in February 1991, the Kativik Commission concluded that Hydro-Québec's study on the infrastructure was fundamentally flawed in several major areas. The Commission stated the utility failed to demonstrate that the 575 kilometres of roads and three airports were needed for anything other than building the hydroelectric project. In a letter to Deputy Environment Minister André Trudeau, the Commission wrote:

> The promoter decided to justify its road project solely in relation to a hydro-electric complex for which it has not received the required governmental authorizations. As a result, we consider the present study fundamentally incomplete. The project that the promoter wanted to separate is presented here as inseparable.[61]

The Review Committee sent its recommendations without the

---

60 Ibid.

61 Graeme Hamilton, "Flaw seen in Hydro Great Whale study," Montreal Gazette [Montreal] 11 Feb. 1991: A3.

approval of the two Cree appointees who withdrew from discussions on the Great Whale after failing to obtain a guarantee that their participation would not prejudice the Crees' legal battle to stop the split of the environmental review process. Alan Penn, a committee member appointed to the Review Commission by the Cree said Hydro developed the infrastructure plan without consideration on its effects on the 1,000 Cree and Inuit living at Great Whale. As examples, he cited the fact that the proposed airport would be located right in the village of Great Whale and that construction of a road from the town site to the power station would disrupt waterfowl hunting. Additionally, new roads would allow access for non-Native hunters and fishermen access to the territory for the fist time.

Worried that Québec would modify and press on until its EIS was accepted, the Grand Council of the Cree launched legal action against Ray Robinson, Chairman of the Federal Environmental Assessment Review Office, to force him and the federal government to carry out an environmental review and to torpedo the agreement between Ottawa and Québec allowing the split of the EA. As co-signatory to the 1975 JBNQA, the Cree argued that the federal government was legally obligated to lead the review process. The federal government, which had remained on the periphery, refused to conduct a review under the JBNQA because as it had already announced Québec had sole constitutional jurisdiction over hydro development. The federal government maintained that environmental matters were of 'paramount' concern and that it was still hoping for a joint review with Québec.

By July, the new Federal Environment Minister Jean Charest, tired of waiting for Québec to agree to a joint-review, and looking to dodge

accusations of federal self-restraint, announced that Ottawa would conduct its own review under the EARP Guidelines Order. Charest acknowledged that like Québec's split-review, the federal review could be broken down in stages and could allow for Québec to begin construction on the infrastructure before hearings had begun on the dams. Charest also stated that Ottawa would be powerless to stop construction if Québec chose to ignore the review. In response to the announcement, Provincial Environment Minister Pierre Paradis and Energy Minister Lise Bacon, who had quarrelled in the past, jointly stated that Québec did not have to abide by federal rules. "The Québec government reaffirms its full jurisdiction over national resources, especially hydro-electricity," Bacon told reporters. "It will not accept being subjected to orders or procedures that come from a federal committee."[62] Bacon's use of the word *national* not only reaffirmed Québec's claim over resource development, but blatantly reminded Ottawa of the political volatility of the situation.

At the end of August, Premier Bourassa, placing blame strictly on economic factors announced a one-year delay in the start of the Great Whale hydro project. Paradis had announced a few days earlier that "the government has become aware of the position of the natives, of the international community which is observing us, as well as of the environmental experts who want to have an approach more acceptable on the environmental level."[63] The government of Québec, already months behind schedule as a result of the Kativik and Review Committee decisions, was clearly under immense pressure on many fronts. The Cree-dominated

---

[62] Elisabeth Kalbfuss and Graeme Hamilton, "Hands off Great Whale, Ottawa told," Montreal Gazette [Montreal] 11 July, 1991: A1-A2.

[63] Philip Authier and Paul Wells, "Québec eases up on Great Whale and will allow time for full review," Montreal Gazette [Montreal] 22 Aug. 1991: A10.

Evaluating Committee (described in Appendix 4) was flexing its new muscle and ignored Paradis' submission deadline for EA guidelines for the second part of the review. Due to a rotating chair position on the committee, Billy Diamond, the former Grand Chief of the Cree, held the deciding vote and delayed the guideline submission to Minister Paradis. The Cree wanted to stall the process because they were actively seeking an injunction in Québec Superior Court to prevent the splitting of the review.

Another pressure on the Québec government was that New York and the province had just agreed to extend by a year the date the two parties could withdraw without penalty from a $17 billion power export contract which hinged on the Great Whale. New York had reduced its forecasted annual increase in electricity demand over the next 20 years to 0.6 percent from 1.14 percent. Québec, bowing under economic pressure, now announced it would have time to review both parts of the review simultaneously. The contract extension provided a political opportunity for Québec to show it could also be 'concerned' about environmental issues. In the end however, Bourassa concluded, "The government has to respect the law of supply and demand."[64]

Three months later in September 1992, the decision from the Crees' legal case against the federal government dealt another major blow to project approval. Justice Paul Rouleau of the Federal Court ruled that Ottawa must approve the Great Whale project before it could go ahead with construction. The federal government was now bound by law to lead the review as provided by the JBNQA, and ultimately had the final decision on the entire project. The federal government had been refusing since November to hold this review- which unlike the EARP announced in July, guaranteed that Cree

---

64 Ibid.

and Inuit would hold places on the federal review committees. Although both lawyers for Ottawa and Québec argued that in the context of the JBNQA, the Great Whale project lay exclusively within Québec's domain, Rouleau rejected the argument, pointing to areas of federal jurisdiction such as migratory birds, fisheries, marine animals and the Cree and Inuit who stood to be affected by the dams. Rouleau concluded that the $13 billion project fell under both provincial and federal jurisdiction and therefore required both levels of government to take part in the review procedures set up under the JBNQA. In his 32-page judgment, Rouleau wrote: "It was incomprehensible that Ottawa would refuse to conduct an environmental assessment of the Great Whale project, because it gives the appearance Ottawa is reneging on its responsibilities toward native people."[65] Federal involvement meant in addition to the Review Committee and the Kativik Corporation, two federal committees would be created, mirroring the structure of the others (one for south of 55th parallel and one for north of the 55th parallel), but with federally appointed members instead of provincially appointed ones. The EARP review would also be active, creating a total of five review bodies. For Québec, the verdict meant going back to square one in the review process and further delays for construction. Following the ruling, Lise Bacon announced that Québec would abandon plans to study the impacts of the infrastructure and the dams and reservoirs separately, and would comply with the ruling of the Federal Superior Court. Bacon warned however, that Québec would have to begin construction within one year in order to keep up with projected electrical demands. When asked what would happen if the project failed the environmental test, an irritated Bacon replied: "We'll go nuclear, that's your

---

65 André Picard, "Ottawa chided by judge over Great Whale project," The Globe and Mail [Toronto] 18 July, 1991: B1.

answer."[66]

One week later, Ottawa appealed the Federal Court ruling which ordered the federal review under the 1975 JBNQA. James O'Reilly, a lawyer who represented the Cree in the signing of the JBNQA and who continued to represent them in the Great Whale proceedings said that Ottawa did not want authority to stop the project, based on the delicate constitutional situation. "It's a hot potato," he said. "They don't want to be seen in this time of constitutional crisis to be able to control in any way hydro-electric projects in Northern Québec."[67]

In January 1992, the governments of Québec and Canada, the Grand Council of the Cree and the Kativik Regional Government signed a memorandum of understanding (MOU) incorporating the five different review bodies into one process (see Appendix 5 for committee membership). The MOU also provided for $2 million for participant funding.[68] The Cree said that it was difficult to find Québec scientists and experts, however, who were not dependent upon funding from either Hydro-Québec or government sources, and that this made most Québec scientists reluctant to offer views contrary to their funding sources.[69]

From January through March 1992, the environmental assessment panels and commissions responsible for drawing up the impact assessment guidelines for the Great Whale project held public hearings on the issue. In September, 1992, taking into account 4,000 pages of transcripts based on some

---

[66]Philip Authier and Graeme Hamilton, "We'll accept one impact study of Great Whale, minister says," Montreal Gazette [Montreal] 3 Oct. 1991 : A7.

[67] Dennis Bueckert, "Ottawa appeals Great Whale ruling," Montreal Gazette [Montreal] 11 Oct. 1991: A6.

[68] Evaluating Committee, et. al., Guidelines: Environmental Impact Statement for the Proposed Great Whale River Hydroelectric Project, (Québec: Bibliotheque Nationale du Québec, 1992).

[69] Susan Williams, Hydro-Québec and the Great Whale Power Project, p. 56.

275 verbal submissions and 90 briefs, it released its final guidelines.[70] Jacob Scherr, Director of the Natural Resources Defence Council described the guidelines as "an impressive piece of work," adding that "if followed through, could be one of the most important and significant environmental reviews ever undertaken."[71]

The Great Whale Guidelines

While the Guidelines for the Great Whale project were organized along classic practice, they broke new ground and placed significant conceptual and research burdens on Hydro-Québec.[72] The Guidelines required Hydro-Québec to closely follow the principles of sustainable development as defined by the Brundtland Report, and as adopted by the Hydro-Québec itself in its 1989 Development Plan, while at the same time recognizing the challenges presented by the project's northern and multicultural setting. As such, the utility was required to provide an economic justification of the proposed project including load forecasting, supply and demand-side resources, as well as demonstrate it had sound knowledge of the regional environment including a description of the geology, aquatic environments, and wetland ecosystems. The description of the proposed project was required to include the hydroelectric complex, roads, housing, airports, communications infrastructures, collector systems, local employment, as well as details about the location of power stations, reservoirs and spillways. Then, through superimposition of the proposed project milieu, they were to assess how the project would affect the biophysical and

---

[70] Great Whale Project Public Review Support Office, Press Release, "Beginning of a 45-day Consultation Period on the Great Whale Project Impact Assessment Draft Guidelines," 30 April, 1992.

[71] Jacob Scherr, qtd. in Williams, Hydro-Québec and the Great Whale Power Project, p. 56.

[72] Canadian Arctic Resources Committee (CARC), The EIS Guidelines: Pushing Hydro-Québec into the 21st Century," Northern Perspectives, 20.2 (1992): 10.

social environment.

The Guidelines also required Hydro-Québec to characterize the biophysical and social environment, incorporating the perspectives of local resource users. Because no description of the environment can ever be complete and exhaustive, the proponent was required to carry out a systematic description focused primarily on valued ecosystem components (VECs). These are generally defined as ecosystem qualities or elements, the identification of which are of public concern regarding social, cultural, economic or aesthetic values, as well as those that are scientific. While the identification of VECs was not new practice, the Great Whale Guidelines were specific in that they were required to be identified from within a *multicultural* definition of the environment. The Guidelines outlined that:

> **While the process of classifying the valued components and the structure of the environment is universal, the manner of performing such classifications is culture-dependent. Thus the Cree, the Inuit and other inhabitants of the region affected by the proposed project may well define the environment around them in different ways. Therefore, in addition to defining the environment in accordance with state-of-the-art scientific methods, the Proponent shall also describe it in accordance with the acquired knowledge of the Cree and Inuit, making use, among other methodologies, of those developed in the field of ethno-science.**[73]

Another important aspect of the Guidelines focused on the identification and study of cumulative impacts of the Great Whale project on the Hudson Bay region. This way, for example, Hydro-Québec was to evaluate the cumulative effects of the proposed Great Whale Project on contamination levels or marine currents in Hudson Bay, taking into account existing hydroelectric development in the region, including the La Grande Project, the

---

73 Evaluating Committee et. al., Environmental Impact Statement for the Proposed Great Whale River Hydroelectric Project, Guidelines (Montreal: Great Whale Public Review Support Office, 1992): 27-28.

Churchill-Nelson and Conawapa projects in Manitoba. The Guidelines also required Hydro-Québec to present plans for mitigative and compensatory measures as well as plans for environmental surveillance, monitoring, and long-term management programs in the region affected by the proposed project. [74]

In August, 1993, Hydro-Québec submitted its 30-volume, 5,000 page environmental impact assessment for the Great Whale project to the Environment Ministers and Review Bodies. The study was a collection of 11 years of studies which the utility estimated cost $256 million, or $400 million with interest. It would be 15 months before the Review Bodies fully examined the document. In the meantime, Hydro successfully negotiated a deal with the Inuit, guaranteeing them more than $500 million in compensation over 50 years.[75] The Agreement was a major public-relations victory for the utility and the only victory in a public relations war which had left Hydro badly scarred internationally. The signing by the Makivik Corporation angered the province's Cree who were leading the battle against the project. The Cree feared that the Inuit, who had members on two of the five review bodies, would be less likely to oppose the project on environmental grounds if they stood to gain from its construction. Zebedee Nungak, one of the negotiators of the deal, in a strikingly similar position to that which the Cree found themselves in 1975, acknowledged that the Inuit doubted whether the project could be stopped.[76]

Public Relations War

Following the verdict of Justice Rouleau, several events, some

---

[74] Ibid.

[75] Kuujjuarapik Agreement-in-Principle Respecting the Great Whale Complex, 1993.

[76] Graeme Hamilton, "It's a deal for Hydro and Inuit, but Cree are upset by Great Whale agreement," Montreal Gazette [Montreal] 15 April, 1994: A1, A2.

orchestrated, others serendipitous, helped delay the project and cast more doubt over the necessity, and economic feasibility of Great Whale. In order to gain public support in Québec, the Crees commissioned two major studies by independent American firms to show how the high net cost of energy produced by Great Whale would make energy conservation and alternate sources of power such as windmills, seem economically attractive.[77] A feature story in the New York Times Magazine also contrasted the benefits of the Great Whale project versus environmental impacts and Native rights.[78] A decision by the International Water Tribunal scolded Québec and Canada for their handling of the Great Whale project. In a three-page judgment rendered in Amsterdam, the tribunal concluded that the James Bay dams represented an "ongoing intrusion of an alien culture into (the) culture of indigenous communities," and dismissed Hydro-Québec's argument that the JBNQA had settled Cree grievances.[79]

Another major blow to the province and Hydro-Québec came in March, 1992, when New York Governor Mario Cuomo backed down from signing a $17 billion contract which would have supplied 1,000 megawatts of energy to New York from the Great Whale complex. Conservation helped to cut in half the growth in the state's peak demand and changes in regulations also enabled independent power producers to start up small generating stations using natural gas. The month before, the New York state legislature overwhelmingly passed a bill ensuring any new hydro-electricity import

---

[77] See for example, Betty Krier, Ian Goodman, and Matthew Clark, "Employment Effects of Electricity Provision in Québec: The Grande-Baleine Hydro-Electric Project and the Electricity Efficiency Alternative," James Bay Publication Series, Paper #1 (December, 1994).

[78] Sam Howe Verhovek, "Power," New York Times Magazine, 12 Jan., 1992: 16-21, 26-27.

[79] Graeme Hamilton, "Hold off on Great Whale till review is done: panel," Montreal Gazette [Montreal] 21 Feb. 1992: A2.

must meet New York standards for environmental review.[80] Though the cancellation of the deal was announced as being based on economics, it was clear that the Natural Resource Defence Council (NRDC) and other lobby groups had influenced the decision.[81]

In contrast to the favourable support the Cree were enjoying internationally, in Québec ugly sentiments related to the Great Whale debate oozed to the surface when the Review Bodies came south to listen to non-native Québecers. While many offered solid recommendations for a study of the dams, business and labour isolated the Cree, using the hearings to rally public opinion against the natives. Richard Le Hir, Vice-President of the Québec Manufacturers' Association, representing 700 companies and 60 percent of the province's manufacturing capacity, said the Cree- all 10,000 of them- have taken the people of Québec "hostage". He likened Cree society to an aristocracy based on bloodlines, and said their society clashes with 'our democratic system'. Le Hir's resentment of the Cree was shared by others, most blatantly the United Steelworkers of America, representing 50,000 Québec metal-workers who assured the Review Bodies that the Cree's insistence on an environmental review was a charade. What they were really after was control over resources that would make them "sheiks of the north."[82] Matthew Mukash, Chief of Great Whale, countered the attack, accusing Hydro-Québec of conducting a smear campaign against the Cree "designed to aggravate racism in Québec."[83]

---

80 Sarah Scott, "N.Y. pulls plug on $17 billion deal; Great Whale might die, Cree say." Montreal Gazette [Montreal] 28 March, 1992: A1.

81 See for example, Power, producer Glen Salzman, director Magnus Isacsson, National Film Board of Canada, 1996.

82 Graeme Hamilton, "Great Whale hearings turn ugly as business, labour bash natives," Montreal Gazette [Montreal] 23 March, 1992: A4.

83 Ibid.

A major survey undertaken by the CROP polling company revealed that in Québec, more people were in favour of the Great Whale project than against it. A majority of respondents indicated that an economic development project ought to be considered even if it caused significant changes to the natural environment. Moreover, satisfaction with Hydro-Québec was reasonably high, while support for the native position was weak, possibly due to the armed standoff between the Canadian military and Mohawk Warriors at Oka in 1991.[84]

The summer of 1993 saw a public-relations war between the Cree and Hydro-Québec. In April, the Cree along with 42 aboriginal groups signed a full-page ad in the New York Times which attacked Great Whale as "a classic example of the political ambition and disregard for the ecology that has historically characterized mega-development in this hemisphere."[85] The second move in the Cree public-relations effort was the arrival of a joint Cree-Inuit delegation in the Odeyak, a canoe made in Great Whale for International Earth Day in New York City.[86] In May, an ABC television crew shot a documentary on the Great Whale River. In August, Cree guides took 33 American environmentalists, legislators and investment counsellors on a four-day rafting trip down the Great Whale river. The most vocal of the participants was Robert Kennedy Jr., Senior Attorney for the Natural Resource Defence Council. The Cree had tried to organize a second trip with Québec politicians, union leaders, artists and environmentalists, but were forced to cancel due to a lack of interest. "Because of the politics, people think

---

[84] CROP, Study of the Public's Attitude To Issues Relating To the Great Whale Project, a research report prepared for Environment Canada, July, 1991.

[85] Canadian Press, "Cree, Hydro to wage public-relations war," Montreal Gazette [Montreal] 15 April, 1993: A4.

[86] The Odeyak is currently on display at the Canadian Canoe Museum, Peterborough, Ontario.

it's very delicate to show any allegiance to the Cree," Matthew Mukash commented afterwards.[87] For their part, Hydro-Québec paid Burson-Marsteller, a New York consulting firm $2 million to wage a public relations war against the Cree efforts which included less-visible political lobbying and some media advertisements.

Conformity Report

In August 1994, five federal government departments studying the EIS for the federal EARP, concluded that Hydro-Québec's Great Whale environmental-impact study was fundamentally flawed, and needed more work before the proposal could be submitted to the second stage of the approval process- the public hearings. Separate briefs from the departments of Indian Affairs, Environment, Health, Transport, and Fisheries and Oceans stated that the impact study did not respond adequately to the guidelines produced by federal and provincial committees evaluating the project.

The Department of Indian Affairs and Northern Development (DIAND) looked at 137 guidelines pertaining to its area of interest and found Hydro's study lacking for 111 of them. The Department stated the finding "reflects a number of pervasive and significant weaknesses" in the impact study.[88] Environment Canada identified deficiencies in the study's discussion of waste management, climate change and migratory-bird populations. According to the Department, Hydro gave too brief a summary explaining why the massive flooding required for the project would not produce significant emissions of greenhouse gases, believed to contribute to global warming. Hydro's avifauna inventories were also flawed. Fisheries and

---

87 Graeme Hamilton, "Kennedy vows to intensify Hydro battle," Montreal Gazette [Montreal] 13 Aug. 1993: A4.

88 Graeme Hamilton, "Great Whale study needs work five federal ministries conclude," Montreal Gazette [Montreal] 3 Aug. 1994: A4.

Oceans concluded that the study failed to adequately address questions such as impacts on the coastal waters of Hudson Bay, cumulative impacts on the marine productivity of James Bay and Hudson Bay and mercury contamination in reservoirs and in the bays. Transport Canada said Hydro did not provide enough information on the project's impact on navigable water, while Health Canada said Hydro should have looked more closely at the diet of aboriginal people living in the area to be affected by the project. One of the most critical briefs was submitted by the territorial government of the Northwest Territories, which accused Hydro of ignoring the people of Sanikiluaq and the marine environment they depend on. Hydro's study not only erred from the Guidelines the government said, it may have even "complicated and extended the review process."[89]

Three months later on November 16, 1994, the Review Bodies submitted their Joint Conformity Report to the provincial and federal governments. The five Committees concluded that Hydro-Québec needed to correct "major inadequacies" in its environmental impact study on the Great Whale. After more than a year studying the EIS, the Review Bodies concluded the document was flawed in seven major areas including: ambiguities relating to the study area boundaries and schedule; treatment of principal assessment criteria including those related to the concept of sustainable and equitable development; knowledge of the human societies affected; approach to the study of the combined and integrated effects of the project; project justification; appreciation of the uncertainty associated with the project's impacts; and the selection of mitigation measures and the short-

89 Ibid.

and long-term management of the proposed project.[90]

While the Report listed more than 300 specific inadequacies of the EIS, the committees found the document failed to meet the very basic criteria which it was meant to address, including principles of equity and sustainability:

> The Proponent has presented the advantages of hydroelectric energy over fossil fuels with respect to global warming, but has failed to apply the precepts of sustainable and equitable development as a "principal assessment criterion". In particular, the magnitude and importance of the proposed project's irreversible impacts on ecosystems and human societies in the region, and the sustainable and equitable development issues involved in endogenous regional development, have not been examined adequately.[91]

The committees noted that the EIS was based upon a limited knowledge of the societies and cultures directly affected by the proposed project and did not provide a basis for the prediction of the repercussions of the proposed project on these societies. "The extent of knowledge of the biophysical environment and the degree of effort made to acquire it have not been matched with respect to the human environment."[92] The committees also criticized Hydro's cursory analysis of the cost-effectiveness of alternative energy sources as required under Québec's Environment Quality Act, an "inadequate analysis" of conservation programs, and finally, an incomplete financial analysis.[93] The sheer size of the document was also criticized. The committees complained that,

> The compartmentalised structure of the study, the sequential treatment of details, the fact that discussions of impacts are spread throughout the

90 Provincial Review Committee (Comex) et. al., Joint Report on the Conformity and Quality of the Environmental Impact Statement for the Proposed Great Whale River Hydroelectric Project. (Montreal: Great Whale Public Review Support Office, 1994).

91 Ibid, p. 6.

92 Ibid, p. 7.

93 Graeme Hamilton, "$256 million down the drain," Montreal Gazette, [Montreal] 18 Nov. 1994: A1.

document, and the complexity or lack of precise references to support studies, make consulting the work ponderous and complex."[94]

The Beaching of Great Whale

The day after the submission of the Deficiency Statement, the Premier of Québec, Jacques Parizeau shelved the project stating, "In politics, like in many other domains, we never say never, but in this case the project is on ice for a good long while."[95] Parizeau, elected only two months prior to his announcement, stated that the former Liberal regime had a kind of "dogmatic" interest in the Great Whale but that it was "their project, not ours."[96] Parizeau's announcement also included harsh criticism of Matthew Coon-Come, Grand Chief of the Grand Council of the Cree, who had attacked the project and separatism in general a day earlier in a speech delivered in Washington to the American Council for Québec Studies. Coon-Come responded by saying that the announcement confirmed the Cree conviction that the Great Whale was never economically or environmentally sound. While the government of Québec said it did not foresee need for the Great Whale in the future, an adviser to Parizeau, said that the government would give Hydro-Québec no instructions to stop their preparation of the project.[97]

Though the litigative processes initiated mainly by the Cree resulted in favourable decisions, considerable doubt and complications arose in other areas. There was uncertainty as to the accuracy of Hydro-Québec's energy forecasts, questionable motives and an unprecedented environmental review process. The following is a brief discussion of the issues which rose out of the Great Whale debate.

---

[94] Provincial Review Committee (Comex) et. al., Joint Report, p.13.

[95] Philip Authier, Graeme Hamilton, "Québec shelves Great Whale," Montreal Gazette [Montreal] 19 Nov. 1994: A1.

[96] Ibid.

[97] Ibid, A8.

A major point of contention between Hydro-Québec and its critics was the accuracy of its electricity demand forecast. Hydro-Québec says that it needed to build the Great Whale project to meet domestic demand. Between 1992 and 2010, Hydro-Québec forecast an average annual growth in electricity demand of 2.2 per cent but the utility's combined efforts at conservation would result only in a 1.8 per cent growth per year. This growth trend was supported by Québec's Energy Department which projected growth at 2.3 per cent despite the fact that Québec's average annual growth rate between 1989 and 1992 was only 1.4 per cent. In June 1993, Québec's environmental hearing board, the Bureau d'Audiences Publiques sur l'Environment (BAPE), questioned the accuracy of Hydro-Québec's demand forecasts and recommended that independent analysts be called in to review them.[98] To meet the demand, Hydro-Québec claimed it was focusing on energy conservation and improvements to its existing system. Nevertheless, the utility maintained it needed new generating facilities.

Prior to the relaunching of the Great Whale project in 1989, Hydro-Québec had been encouraging domestic and industrial use of electricity within Québec. The principal focus was on residential users, but in an unprecedented way, the utility also began to go after industrial customers to use more electricity by offering heavily discounted prices. Hydro-Québec began to offer heavy industrial users 'shared-risk' contracts where the price industry would pay for electricity would be determined by the prices they received for their products. Subsidizing industry was seen as a way to raise consumption rates and unload power surpluses while creating an increase in the demand for more generating capacity.[99] Since hydroelectric facilities

[98] Susan Williams, Hydro-Québec and the Great Whale Power Project, p. 20.
[99] Wayne Skene, Delusions of Power, p. 119.

generate the most jobs per million dollars of expenditure due to the required investments in civil engineering and construction,[100] new construction would also create tens of thousands of jobs for Québec, which had not yet emerged from the severe recession of the early 1980s.[101]

Throughout the debate, energy analysts as well as Québec and U.S.-based environmental groups questioned the ability of Hydro-Québec to predict electrical demand accurately on a 15 to 20 year horizon. Hydro argued that while uncertain, long-term forecasting is essential in the electricity industry given the period required for construction. Critics said that a specific analysis of Hydro's forecasts identified flaws including over-optimistic estimates of demand in the domestic, industrial sector, and export market. Critics also claimed the utility had already saturated potential electricity markets abroad. Others claimed that the forecasts didn't look far enough ahead. The forecast depends in large part on demographic trends between now and 2010: Hydro says Québec's population, which makes up both the utility's residential customers and most of the market for its industrial clients, would increase until then. Though the EIS was silent on this point, virtually all demographers agreed that Québec's population will dip sometime after 2010. The only disagreement was whether it will do so immediately after 2010 or a decade or more afterwards.[102] Clearly, Hydro-Québec's forecasts were based on the potential deregulation of the $270 billion a year North American energy market. Hydro-Québec, with its hydroelectric potential in the north is well positioned to profit from its electrical surplus on the open market. Hydro-Québec was granted a licence to export electricity to the U.S. in

---

100 Hydro-Québec, Grande Baleine Complex: Feasibility Study: Summary, p.10.

101 Wayne Skene, Delusions of Power, p. 118.

102 Jacques Henripin, dean of Québec demographers, Université de Montréal. Cited in, "Questions about Great Whale," Montreal Gazette [Montreal] 3 Sept. 1993: B2.

November, 1997.[103] Even prior to a licence, the export market had been the major motivation for new generating stations. In the late 1980s, Québec had signed contracts for firm power with Maine, Vermont, and New York. Hydro-Québec would supply half of Vermont's power needs in the 1990s and by 1999, New York state with about six percent of its electricity. The return from these future deals was estimated by Bourassa to be worth $40 billion.[104] Matthew Coon-Come articulated the criticism that many had raised. "The problem with Bourassa's dream is that it is fast becoming an environmental and economic nightmare," the Grand Chief of the Cree argued. "Why spend billions of dollars to destroy the environment and to destroy my people just to export electricity to the United States? Does this make any sense?"[105] Clearly for the government of Québec, it made economic sense.

In assessing the potential environmental implications of the proposed Great Whale project, Hydro-Québec relied heavily on its experience with the La Grande hydroelectric complex. The utility has stated that "hydroelectric development under the La Grande complex has not upset the ecological balance of northern Québec."[106] Hydro-Québec maintains that the James Bay and Northern Québec territory is "one of the best understood and best researched areas in Canada, largely due to the unique environmental monitoring network established with the first phase of development if the La Grande complex."[107] The utility said that along with its subsidiary, the Société

---

103 See Neal Burnham, "More Damnation in Québec: Hydro-Québec plans to divert eight more rivers to generate additional electricity for the U.S.," Alternatives, 24.2 (1998): 5-6. See also Philip Raphals et Philippe Dunsky (Centre Hélios), Ouverture des marchés de l'électricité au Québec: Options, impératifs d'une réelle concurrence et conséquences pour les prix (Montréal: Option Consommateurs, 1997).

104 Wayne Skene, Delusions of Power, p.118-119.

105 Matthew Coon-Come, qtd. in Wayne Skene, Delusions of Power, p. 121.

106 Susan Williams, Hydro-Québec and the Great Whale Power Project, p. 61.

107 Ibid.

d'énergie de la Baie James (SEBJ), "it has carried out a large number of environmental study programs in conjunction with federal and provincial government departments, universities and private-sector firms."[108]

However, as La Grande has made clear, dams, dikes, powerhouses and roads bring dramatic changes; some of which are anticipated, and others which are unpredictable. McCully notes that other than predicting a river will run dry, the specific impacts of river engineering are extremely difficult to predict and assess.[109] Experience with large dams has demonstrated that they bring with them large-scale impacts. The following is a brief discussion on some impacts of large-scale hydro development with reference to the La Grande project.

Flooding

Perhaps the most obvious ecological effect of a dam is the permanent inundation of forest, wetlands and wildlife. The amount of land submerged understates the impact these areas have for wildlife: river and flood plain habitats are some of the world's most diverse ecosystems. As well as destroying habitat, reservoirs can also cut off migratory routes across valleys and along the river. The trapped sediment also reduces water storage capacity, potentially limiting the life of the reservoir

Erosion

All rivers carry suspended sediments eroded from the soils and rocks over which the river passes. Dams and reservoirs trap much of this sediment, especially the heavier gravels, starving the river downstream of its normal sediment load. The clear water below a dam is said to be 'hungry' and will seek to recapture its sediment load by eroding the bed and banks of the river.

---

108 Ibid.

109 Patrick McCully, Silenced Rivers, (London: Zed Books, 1996): 31.

Over time, all the erodable material on the riverbed below the dam will be removed, and the bed will become 'armoured' with rocks. An armoured riverbed below a dam does not have the gravels needed for spawning of fish and as habitat for benthic (river-bottom) invertebrae such as insects, molluscs and crustaceans. Downstream changes in hydrology and in sediment transport can change the entire river environment and the organisms that live there.

Climatic Effects

During the first years after a reservoir is filled, the decomposition of submerged vegetation and soils can drastically deplete the level of oxygen in the water.[110] Rotting organic matter can also lead to releases of huge amounts of greenhouse gases including methane and carbon dioxide. Though clearing of vegetation in the submergence zone before a reservoir is filled can reduce this problem, it is difficult and prohibitively expensive, especially for large reservoirs.[111]

Mercury

Scientists have only recently become aware of what now appears to be a pervasive reservoir contamination problem: the accumulation of high levels of mercury in fish.[112] Mercury is commonly found in rocks throughout the north in an insoluble form that does not affect the air and water. However, bacteria associated with decomposition of organic matter transform it into methylmercury, a central nervous system toxin, which vaporizes into the atmosphere, and then falls back into the water. From there, it enters the food chain and bioaccumulates. New reservoirs induce a burst of decomposition

110 Ibid, p. 38.
111 Ibid.
112 Ibid, p. 39-40.

that accelerates the release of mercury.[113] As Bodaly and Johnston have identified, mercury concentrations in fish increase considerably after impoundment and flooding in all climatic regions of the world. Mercury problems in reservoirs in boreal areas however, appear to be more severe than in warmer areas.[114]

On the La Grande River, levels of mercury in fish downstream climbed to six times their normal levels within months of the project's completion. Mercury concentrations do not cause acute effects on fish themselves, but pose a potential risk for human health as a result of their consumption. Fish containing concentrations greater than 0.5 parts per million (ppm) of mercury in their flesh cannot be sold commercially in Canada, and the Canadian Department of Health and Welfare recommends that fish with greater than 0.2 ppm of mercury should not be consumed on a frequent basis.[115] The concentrations of mercury in fish in reservoirs of the La Grande complex in Northern Québec are very high, with predatory fish such as northern pike having average mercury concentrations in muscle as high as or exceeding 3 ppm.[116] A 1984 survey of Cree living in the village of Chisasibi found that 64 percent of the villagers had unsafe levels of mercury in their bodies.[117] Hydro-Québec's environment branch says mercury levels reach a peak during the first few years following impoundment and then gradually return to levels found under normal conditions after 20 to 30 years.

---

113 Peter Gorrie, "The James Bay Power Project," p. 27.

114 R.A. Bodaly and T.A. Johnston, "The Mercury Problem in Hydro-Electric Reservoirs with Predictions of Mercury Burdens in Fish in the Proposed Grande Baleine Complex, Québec," James Bay Publication Series, Paper #3 (December, 1992).

115 Ibid, p. 2.

116 D. Brouard et. al., "Evolution of Mercury Levels in Fish of the La Grande Hydroelectric Complex, Québec (1978-1989)," Summary Report, (Montreal: Vice-présidence Environment, Hydro-Québec & Groupe Environment Shooner, inc., 1990).

117 Peter Gorrie, "The James Bay Power Project," p. 27.

Methylmercurization, according to the utility is therefore a 'temporary' problem.[118] The Canadian Department of Fisheries and Oceans' Freshwater Institute estimates however, that mercury levels do not normalize for 80 to 90 years.[119]

While mercury concentrations in fish are expected to remain high for a long period after impoundment of a new reservoir, the duration of elevated concentrations is not precisely known; the longest data base from the monitoring of mercury concentrations in fish in a reservoir is now only about 15 years old. Concentrations of predatory fish in boreal regions currently being monitored remain elevated 10 to 15 years after impoundment and problems are therefore expected to persist for 20 years or longer. The time course of elevated mercury levels in fish in reservoirs appears to depend on the degree of flooding and on the species of fish.[120] Table 1 shows the predicted levels of mercury concentration in fish resulting from the Great Whale project.

While Hydro-Québec maintains that not only is the problem of mercury a temporary one, but it can also be managed by setting maximum consumption levels and by encouraging fishing outside the reservoirs. Hydro-Québec also argues that fish can be substituted by other wild game such as waterfowl. The Cree however, say the mercury problem has caused them to lose the "spiritual connection" they have long felt with fish. Traditionally, fish has been an important part of the Cree diet and culture, providing a cheap and reliable source of high-quality proteins and minerals. Socially, fish

---

118 Hydro-Québec, The Natural and Human Environment of the La Grande Complex (Québec: Hydro-Québec, Vice-présidence Communications et Relations publiques, 1992): 28.

119 Susan Williams, p. 63.

120 R.A. Bodaly and T.A. Johnston, "The Mercury Problem in Hydro-Electric Reservoirs," p. 3.

Table 5.1

Concentrations are given in parts per million

Reservoir	Pike	Whitefish
GB-1	1.57	0.52
GB-2	1.67	0.54
GB-3	1.86	0.56
Bienville	1.08	0.24

Source: R.A. Bodaly, T.A. Johnston, "The Mercury Problem in Hydro-Electric Reservoirs with Predictions of Mercury Burdens in Fish in the Proposed Grande Baleine Complex, Québec," James Bay Publication Series, Paper #3 (December, 1992): 7.

is shared in feasts, increasing social ties within families, and an important form of physical activity. The problem of mercury contamination, stressed Bill Namagoose, Executive Director of the Grand Council of the Cree, "is sheer terror for our people."[121]

Altered Habitat

The reservoirs of the La Grande complex cover more than 10,000 square kilometres. The Great Whale complex would have required the flooding of an additional 1000 kilometres of forest and vegetation.[122] The utility claims that in percentage terms, the amount of land flooded in the James Bay region is not very large. Moreover, the utility argued that flooding does not destroy an area but instead, "replaces terrestrial habitat with aquatic habitat."[123] The result, said Hydro was that since reservoirs are more

[121] Bill Namagoose, qtd. in Susan Williams, p. 63.
[122] "Freshwater seal symbolizes fears for wildlife," Globe and Mail [Toronto] 17 April, 1991: A1.
[123] Hydro-Québec, The Natural and Human Environment of the La Grande Complex, p.24.

biologically productive than the terrestrial ecosystems they replace, the potential is for an increase in harvesting.

Traplines divide hunting grounds amongst Cree families. The La Grande affected approximately 3 percent of all traplines within the James Bay territory, including half of the Cree community of Chisasibi's 40 traplines. The Great Whale project would have flooded about 5 percent of the territory used by the Cree of Great Whale for hunting and fishing. Bill Namagoose underlined the significance of the seemingly small loss associated with Great Whale. "It's an unrealistic vision. If they cut off your foot, would you say that 5 percent of your body was affected? For us, the flooded river shoreline is the most valuable land, the richest in species."[124] The Cree maintained that Hydro-Québec understated the impact of flooding small, shallow lakes and streams in the region. The utility countered that the project's impacts would be moderate because of the size of the territory, the relative homogeneity of the biological environment of Northern Québec, and the low diversity of species that inhabits it.[125]

Disrupted River Flow

Another major hydrological impact of hydro dams is to impose on the river an unnatural pattern of flow variations. In North America, peak electricity consumption occurs during winter when river flows are naturally at their lowest as the water is frozen up in ice and snow. To meet the demand for electricity during cold weather, dams and diversions have increased the winter flow on the La Grande River by eight times, and in order to store water for the following winter, have eradicated the spring flood.[126] Rapid

---

124 Bill Namagoose, qtd. in Susan Williams, p.66.

125 Ibid.

126 Patrick McCully, Silenced Rivers, p. 46.

fluctuations in reservoir levels can prevent fish spawning by alternately exposing and submerging the favoured nesting areas in shallow waters. Nests of waterfowl may be similarly affected. The fluctuations also prevent riparian and marsh vegetation from growing along the reservoir shore and so render lifeless the nearshore shallows- usually the most biologically prolific areas of natural lakes and ponds. The hydro-reservoirs on the La Grande River have submerged some 83,000 kilometres of natural shorelines with their fringing woods and shrubs; the shores of the reservoirs, meanwhile have been described as "broad, lifeless banks of mud, rock and dead trees."[127]

As a result of the residence time in the reservoirs, the temperatures of water in the fall and winter become higher than they normally would. Consequently, in the La Grande, water temperatures do not reach critical spawning temperatures until December, whereas normally such temperatures would be reached in late October.[128] In summer, water temperatures are more characteristic of an arctic river as a result of the cooling effect from the large reservoirs.

The overall effect of these environmental changes, as Berkes has argued, may be greater than the sum of the individual effects, and may lead to"destruction by insignificant increments".[129] Other obvious impacts resulting from the La Grande complex was the flooding of Cree trap-lines and other productive hunting grounds, and the flooding of areas used for travel of caribou and other migratory animals. Less obvious impacts resulting from flooding like methylmercury contamination may be yet to be realized.

---

127 Sean McCutcheon, Electric Rivers, p. 98.

128 Ibid.

129 Fikret Berkes"The Intrinsic Difficulty of Predicting Impacts: Lessons from the James Bay Hydro Project," Environmental Impact Assessment Review, 8 (1988) : 201-220. See also Fikret Berkes, "Some Environmental and Social Impacts of the James Bay Hydroelectric Project, Canada," Journal of Environmental Management, 12 (1981): 157-172.

Other environmental concerns relating to the Great Whale project included matters of health, including the impacts of dietary changes that would result from the proposed project on the health of humans, contamination of wildlife and the identification of any other contaminants. Factors such as potable water, waste water and solid waste disposal, electromagnetic fields, stress, the quality of life, and the greenhouse effect resulting from the release of greenhouse gases, all caused local concern. As a result of the flooding, migratory corridors- both terrestrial and marine- would have been altered. The movement of beluga populations and the corridors used by caribou would have been disrupted. New roads also open up the area for sport hunting and fishing by non-residents. Finally, the project would have had an uncertain impact on the social cohesion of native communities in the territory through the impact on the social organization of the communities.

Discussion

The conflict over the Great Whale project was not a replay of the La Grande complex. Although the proponents and their arguments had not changed, the number and vigour of the opponents had, as did the persuasive force of their arguments against the project. The Cree had more money, experience, and contacts than they had during the 1970s. The Cree also had many supporters on both sides of the border. As environmental concerns moved from the margins towards the mainstream of politics, so too did international sympathy with native peoples.

As Jan Beyea, a senior scientist for the National Audubon Society told an American committee studying the Great Whale project, "Hydro power in moderation is one of the best energy sources we have. Hydro power in excess

is one of the worst energy sources we have."[130] Given the predictable environmental and social impacts the Great Whale project would have had on the ecological systems of the Hudson Bay bioregion, in addition to its lack of economic justification, the decision to shelve the Great Whale project was an ecologically rational one. The destruction by 'insignificant increments' resulting from the cumulative effects of hydroelectric development in the region including global warming and the disruption of aquatic ecosystems, further confirms a sound decision in the face of uncertainty. While Hydro-Québec has tried to justify large-scale development in the north by extolling the clean and renewable virtues of hydroelectricity, the La Grande complex has demonstrated that hydroelectric development has had serious impacts both on the environmental and social systems in Northern Québec.

One of the most obvious differences between the La Grande project and the Great Whale proposal was the environmental assessment process. Whereas the La Grande project had steam-rolled ahead without any consultation with local residents or provisions for environmental protection, the Great Whale EA was regarded as setting a new standard for northern EA and confirmed the utility and necessity for using traditional ecological knowledge in the EA process.[131] Due to the size of the project and the prominence of the undertaking on the domestic and international political stage, the expectations for the review process were extremely high. The unique political organization under the JBNQA ensured the Cree and Inuit key roles in negotiations. The Review Bodies, in part due to pressure from their aboriginal representation, took an uncompromising stance in assessing

---

130 Associated Press, "Massachusetts considers review of Great Whale," Montreal Gazette [Montreal] 8 April, 1994: A5.

131 Mary May Simon, Inuit: One Future-One Arctic, The Trent University Northern Chair lecture series (Peterborough: Cider Press, 1993).

the project. As a result, the recognition of values and importance of local knowledge was a prominent feature in the EA study. The Guidelines for the EIS, issued after a long series of public scoping hearings, were extremely demanding on the proponent, both on a technical and on a conceptual level.

The Great Whale EA Guidelines subscribed to basic principles of sustainable development, with a focus on the cumulative effects of hydro development in the region, and the mandatory use of aboriginal knowledge for describing valuable ecosystem components. The Great Whale environmental assessment also broke new ground because it reversed the burden of proof onto the proponent, requiring Hydro-Québec prove that it was in society's best interest that the project proceed.[132] This involved not only looking at the economic, environmental and social impacts of the proposed project, but also at the possible alternatives to such an undertaking. Hydro-Québec was also required to prove that the project would not create unacceptable inequities for residents, and would not bring with it impacts which would diminish the possibility for future economic development in local communities. Consultation with the local population and access to the decision-making process was also recognized as a critical condition for an equitable environmental assessment.

While the previous chapter established that EARP and CEAA closely resemble a development model of environmental assessment, the Great Whale Guidelines, created under the provisions of the James Bay and Northern Québec Agreement, allowed for a broader, more holistic EA which

---

132 For a more detailed examination of how the Guidelines placed the burden of proof on the proponent, see Philip Raphals, "Effectiveness of Environmental Assessment in Canada: The Acceptability and Optimality Paradigms," presentation at the Eighth Workshop of the NATO/CCMS Pilot Study on Methodology, Focalisation, Evaluation and Scope of Environmental Impact Assessment, 26-30 April, 1995, Kusadasi, Turkey; Philip Raphals, personal communication.

closely follows that of the sustainability paradigm. A broad scope, public participation with adequate intervener funding, and limited discretionary powers all describe an EA within the sustainability model EA. Moreover, unlike the developmental model of EA which does not question the need for economic growth, the Great Whale Guidelines challenged the underlying rationale and need for the project, and required the consideration of alternative means to satisfy the needs of the larger population.

Despite the comprehensive nature of the Great Whale Guidelines however, all the major decisions about the Great Whale project were the result of economic, political, and consumer pressures, rather than concern for the northern environment or its residents. Poor consumer demand, project delays, cancelled contracts, international opposition, a newly-elected provincial government, and to a lesser extent, the ground-breaking EA all contributed to the beaching of the Great Whale project. While the Cree and Inuit, as well as other appointed members on the Review Bodies had a genuine interest in seeing a comprehensive assessment take place,[133] the actions of both levels of government reflected the concentrated costs and diffuse benefits inherent to the practice of EA and environmental protection.

Grace Skogstad and Paul Kopas have described the federal-provincial relationship as being in a process of transition.[134] They argue that "governments at at the two levels have engaged in a certain degree of 'competitive federalism' to obtain public support by providing citizens with the policies they want."[135] For Great Whale, they suggested that "Québec and

---

133 Brian Craik, personal communication, 22 July, 1998.

134 Grace Skogstad and Paul Kopas, "Environmental Policy in Federal System: Ottawa and the Provinces," Canadian Environmental Policy: Ecosystems, Politics, and Process, ed., Robert Boardman (Toronto: Oxford Press, 1992): 43-59.

135 Ibid, 54.

Ottawa became locked in a protracted negotiation concerning the scope and nature of federal authority to review the environmental impact of the Great Whale project."[136] As this chapter has demonstrated however, the federal government, while initially making an effort to coordinate a single EA review, tried to pass off all environmental responsibility to the province of Québec. Ottawa claimed they had jurisdictional immunity and "could not stop" Québec from splitting the review process in two, or from beginning construction on the project infrastructure.[137] In light of the national unity crisis that followed the demise of the Meech Lake Accord, the government was not eager to provoke a conflict with the Québec government over the environment.[138] The federal government clearly sought to avoid conflict with the province by consenting to a two-stage review under EARP, and by abstaining from the more authoritative James Bay and Northern Québec Agreement, which allowed for Cree and Inuit representation on the review committees and decision-making powers for the Inuit. The proposal for a two-stage review was strongly opposed by environmentalists and the Cree who both feared that after the province had already spent hundreds of millions of dollars on infrastructure, it would not seriously consider cancelling of the project. Bill Namagoose said that the governments were not negotiating on their own goodwill. "We spent three years in court, going all the way to the Supreme Court to get them here. We forced them kicking and screaming all the way, to do an environmental review."[139]

For their part, the government of Québec fiercely defended what they

---

136 Ibid.

137 Peggy Curran, "Ottawa can't stop Québec building roads, de Cotret says," Montreal Gazette [Montreal] 21 Nov. 1990: A5.

138 Kathryn Harrison, Passing the Buck, p. 149.

139 Susan Williams, Hydro-Québec and the Great Whale Project, p. 58.

perceived to be sole provincial jurisdiction over the development of Great Whale. The province viewed the federal presence in arena of environmental protection a threat to its ability to control the development of its natural resources. This fear was made patently clear by Energy Minister Lise Bacon when she charged that, "on the pretext of protecting the environment, the federal government has in fact given itself the possibility of intervening in the overall management of natural resources in Canada...Tomorrow it could be forestry, it could be mines,"[140] For Québec, the development of hydroelectric power has been strongly equated with nationalism and the economic strength of the province. As journalist Francine Pelletier noted:

> I think a lot of Québecers would agree with the Cree that Hydro-Québec doesn't do everything right. But this isn't any old company, Hydro-Québec. This is the instrument of emancipation of 'La Belle Province'. It is the way Québec went from an age of darkness to an age of light. You just don't beat up on a Sacred Cow (like) Hydro-Québec.[141]

While the federal government sought to avoid conflict with Québec over the environment, in the wake of the Rafferty-Alameda decision, it had little choice.

It is necessary to acknowledge the key roles of environmentalists and aboriginal peoples in the campaign against the Great Whale project. The Cree, not believing their concerns would be adequately addressed by either the federal or provincial governments, targeted the end-users of the electricity in New England, and also to concerned groups in Europe. The Cree coordinated an international campaign which included: lobbying the state legislatures of New York, Massachusetts, and Vermont; attending the hearings of the New York State Standing Committee on Energy; running print campaigns abroad;

---

140 "Québec Says, 'hands off' energy policy," Ottawa Citizen [Ottawa] 26 October 1990: F5.
141 Power, Producer Glen Salzman, director Magnus Isacsson, National Film Board, 1996.

establishing contacts with several U.S. public-interest groups, and finally; the arrival of the Odeyak, a kayak carrying both Inuit and Cree in New York harbour for Earth Day. While these efforts alone may not have been enough to force the cancellation of the project, there is no question that the heightened profile of the project tipped the balance of power, and contributed to the cancellation of several large energy contracts. Clearly, the gaze of the international community forced the province to undertake a more comprehensive environmental review.

The fatal blow to the project came the day after the submission of the Review Bodies' Adequacy Report. An opportunistic Jacques Parizeau saw a way for his government to gain support from native groups, the international community and from the general public who for the most-part, had harshly criticized the previous Liberal government's inexorable support for the project and seeming disregard for the environment and native affairs. While Québec business and labour unions vocalized their opposition to the decision, it diffused a politically volatile situation for a new government seeking broad support in its ultimate goal of sovereignty. The decision also denied critics the opportunity for criticizing the province's utility for wasting hundreds of millions of tax dollars on a flawed EIS study.

The Great Whale project has not yet been built, although rumours of its resurrection did surface in the summer of 1997. By 1998 however, the cost of generating electricity from the Great Whale project would have reached an unprofitable 6 cents/Kwh. Hydro-Québec president André Caillé responded to this figure by stating that, "Maybe it's strange to say, but I suppose we're lucky we haven't had that one."[142] In light of the federal and provincial reluctance

142 Don Macdonald, "No risk at Churchill: Caillé," Montreal Gazette [Montreal] 11 March, 1998: F1, F3.

to jeopardize economic development for environmental protection, it is indeed fortunate that amongst other factors, a sagging energy market and cancelled contracts led to the demise of Great Whale. The experience of Great Whale leads to a disturbing conclusion: when a government proposes a massive, publicly-funded development project with serious and irreversible environmental and social impacts, 'luck' shouldn't have any place in decision-making. Environmental assessment is an invaluable process which was developed to inform major resource decisions. When the exercise is viewed by government as a threat, not only is the principle of EA undermined and environmental protection devalued, but so too are democracy and the value of the public in Canadian resource decision-making. In the distance, Montréal still glimmers brightly on a cold winter's night. No one grovels by candlelight, nor has anyone peeped the word 'nuclear' since Lise Bacon's dramatic prediction in 1990.

The following chapter describes the recent mineral bonanza in Labrador and the proposal to build a mine and mill near Voisey's Bay. While decision-making in the federal context closely follows the model developed in the preceding chapters, there are some notable differences between the two examples. Perhaps most significant is the difference in the scale and magnitude of the two projects. Massive hydro development involves the human reengineering of entire ecosystems. While the ecological footprint of a mine and mill will no doubt have adverse environmental effects, its impacts are localized and less intrusive for local populations. While the Great Whale proposal could not be justified in light of its environmental and social costs, an independent Panel at Voisey's Bay concluded that the mine and mill would not result in serious environmental damage and could bring many

benefits to northerners. The potential benefits for the Innu and Inuit of Labrador may be undermined, however, by regulators who continue to view the region as a hinterland to be exploited, rather than a homeland to be protected.

Chapter Five
The Rock Hunters of Labrador

Mining is not local, but global. Just as the ore that is taken from our land becomes part of a global economy, the environmental consequences of mining and smelting become part of the global environment. We have to take these consequences into consideration.[1] -Daniel Ashini, Innu Nation

In October 1993, two geologists prospecting for diamonds on Labrador's North Coast spotted a rusty outcrop on a hill, near Voisey's Bay (Figure 5.1). Their discovery turned out to be one of the largest and richest deposits of nickel, copper and cobalt in Canada, and possibly, the world.[2] The official announcement of the find set into motion a maelstrom of exploration activity along the coast. By the end of 1995, much of Northern Labrador had been claim-staked for mineral exploration. Helicopters carrying geologists, technicians and support crews from more than 70 mining companies descended upon the barren granite, fens, and spruce forests of Labrador in search of their own Voisey's Bay. As one Inuk from Nain commented, the 'rock hunters' had arrived. A region devoid of any major industrial development was on the cusp of becoming a new Mineral Capital.

Following the discovery, the world's largest nickel producer,

---

1 Innu Nation, "Innu Nation Country Report on Mining Activities," excerpt from speech by Daniel Ashini at International Consultation on Mining and Indigenous People , London, UK 6-16 May, 1996.

2 The exact size of the deposit is not yet known, but Voisey's Bay Nickel Company estimates the mineral resource at 150 million tons. Voisey's Bay Nickel Company Limited, Voisey's Bay Mine/Mill Project Environmental Impact Statement: Project Description and Planning, Volume 2 (St. John's: VBNC, December 1997):1-3.

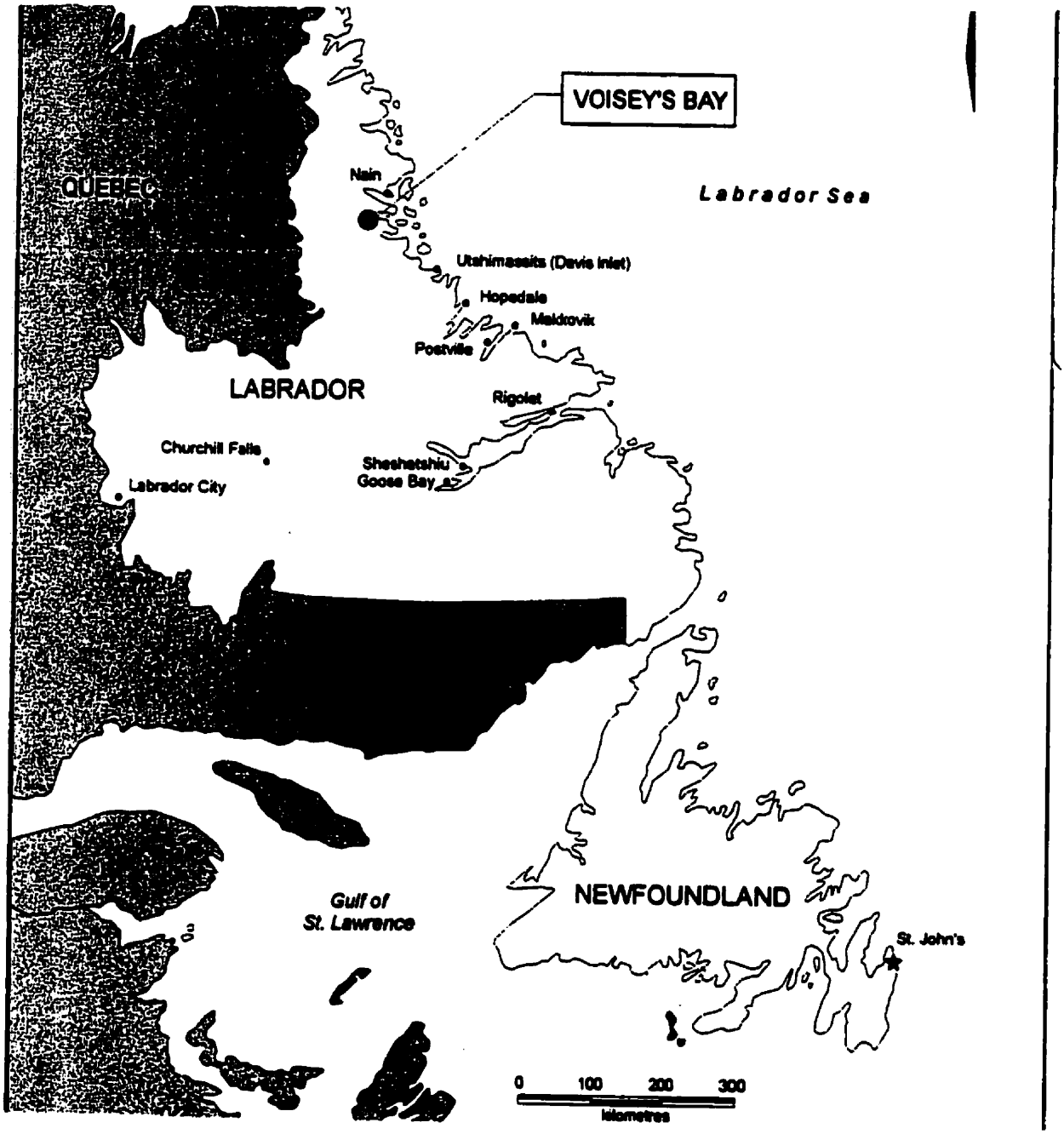

Figure 5.1 Location of Northern Labrador and the Voisey's Bay Project

Source: Voisey's Bay Nickel Company Limited, Exploration Support Works at the Voisey's Bay Mineral Exploration Site (St. John's: VBNC, 22 April, 1997): 5.

Canadian-owned Inco Limited, purchased the claim block and the Voisey's Bay Nickel Company Limited (VBNC), from Diamond Fields Resources (DFR)[3] for $4.3 billion.[4] VBNC has since proposed to build a mine and mill near Voisey's Bay to extract and process the estimated 150 million tons of ore encased within the ancient Precambrian bedrock. The Voisey's Bay Project would consist of three mines- one open pit, and two underground- as well as a mill where ore would be crushed, ground and separated into concentrates, tailings and waste-rock. The concentrates would be shipped in tankers to an undetermined location for smelting and further processing. The company has estimated the market value of the deposit to be approximately $20 billion- enough ore to keep the project in operation for at least 25 years.[5]

While the mineral rush in Northern Labrador has commanded much interest from the mining and investment communities, the discovery also highlights the recurring dilemma of how to strike a balance between industrial development, environmental protection, and the legitimate needs of aboriginal peoples. The Voisey's Bay region has been used for centuries by the Labrador Innu and Inuit who hunt and camp in the surrounding bays and forests, which provide important habitat for caribou, wolves, bears, and migratory birds, including the endangered Harlequin duck and the Peregrine falcon. The area is also significant for its archeological and ancestral burial sites.[6] On a flight over the Voisey's Bay area, the former premier of

---

[3] In fact, it was Archaean Resources Ltd., a junior company from Vancouver contracted by Diamond Fields Resources (DFR) to do the exploration work. For the purpose of simplicity, the discovery is attributed to DFR. See Jacquie McNish, The Big Score (Toronto: Doubleday, 1998).

[4] Allan Robinson, "Inco to halt Voisey's Bay work," Globe and Mail [Toronto] 28 July, 1998: B1,B6.

[5] Of course, the timeframe depends of the production rates and capacity of the facilities at Voisey's Bay. The Panel studying the proposal has stated clearly that in order to avoid the "boom and bust" phenomenon associated with mining, and for there to be ample time for the realization of lasting benefits to local communities, the project must be in production for at least 20-25 years.

[6] Voisey's Bay Nickel Company Limited, Voisey's Bay Mine/Mill Project Environmental Impact Statement, Volume 2, (St John's: VBNC).

Newfoundland and Labrador, Clyde Wells noted that "he didn't see anyone down there."[7] The open spaces of Labrador belie the extent to which the land is used by local residents. Northerners view the territory not as empty wilderness, but as cultural landscapes, comprising of intricate networks of travel routes, campsites, burial grounds and animal migration routes.[8] Resource development which fails to preserve or enhance the environmental quality of the region, and interferes with subsistence and other traditional pursuits, threatens not only established social and economic systems, but may undermine the cultural identity of local residents.

While mining itself is an inherently non-renewable form of resource development, it has been argued that provided the right circumstances, it can serve as a 'bridge' to create conditions for its replacement with more environmentally benign and sustainable activities. For this to occur, communities must be left in a more "viable, durable and equitable condition than what prevailed before the arrival of a project."[9] The pace of this development and control over what is allowed to proceed however, must be in accord with the desires and goals of local communities. The Innu Nation and the Labrador Inuit Association (LIA) have stated that they are not against development per se, rather, they are opposed to the lack of control they have over this development and the lack of influence over their own futures. In

---

[7] Brian Williams, Nain resident, personal communication, 5 August, 1998.

[8] Innu Nation, Mineral Exploration in Nitassinan: A Matter of Respect: Innu Nation Guidelines for the Mining Industry, 1995.

[9] As Robert Gibson has noted, such bridging is not a new concept. "[Bridging] has been used for decades in energy policy discussions...There, the concern has centred on justifiable use of non-renewable hydrocarbons, and the argument from what is now called a sustainability perspective is that non-renewable energy resources ought to be used chiefly for bridging purposes, facilitating their own replacement by technologies and resources that are more benign and renewable." Robert Gibson, "Comments on the March 14, 1997 draft "Environmental Impact Statement (EIS) Guidelines for the Review of the Voisey's Bay Mine and Mill Project," 25 April 1997. See also Malcolm Taggart, "The Free-entry Mineral Allocation System in Canada's North: Economics, Sustainability, and Alternatives," in Northern Perspectives, 25.3 (1998-1999): 8.

evaluating environmental assessment, the real test of successful performance is the extent to which environmental objectives are realized.[10] To what extent has EA served this purpose at Voisey's Bay?

In March 1999, after more than two and a half years, 49 days of public hearings, and a $15 million environmental impact statement (EIS), an independent Panel concluded that the Voisey's Bay Project may offer the people of Northern Labrador lasting social and economic opportunities, and recommended that the Project be allowed to proceed.[11] The Panel's report was well received by both the Innu and the Inuit. David Nuke, president of the Innu Nation said, "We are very pleased that the panel not only listened to us, but heard what we had to say." Chesley Andersen, of the Labrador Inuit Association added that the Inuit were also pleased. "The Panel did a pretty thorough job of addressing the impacts...and where impacts are uncertain, they recommended comprehensive mechanisms for monitoring."[12]

Indeed, the Voisey's Bay example confirms the necessary and valuable role for EA in environmental decision-making as well as for guidance in ways to maximize the benefits in communities affected by resource development. The Panel's recommendations were informed by widespread public consultation, which included submissions on both general and technical aspects of the project, and reflected many local concerns about whether the project would cause irreversible environmental impacts in the region, or prevent local residents from harvesting wildlife. Among the Panel's primary concerns was whether the project would bring social and

---

10 Barry Sadler, International Study of the Effectiveness of Environmental Assessment, p. ii.

11 Voisey's Bay Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, (Ottawa: Minister of Public Works and Government Services Canada, March, 1999) viii.

12 Ibid.

economic benefits to a wide (rather than a narrow) range of people in Northern Labrador. This approach, like the one taken by Justice Berger more than two decades earlier, was designed to ensure that the Project would be consistent with the aspirations of local communities to achieve and maintain ecological integrity, cultural stability, and a sustainable economy.[13] The proponent described the Voisey's EA as "the most comprehensive in Canadian mining history".[14] Further, the process represented the first time aboriginal organizations have been so centrally involved in the development of an EA process in Canadian history.[15]

But while the Voisey's Bay environmental study is remarkable for its approach to northern resource development, it also highlights a fundamental weakness of EA in its present form and one which may undermine its potential to deliver both durable and equitable benefits to local residents. Environmental assessment is only effective when there is a political commitment to the process. As this chapter demonstrates, in light of the diffuse benefits and concentrated costs associated with environmental protection, decision-makers may resist measures for social and environmental protection which impose substantial costs to industry, or which may jeopardize resource development, and thus voters' concerns about the economy and unemployment.

The government of Newfoundland and Labrador has aggressively promoted the Voisey's Bay Project (amongst several other developments including the Hibernia and Terra Nova oil projects) as a way to boost its

---

13 See Peter J. Usher, "Northern Development, Impact Assessment, and Social Change," in Anthropology, Public Policy, and Native Peoples in Canada, eds. Noel Dyck and James B. Waldram (Montreal & Kingston: McGill and Queen's University Press, 1993):98-130.

14 Maura Hanrahan, "Mining for Community Benefits," Alternatives, 25.3 (1999): 4.

15 Lesley Griffiths, Environmental Assessment Panel Chairperson, Voisey's Bay Mine/Mill Project Scoping Sessions held at Hotel Newfoundland, St. John's Newfoundland, April 29, 1997.

economy. The weakest economic performer in Canada in 1997, the province also has the highest unemployment rate, the lowest level of personal disposable income of all the provinces, and is heavily reliant on shrinking federal transfer payments.[16] The Voisey's Bay Project will generate up to 40,000 person-years of employment and $3.3 billion investment in Labrador alone.[17] The provincial response to the final Panel report made obvious the weak relationship between the environmental study and the political and economic objectives of the provincial government. Rejecting several key recommendations of the Panel- which included among other things, the settlement of Innu and Inuit land claims and impact benefit agreements[18] prior to project approval- premier Brian Tobin stated that, "We have to remember that all of these are recommendations. None of these are mandatory obligations imposed on government."[19]

For their part, the federal government demonstrated they were reluctant to interfere with resource development in the province. In a scenario similar to that of the Great Whale, Environment Canada, claiming jurisdictional immunity, maintained it had no legal power to stop the construction of a road, loading dock, and airstrip at the Voisey's Bay site. The courts disagreed however, and granted the Innu and Inuit an injunction until the main review, under the terms established by the MOU, was complete. Other examples also suggest that it is the absence of political incentives, rather

---

16 Voisey's Bay Nickel Company Limited, Voisey's Bay Mine/Mill Project Environmental Impact Statement, Volume 2, p.3-3.

17 Government of Canada, "The Government of Canada Responds to Voisey's Bay Environmental Panel Report," news release, 3 August, 1999.

18 Impact Benefit Agreements, or IBAs are contractual agreements between proponents and aboriginal groups which clearly define aboriginal rights and culture, provides socioeconomic benefits to nearby aboriginal communities and addresses negative environmental, economic and social impacts.

19 Maura Hanrahan, "Mining for Community Benefits," p. 4.

than constitutional constraints or provincial opposition, that may explain why the federal government did not pursue a larger role in environmental protection at Voisey's Bay. At the same time, it is important to note that governments are not monolithic, and as Harrison has suggested, there are important differences between the positions of departments within the bureaucracy, and an elected government's overall position.[20] The Department of Fisheries and Oceans (DFO) was active and highly critical of the proponent's EIS. While the Panel had to go as far as request the participation of other federal departments including Environment Canada and Transport Canada to participate in the review hearings,[21] the expertise of the DFO on fish and marine environments clearly improved the quality of the review and influenced the final recommendations of the Panel for environmental protection at the project site.[22]

The environmental assessment process, created by a four-party memorandum of understanding (MOU), represented an opportunity for government and industry to break new ground not only in environmental assessment, but more specifically, to establish a new partnership with the Innu and Inuit of Labrador based on cooperation, consensus-building and respect. The environmental assessment process, as a clear and credible framework from which all signatories could work from, may have provided such a bridge. Despite some cooperation between parties in early negotiations however, the events at Voisey's Bay suggest that this opportunity may have

---

[20] Kathryn Harrison, Passing the Buck: Federalism and Canadian Environmental Policy (Vancouver: UBC Press, 1996): 26.

[21] Brian Torrie, Voisey's Bay Environmental Assessment Panel Manager, correspondence to Larry Coady, Department of Fisheries and Oceans, 12 April 1997. CEAA registry document VB/Cor.074.

[22] DFO was especially critical of the EIS on the project's impact on habitat and for its lack of baseline studies. See recommendations 17, 21, 22,23, 24 in Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, pp. 60-67.

been lost.

As a way to explain how aboriginals in the region view the Voisey's Bay proposal, Georg Henriksen, an anthropologist who has lived with, and is highly respected amongst the Innu of Labrador, has argued that the development must be seen as part of a larger picture which includes an historical understanding of the aboriginal experience of exploitation, neglect, abuse and unfair treatment by the dominant society.[23] Aboriginal leaders cite the high levels of suicide, alcohol and solvent abuse, and family breakdown within the communities as a result of the way governments have dealt with them.[24] Following the discovery of nickel, mineral companies were perceived by residents to roam over the land at will, and there was a general feeling of resignation and fear expressed by many locals that aboriginal voices would not be heard or heeded during the EA hearings. Thus, the Voisey's Bay Project falls into the place of an already established legacy of how non-aboriginal interests have over-run the interests of local aboriginal people. As Henriksen argues, any activity associated with the Project, including the environmental assessment, may easily come to be interpreted in the context of this "master narrative."[25] Exhausted and frustrated after a nine-year struggle from what was ultimately a fruitless effort to eliminate low-level flying, the Innu have charged that EA is a toothless policy "set up to defeat" the Innu.[26] One participant at a mining workshop organized by the Canadian

---

[23] Georg Henriksen, "Social and Cultural Impacts, Voisey's Bay Mine/ Mill Project, Environmental Impact Statement," prepared on behalf of the Innu Nation, Utshimassits, October 16, 1998.

[24] Daniel Ashini, "The Innu Struggle," p. 41; William Barbour, President, LIA, Environmental Assessment Panel for the Voisey's Bay Mine/Mill Project, Transcript of Proceedings of the Scoping Sessions, April 16, 1997: 26; see also Martin Mittelstaedt and Kelly Haggart, "U.K. group calls treatment of Innu 'Canada's Tibet'," Globe and Mail [Toronto] 8 November, 1999: A3.

[25] Georg Henriksen, "Social and Cultural Impacts".

[26] Alexis Lanthem, "Aboriginal People Speak Out on Mineral Development in Labrador," Nitassinan News [Burlington, VT] August 1997: 1.

Arctic Resources Committee (CARC) concluded that EA was plain and simply a "nasty game" played by governments and industry.[27]

For these and other reasons, some aboriginal people felt they could not support the proposed mine under any circumstances. Of greatest concern were the social and environmental impacts and the incompatibility of mining with aboriginal culture. In Nain, the Panel heard from a group of presenters who described a busy local economy with good prospects in fisheries, small-scale quarrying, tourism and crafts. The presenters felt that Inuit communities had a range of economic development opportunities and need not depend on large resource extraction developments such as the Voisey's Bay mine and mill.[28]

At the same time, many residents made it clear that while economic development at any cost must not be an option, new economic activity is important for the future, provided the environmental effects, the timing and the level of control are satisfactory.[29] Since subsistence activities alone can no longer support growing communities,[30] economic development and employment are viewed as a way to ease the social problems and poor living conditions which plague aboriginal communities along the North Coast. During the scoping sessions, it was suggested that the two VBNC exploration sites at Voisey's and Anaktalak Bay were better serviced than the community of Nain.[31] Indeed, poverty and the quality of living conditions in several of

---

27 Susan Wismer, "The Nasty Game: How Environmental Assessment is Failing Aboriginal Communities in Canada's North," Alternatives, 22.4 (1996) 14.

28 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p.16

29 Ibid.

30 Ibid, xv.

31 Ms. Fran Williams, for the Ad Hoc Committee on Women and Mining, Environmental Assessment Panel for the Voisey's Bay Mine/Mill Project, Transcript of Proceedings of the Scoping Sessions, 16 April, 1997: 53.

the communities like Davis Inlet rival those of less developed countries.[32] This fact was not lost on residents of the region who were incensed when millions of dollars were invested into the search for minerals, while aboriginal appeals for basic amenities such as housing, clean water and plumbing- guaranteed to most Canadians- went unnoticed.

While the focus of this chapter is specifically on the Voisey's Bay EA, the implications of this study extend well beyond Northern Labrador's rocky shores. Just as the benefits of job creation and revenues should be seen as vital interests to the province, the Inuit and Innu are also representing the broader interests of the population. The Innu and Inuit are understandably preoccupied with the protection from adverse environmental effects on the territory to which their whole cultural, social and economic lives have been linked for generations. Yet in their commitment for a rigorous environmental review at Voisey's Bay, they represent the interests of the general public insomuch as environmental protection is a right for all citizens.

As argued elsewhere in this report, northern resource development must be compatible with the the socio-political and ecological setting in which it takes place. The chapter gives a brief overview of the ecological and human context of Northern Labrador to underline the ongoing struggle of local residents for control over their futures and to highlight the legacy of neglect by the provincial and federal governments. It is suggested that Voisey's Bay EA should be viewed as a model for its approach to resource assessment because it incorporated regional concerns into its final recommendations. Despite these advances, the case is made that

---

[32] Camille Fouillard and Innu Nation, eds., Gathering Voices.

environmental assessment may fail residents of Northern Labrador as both the federal and provincial governments have approved the project, but have rejected key Panel recommendations. The Voisey's Bay assessment, despite its potential to guide to environmental planning and encourage local empowerment, may continue the unbroken legacy of the master narrative and economic development which overruns the interests of local aboriginal people.

Regional Ecological Context

Labrador is located along the northeastern coast of Canada, south of Baffin Island and northwest of the Island of Newfoundland. Much of Northern Labrador's physical landscape of rounded mountain tops, deep fjords, and gouged depressions were formed by the abrasive movements of glaciers (photo 5.1). Northern Labrador represents a transition zone between Arctic and sub-Arctic climates, whereas the interior of Central Labrador is dominated by a large, relatively flat plateau of lichen-dominated barrens and plateaus which combine to form the rolling landscape typical of southern Labrador (photo 5.2).[33] The total land area of Labrador is equal to three-quarters of the total land mass of the Province of Newfoundland and Labrador.[34]

The North Coast supports a rich variety of wildlife. Terrestrial animals include several herds of caribou, including the George River herd and other

---

[33] Voisey's Bay Nickel Company Limited, Voisey's Bay Mine/Mill Project Environmental Impact Statement, Vol.1 (St. John's: VBNC, December, 1997): 24.

[34] Voisey's Bay Nickel Company Limited, Voisey's Bay Mine/Mill Project Environmental Impact Statement, Volume 2, p.2-2.

Photo 5.1 Coastal Labrador

Photo 5.2 Labrador's interior

large mammals including moose, black bear, and wolf. Other species of furbearers and small mammals are also found, including Arctic hare, beaver, porcupine, and fox.[35] The rivers, ponds and lakes of Northern Labrador provide important habitat for several species of fish, including trout, salmon and char. The marine waters of coastal Labrador support cod, Atlantic salmon, char, shrimp and scallop as well as large marine mammals including seals, porpoises and minke whales. Although fewer in number, beluga, humpback, narwhal, and polar bear are also present.[36] These waters also attract hundreds of thousands of marine birds, including Harlequin duck and the more abundant species such as black scoter, common eider.[37]

Regional Human Context

The Québec-Labrador peninsula has long been occupied by peoples with distinct, but overlapping, territories. The forested interior is the land of the Innu, and the barren coast on the west and east side of the peninsula is the land of the Inuit. The aboriginal groups of the interior regularly use established corridors to the coast however, so their land-use has included movements into, or across, Inuit lands.[38] Similarly, the Inuit use parts of the interior, and, for as long as they have been in Labrador, travelled considerable distances inland.[39] A third group, known as Settlers, or Kablunagajuit, are individuals of mixed Inuit and European ancestry who have established a way of life on the coast in bays adjacent to, and sometimes overlapping the lands of the Inuit.

---

[35] Ibid, p. 2-5.

[36] Ibid.

[37] Ibid.

[38] Hugh Brody, "Permanence and Change among the Inuit and Settlers of Labrador," in Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador, ed. C. Brice-Bennett (Nain: Labrador Inuit Association, 1977): 311.

[39] C. Brice-Bennett, ed., Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador (Nain: Labrador Inuit Association, 1977).

Labrador Inuit

Numbering approximately 5000, the Labrador Inuit or *Sikumiut*, meaning 'people of the sea ice' are the largest aboriginal group in the province of Newfoundland and Labrador.[40] Most Inuit live in one of the five small communities dotting the coast including Nain, Hopedale, Postville, Makkovik, and Rigolet. The community of Nain is the closest settlement to the Voisey's Bay claim block, located only 35 kilometres southwest of the community. Settled in 1771 by Moravian Missionaries, Nain's population of 1,200 is 90 percent aboriginal, and is the administrative centre for the region (photos 5.3, and 5.4).[41]

Inuktitut is the language of the Labrador Inuit and before Confederation in 1949, the language of daily life. Over the past forty years however, the imposition of a provincial educational system has discouraged the use of Inuktitut and reduced its use. Only about one quarter of the population now speaks Inuktitut, although many more understand the language.[42] The more recent influx of outsiders, including prospectors and those with resource development companies, has also created some concern over the loss of Inuktitut.[43] Subsistence activities, including the harvesting of country foods and wildlife, are still very much a part of life for Labrador Inuit. Country foods such as caribou, seal and fish, can make up to 90 percent of Inuit diet and are preferred over imported and store-bought foods.[44]

---

40 Labrador Inuit Association, "Labrador Inuit Fact Sheet," no date.

41 According to a 1991 Census, the population of Nain was 1069, but has since increased. Town Council of Nain, "Town of Nain Information Directory," December 1996: 1.

42 Ibid.

43 Tony Williamson, Seeing the Land is Seeing Ourselves, report prepared for the Labrador Inuit Association, 4 July, 1996: 8.

44 Joanna Lampe, Katie Harris, Frances Murphy, Eco-Research Project: Environmental Health Study Final Report, prepared for the Labrador Inuit Association, October, 1997: 8.

Photo 5.3 Nain townsite from Nain Hill

Photo 5.4 Community life in Nain

The Labrador Inuit Association (LIA), incorporated in 1975, is the political body representing both Inuit and Kablunagajuit. The mandate of the LIA is to promote involvement in all matters affecting the Inuit of Labrador, promote Inuit culture, and to protect hunting, fishing and constitutional rights.[45]

The outlook for employment in Northern Labrador is bleak. While fish stocks along the coast once supported a seasonal commercial fishery, the closure of the cod and salmon fisheries, harvest restrictions on char, and the loss of markets for seal skins- all major sources of income for coastal residents- have all but disappeared. Compounding the employment problem is an extremely high birth rate which has created a bulge of young people who will soon need to earn a livelihood. In Nain for example, 60% of the population is under the age of 25.[46]

The Innu

The Innu of Labrador number approximately 1,500 and live primarily in the communities of Sheshashit and Davis Inlet (Utshimassits). The Labrador Innu are part of the Innu Nation, with a membership of 13,000 spread throughout thirteen communities on the Labrador and Québec sides of Nitassinan, the traditional territory of the Innu.[47] The Voisey's Bay Project will have the greatest impact on the Mushuau Innu, or the 'Innu of the Barrens' from Davis Inlet, located 80 kilometres southeast of the Project site. The language of the Innu is Innu-Eimun.

Utshimassits, which means 'place of the boss' was the name given to Old Davis Inlet because of the trading post established by the Newfoundland

---

45 Labrador Inuit Association, "Mineral Development in Labrador."

46 Tony Williamson, Seeing the Land is Seeing Ourselves: 10.

47 Camille Fouillard and Innu Nation, eds., Gathering Voices: Finding Strength to Help Our Children (Vancouver: Douglas & McIntyre, 1995) xvii.

government and Catholic missionaries. Located seven kilometres south of the present Davis Inlet, some Mushuau Innu began to settle permanently in the Old Davis Inlet, while others returned to the barrens.[48] In 1967, the Province, with financial support from the federal government, relocated 100 Innu to Davis Inlet, on Iluikoyak Island. The province guaranteed the Innu clean water and heated homes (photos 5.5 and 5.6).[49] While initially there was apprehension about moving to an island, making access to inland hunting routes impossible without a boat, many were suffering from food shortages and were tempted by the prospect of a comfortable home. Disappointment was not far behind, as one resident explained:

> So the promise of new houses was kept but we had no water. Government people told us we would have running water and sewers, but our homes were like empty boxes. All we had were stoves. The houses looked good from the outside, but when we got inside and looked up to the ceiling, we could see outside... More houses were built years after but those houses were worse than the first ones...[50]

Several tragedies in the early 1990s focused national and international attention to the health and social problems at Davis Inlet. In February 1992, fire claimed the lives of six young Innu children all under the age of 12, left alone while their parents were at a party.[51] Since no running water or fire hoses were available, bystanders could only watch in horror as the house was consumed by flames. Later, in January 1993, six teens were discovered sniffing solvents in an abandoned shack, threatening suicide.[52] International news

---

[48] Camille Fouillard and Innu Nation eds., Gathering Voices: Finding Strength to Help Our Children: xvii; Timothy A. Powers, "The Green Grass of Home:The Mushuau Innu of Davis Inlet, Labrador," in Avancer: Beyond the Postcard: Missing Snapshots of Canada (Peterborough: Frost Centre for Canadian Heritage and Development Studies,1997): 39.

[49] Innu Nation and Camille Fouillard, eds., Gathering Voices: Finding Strength to Help Our Children: 35.

[50] Ibid, 37.

[51] Ibid, 9.

[52] Ibid, 143.

Photo 5.4 Utshimassits: Place of the Boss. Community life in Davis Inlet

Photo 5.4 Davis Inlet

agencies were quick to condemn Canadian officials for allowing such a situation to exist within a wealthy nation. As former Innu Nation President Katie Rich noted:

> Before gas sniffing and the death of the six children, Davis didn't exist. Until then, the government had been ignoring people. Once the stories were in the news, the community was an embarrassment to governments.[53]

In April 1994, governments made a commitment to the Innu for the transfer of services, self-government, relocation, and land claims.[54] The negative exposure also placed political pressure to improve living conditions, and in 1997, Canada announced it would fund the relocation of Mushuau Innu to Sango Pond (Natuashish), a location 15 kilometres west of the present settlement on the mainland. The deeply-rooted social problems of Davis Inlet will be difficult to overcome. A tentative step towards healing in the community began with the 1998 referendum in which the community of Davis Inlet, population 550, voted for a ban on alcohol. Tragically, Sheshashit followed the lead of Davis Inlet after the suicide deaths of two men in the community in July, 1999.[55]

The Davis Inlet Innu face a similar bulge in birth rates and unemployment as do their Inuit neighbours to the north. The Innu population is young; more than half of the population is under the age of 16.[56] Unemployment in both communities is also extremely high, hovering around 90 percent.[57]

---

53 Katie Rich, President, Innu Nation, personal communication, Davis Inlet, 12 August, 1998.

54 Sonya Dakers, "Mining and Regulation," p. 7.

55 "Alcohol ban imposed after suicides," Globe and Mail, [Canada] 27 July, 1999: A5.

56 Mary G. Alton Mackey, "Nuitshinushunanu: We are Healing Ourselves, A Review of the Healing Efforts of the Mushuau Innu Since 1992," Report submitted to the Mushuau Innu Renewal Committee and the Mushuau Innu Band Council, August 1995: 1, qtd. in Timothy A. Powers, "The Green Grass of Home, in Avancer: Beyond the Postcard: Missing Snapshots of Canada: 39.

57 Timothy A. Powers, "The Green Grass of Home," p.45.

Land Claims

Whereas land claims negotiations in other parts of Canada have been driven by the demand for resources,[58] with the obvious exception of military development, there has been little pressure in Labrador from anyone other than the aboriginal people for land claims settlements. The Labrador Inuit are the only Inuit in Canada without a comprehensive land claim.[59] Accepted by the federal government in July 1978, the Labrador Inuit's Statement of Claim[60] has been plagued with delays resulting from intergovernmental bickering over constitutional responsibilities.[61] In 1990, a Framework Agreement, the first step in a three-stage claims process, was signed between both levels of governments and the LIA. After the announcement of the nickel discovery near Voisey's Bay, the parties agreed to 'fast track' land claims negations. In 1998, negotiators reached a tentative Agreement In Principle (AIP), which was accepted by the LIA membership in July 1999. The AIP provides for exclusive Inuit lands under management of the Inuit Central Government, and a larger area with shared jurisdiction called the Labrador Inuit Settlement Area (LISA). The agreement also provides for Inuit self-government, resource sharing, and co-management.[62]

Like the Inuit, the Innu have also been negotiating a comprehensive land claim. Figure 5.2 shows the overlapping claims of the LIA and the Innu Nation. Accepted for negotiation by the federal government in 1978, a framework agreement was ratified in 1994, and talks accelerated in

---

58 Veryan Haysom, "Labrador Inuit Land Claims," p. 7.
59 Judy Rowell, "Northern Labrador's Biggest Developer," p.13.
60 Labrador Inuit Association, Our Footprints Are Everywhere.
61 Veryan Haysom, "Labrador Inuit Land Claims," p. 6-10.
62 Labrador Inuit Association, "Highlights of the Agreement in Principle," http://www.cancom.net/~franklin/Land_Clai...hts_of_the_AIP, 1999.

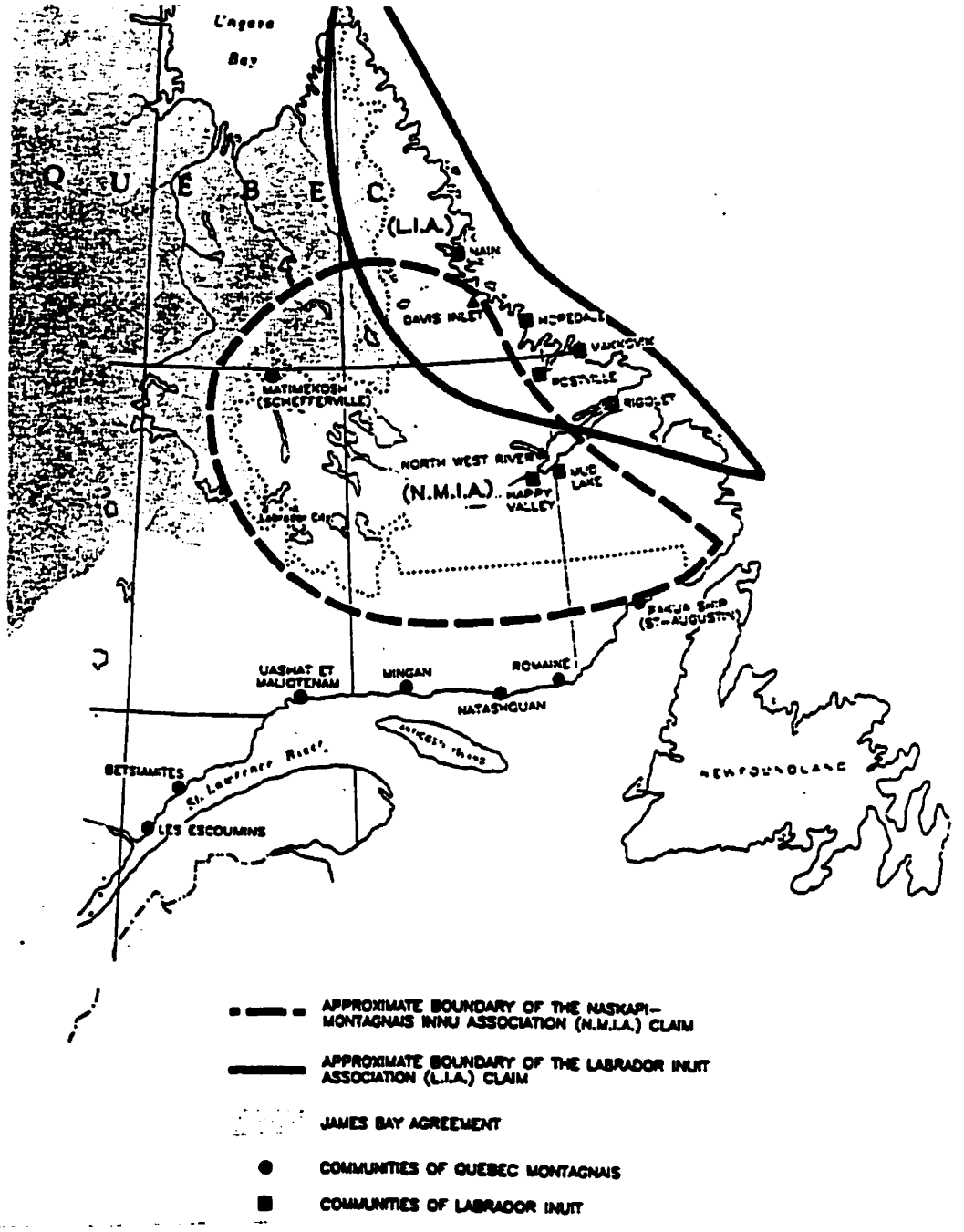

Figure 5.2 Overlapping Land Claims of the Innu and Inuit of Labrador

Source: Canadian Environmental Assessment Agency (CEAA), Voisey's Bay Public Registry, document VB/DOC.057.

1997 as a result of the pressures from Voisey's Bay. In preparing for a final agreement, the Innu are cynical about the intentions of government. A report released for public consultation captures this frustration:

> We know that Canada and Newfoundland have very different goals. We know that the land claims process was not set up to bring justice for the Innu. It was set up by government to establish certainty about what lands can be used for industrial developments. Governments see the negotiations as a real estate deal.[63]

Resource Development in Labrador

The Inuit and Innu of Labrador know that along with economic and resource development, comes social and environmental impacts. In their experience, very few economic benefits have followed. For two decades, the LIA has witnessed the effects from the activities of Northern Labrador's biggest developers, the U.S. and Canadian militaries. In the 1950s, the United States set up radar sites as part of the Distant Early Warning (DEW line) system in Hopedale, Saglek, and Cape Makkovik. The clean-up of thousands of tons of PCB-contaminated soil from these bases has only recently begun.[64] As low-level flying has escalated over the years, Inuit have become increasingly uneasy about its potential effects on wildlife, especially on the George River Caribou heard, waterfowl, and furbearing animals. Inuit claim the overflights contribute to 'sick' caribou, and hunters have reported animals with abnormalities of the liver they believe is caused by the pollution from the military aircraft.[65]

Many Innu have also stated that their concerns over mining

---

63 Innu Nation, Money Doesn't Last, The Land is Forever, Innu Nation Community Consultation and Land Rights Negotiations (1 July, 1998): 3.

64 Judy Rowell, "Northern Labrador's Biggest Developer: The Department of National Defence," Northern Perspectives, 18. 2 (1990)13; Peter Evans and William Kalleo, "Hopedale gets toxic cleanup," Kinatuinamut Iingaiuk, [Nain] Summer/Fall 1997: 7; Peter Evans, William Kalleo, "Saglek gets long overdue cleanup," Kinatuinamut Iingaiuk, [Nain] Summer/Fall 1997: 12.

65 Joanna Lampe, Katie Harris, Frances Murphy, Eco-Research Project, p. 21.

development near Voisey's Bay stems from past negative experiences with development activities on Innu land. Environmental impacts have resulted from massive flooding from the Churchill and other hydro-electric projects, logging and clear cutting, low-level flying, iron ore mining, and sports-fishing and hunting camps.[66] Daniel Ashini of the Innu Nation has described what low-level flying is like for people out on the land:

> ...It is like you are in a library somewhere studying or you are in a church and somebody sneaks behind you and fires off a 12-gauge shotgun right beside your ear. It is terribly frightening and very traumatic for children and especially for elderly people.[67]

Mineral Exploration in Newfoundland & Labrador

It is the recent wave of mining exploration however, which represents the most dramatic change for residents on the North Coast. During the mineral rush of 1995, Nain was used by mining companies as a staging area for flying fuel and supplies to exploration sites. The Town of Nain objected to the large amounts of garbage from the exploration camps being dropped by helicopter into the town dump without permission.[68] The random caching of fuel drums led to speculation that many have been left in the bush, possibly leaking into lakes and rivers. Non-residents working in exploration camps also hunted and fished illegally without licences or harvest restrictions.[69] Innu hunters have been over-flown by helicopter, and the Canadian Wildlife Service expressed serious concern over the impacts of aerial survey work on wildlife.[70] While many of the impacts stemming from these activities may

---

66 Camille Fouillard and Innu Nation, eds., Between a Rock and a Hard Place, p.18.

67 Daniel Ashini, "The Innu Struggle," in On The Land: Confronting the Challenges to Aboriginal Self-Determination in Northern Quebec and Labrador: 40.

68 Vicki Williams, Town Manager, Nain, personal communication, 6 August, 1998.

69 Tony Williamson, Seeing the Land is Seeing Ourselves, p.9.

70 Innu Nation, "Innu Nation Country Report on Mining Activities," excerpt from speech by Daniel Ashini.

have been curtailed, the Department of Mines and Energy had no staff in Labrador to monitor exploration activities.[71] While the Inuit have traditionally been passive, welcoming, and hospitable, many are changing as they see strangers exploiting and damaging their land while they perceive their own situation to be deteriorating.[72]

Mineral extraction and exploration in Newfoundland and Labrador is administered by the provincial Department of Mines and Energy and is based on a 'free entry' system. For a recording fee of $10 per claim, prospectors gain the legal surface and subsurface rights to an unlimited number of claims, each measuring 500 square metres.[73] In 1995 alone, over 250,000 claims were issued within 100 kilometres of Nain.[74] Free-entry is a source of frustration for members of the LIA and Innu Nation who have had outstanding land claims for over 20 years. Fran Williams, former president of the LIA, and now head of the regional radio and television provider, the OkalaKatiget Society, expressed her frustration and sadness over the inequality of the process:

> You hear about claims given out to companies who don't use and respect the land like we do, to develop the land only for money. To know they got it so easily, when we have been in land claims negotiations for 20 years and we still can't say that it is our land. But in the meantime anyone from Vancouver or Toronto can come in and say this is my pocket of land, I bought it and I can work on it and disturb whatever is in the region while they're doing it. It just makes me very angry and sad.[75]

The Whitehorse Mining Initiative (WMI), signed in 1994, was an effort

---

71 Innu Nation, "Mineral Exploration at Emish," April 1996.

72 Susan Tatoosh and Jim Lotz, "Insiders and Outsiders," report on a visit by the Canadian Executive Services Association (CESO) team to Nain, 16 March, 1996.

73 Government of Newfoundland and Labrador, Department of Mines and Energy, "Managing Your Mineral Licence," no date; Eye of the Storm, prod. Paul Pope and Mary Sexton, dir. Nigel Markham, NFB, 1997.

74 Personal communication, Christine Cleghorn, 12 August, 1998.

75 Fran Williams qtd. in Eye of the Storm, 1997; Personal communication, Fran Williams, 5 August, 1998.

by the Canadian mineral industry to bring together government, industry, labour, aboriginal, and environmental groups to facilitate and ensure a future for "sustainable mining." The initiative was in part a means to overcome the widely held perception of a mining culture characterised by some as "optimism, boosterism, exploitation and aggressiveness."[76] In aboriginal contexts, the accord seeks to foster better notification and consultation between companies and communities during exploration and mining.[77] As some in the mining industry are quick to point out however, the WMI does not seem to be working. An official from Noranda, a signatory to the WMI conducting exploration in Labrador noted, "Noranda is operating next door to some junior companies...who are not doing anything. They have no idea what the WMI is."[78]

Governments also have a role under the WMI. While Newfoundland is not a signatory to the initiative, it has reported progress toward some of the WMI goals such as creating incentives for mining. It has, on the other hand, made no effort to fulfil other goals, including opportunities for aboriginal participation in mining and research on more environmentally sound approaches to mining.[79] Tatoosh and Lotz have characterized the gulf which exists between local residents on the North Coast, the mining industry, and the provincial government:

> This [mining] culture is little known and understood by the people of Northern Labrador, who have a great deal of difficulty in sorting out its rhetoric from its reality. In the same way, the traditional cultures and the way of life of people in Northern Labrador appear little understood and appreciated by mining

---

76 Susan Tatoosh and Jim Lotz, "Insiders and Outsiders."

77 For a thorough discussion of the Whitehorse Mining Initiative, see Mary Louise McAllister and Cynthia Jacqueline Alexander, A Stake in the Future: Redefining the Canadian Mineral Industry, (Vancouver/Kingston: UBC/Queen's University Press, 1997).

78 Ibid, 150.

79 Ibid, 148.

> companies. Complicating matters is the perceived lack of concern by the provincial government for the fate of the people in the region...The provincial government sees jobs and wealth in the Voisey's Bay development and other potential mines and obviously wishes to see them go ahead as quickly as possible.[80]

As a response to the seeming indifference of the provincial government, and to the intensification of exploration activities at the Voisey's Bay site in February 1995, the Innu Nation issued an eviction order on the Voisey's Bay claim to Diamond Field Resources. Suspicious that mining companies would continue to ignore local interests, operate only as long as profitable, and leave behind serious environmental impacts, the Innu staged a 12-day standoff with RCMP.[81] Certainly there was ground for concern; Robert Friedland, head of DFR and the first promoter of the Voisey's Project, had recently been the CEO of Galactic Resources Ltd., a company responsible for an environmental disaster at Summitville, Colorado in the late 1980s. Following a toxic spill of cyanide and heavy metals into the Rio Grande water system, the bankrupt company left the U.S. Environmental Protection Agency with a $100-million bill for decontaminating the mine site and nearby waterways.[82] In environmental circles, the Galactic legacy earned Friedland the nickname "Toxic Bob".[83]

The Voisey's Bay Mine and Mill Project

The Voisey's Bay Nickel Company proposes to build three mines and a mill on a peninsula bordered to the north by Anaktalak Bay and to the south by Voisey's Bay (Figure 5.3). The mineral resource at the discovery site is estimated to be 150 million tons and consists of three ore bodies: the Ovoid,

---

[80] Susan Tatoosh and Jim Lotz, "Insiders and Outsiders," p.2-3.

[81] Daniel Ashini, "The Innu Struggle," On The Land, pp. 29-41.

[82] Jacquie McNish, "Friedland on Offensive over Toxic Spill Incident," Globe and Mail [Toronto] 13 March, 1996.

[83] Jacquie McNish, The Big Score (Toronto: Doubleday, 1998): 23.

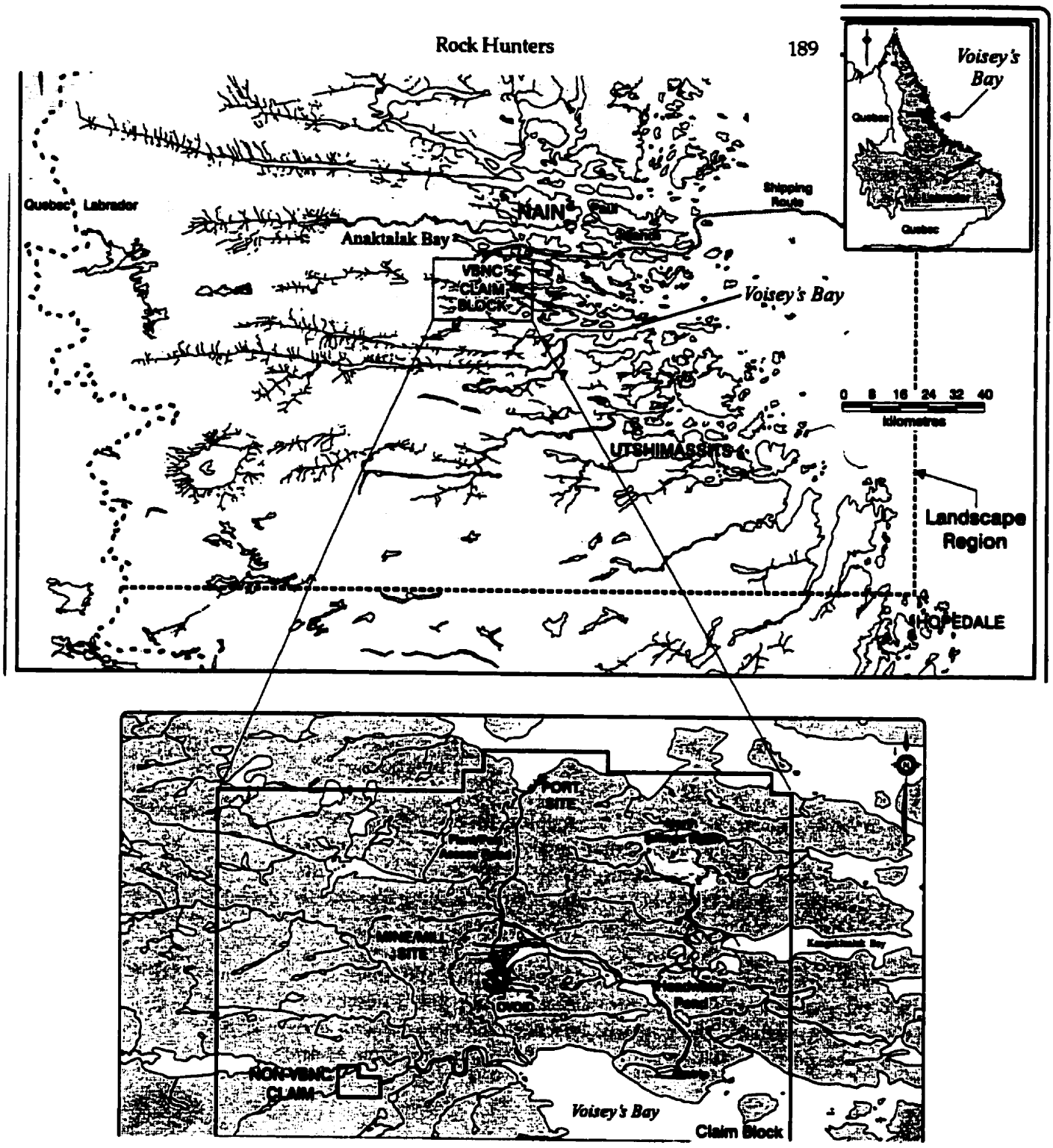

Figure 5.4 Voisey's Bay Mine/Mill Project Site Layout

Source: Voisey's Bay Nickel Company Limited, Voisey's Bay Mine/Mill Project Environmental Impact Statement, Vol. 2 (St John's, NF.: VBNC): 1-2.

where massive sulphides are located close to the surface and will be mined using an open pit method; and the Eastern Deeps and the Western Extension, where underground mining will be required. Ore will be transported to a concentrator and processed into nickel-cobalt and copper concentrates using crushing, grinding and flotation processes. Concentrates will then be trucked to storage facilities at the port site at Anaktalak Bay (Edwards Cove) to await shipment. At full capacity, the mill would process ore at a rate of 20,000 tons per day. Site infrastructure would include a plant, a port facility and storage area at Edward's Cove, access roads, accommodations, and an airport.[84]

During mining and concentrating operations, the Project would produce mine rock and tailings that could generate acid if exposed to oxygen and moisture. These materials would be placed underwater to inhibit acid generation. Mine rock and tailings would be co-disposed in Headwater Pond during open pit mining, expected to last for the first eight years of operation. During underground mining, tailings would be placed in the North Tailings Basin, located abut 10 km northeast of the plant site, and acid generating mine rock would continue to be placed in Headwater Pond. Upon closure, the company intends to decommission the Project site and return it to a "safe and environmentally stable" condition.

Direct on-site employment would peak with 570 workers during the construction phase, 420 during the open pit stage, and 950 throughout the underground mining phase.[85] Only half of the workers would be on-site at any one time however, as employees would work on- site for two weeks, then

---

84 Voisey's Bay Nickel Company Limited, Voisey's Bay Mine/Mill Project Environmental Impact Statement,Vol. 2, p. 3-1.

85 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p.vii.

return home for two weeks.[86] VBNC proposes to transport workers to the project by aircraft from pick-up points in Happy Valley-Goose Bay and local communities. Following the 'adjacency principle', VBNC would give first preference for employment to members of the LIA and the Innu Nation, followed by residents of the mainland portion of the province. The site would be operational year-round, seven days a week.

The ore body at Voisey's Bay is inexpensive to mine because the minerals are high in concentration and close to the surface. The proven reserve has an average grade of 2.83 percent nickel, 1.68 percent copper, and 0.12 percent cobalt. The ore is almost twice as rich as the average grades in the Sudbury nickel basin of Canada.[87] In 1997, it was estimated that the average operating costs over the project's life would be US $0.45 per pound of nickel, and US $0.18 per pound in the first six years of open pit Ovoid production. Average nickel industry costs were then at US $1.85 per pound.[88] Thus, the sale of the copper and cobalt is viewed as a fringe benefit, expected to cover the capital expenditures of the project, making the sale of the nickel pure profit.[89]

Environmental Impacts from Voisey's Bay

In many respects, the proposed Voisey's Bay Project is a conventional mining operation and as a result, many of its effects can be predicted with reasonable certainty.[90] Judy Rowell, environmental advisor to the LIA, suggested that from an environmental, safety and economic standpoint, all

---

86 Voisey's Bay Nickel Company Limited, Voisey's Bay Mine/Mill Project Environmental Impact Statement, Vol. 2, p.1-3.

87 Sonya Dakers, "Mining and Regulation: Voisey's Bay," p. 3.

88 Paul Pigott, "VBNC needs more time on EIS," Voisey's Bay News, [Happy Valley- Goose Bay] October, 1977: 1.

89 Eye of the Storm, 1997.

90 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 7.

concerns raised by the mine are mitigable.[91] Nevertheless, the geographical location of the discovery presents a number of significant environmental challenges including: the protection of the adjacent river systems; the protection of migratory waterfowl and the salt marshes which provide them important habitat; navigation through sea-ice and; the reclamation of the project site in a subarctic environment.[92] Additionally, Voisey's Bay would be the first nickel mine in Canada to discharge its effluent into salt water. Thus, only limited information about the effects of these metals in a marine environment are presently available.[93]

A major area of concern for residents of Labrador is the uncertainty of shipping through landfast ice. Upon freeze-up, ice cover between the coastal islands allows easy travel for hunting or visiting other communities. The passage of ice-breakers will destabilise and make unpredictable ice conditions. Large areas of landfast ice could potentially dislodge 'ice pans' from the shore. In 1972, the only time an ice-breaker made a passage to Nain, an Inuk hunter died after his snowmobile plunged into a crack created by the ship.[94]

The Review Process

The Voisey's Bay Project requires more than 50 permits from both federal and provincial governments for the construction and operation of the mine and mill.[95] Following the registration of the Project in September 1996, the application triggered the Canadian Environmental Assessment Act (CEAA) because of the federal responsibility over the harmful alteration,

---

91 Judy Rowell, personal communication, 7 August, 1998.

92 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project,

93 Ibid, p. xi.

94 The Webb Family, "Voisey's Bay Environment Impact Statement Adequacy Review," submission to the Voisey's Bay Environmental Assessment Panel, 28 March 1998.

95 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 153.

disruption or destruction (HADD) of fish habitat under the Fisheries Act and for a permit under the Navigable Waters Protection Act.[96] The Department of Fisheries and Oceans (DFO) was designated as the lead federal agency and the responsible authority (RA) for the review process. The Project also required permits from the government of Newfoundland and Labrador. In order to participate in a harmonized review process, the province exempted the project from the Newfoundland Environmental Assessment Act, (NEAA).

Memorandum Of Understanding

The Voisey's Bay EA officially began after the signing of a memorandum of understanding (MOU) on January 31, 1997. Under the MOU, the governments of Canada and Newfoundland and Labrador, and the presidents of the LIA and the Innu Nation agreed to establish a joint 'single, effective and efficient' assessment of the effects of VBNC's proposal. The MOU harmonized the EA processes of the federal and provincial governments while recognizing the interests of the Innu and Inuit and their overlapping land claims.

The strength of the MOU, according to LIA advisor Judy Rowell, was that the final document was produced through consensus, enabling all groups to focus energies on the actual study, rather than disputing the procedural aspects of the EA. Further, universal respect for a jointly-appointed panel went a long way to assuring that their rulings would not likely be challenged by signatories to the MOU[97] (see Appendix 5 for the Panel membership). But as Rowell emphasized, the nine-month MOU negotiation period was extremely difficult nonetheless :

> There were obviously different agendas...the aboriginal parties wanted to

---

96 Ibid.

97 Judy Rowell, personal communication, 7 August.

> establish a high water mark and push the frontiers of environmental assessment. You've also got government(s) who want to find the quick, cheap, and dirty route to project approval, so it was getting them to accept a level of risk in an alliance with the aboriginal groups, and I don't think you can underplay that. That was tough for governments to do.[98]

Scope of the Assessment

One specific concern both the federal and provincial governments had with regard to the MOU was an expanded definition of 'environment'. Under CEAA, 'environment' means the components of the Earth, and includes:

> (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 paragraphs (a) and (b).[99]

Under the MOU, this definition was expanded to form a broader interpretation which encompassed more than just biophysical components. While parts (a) and (b) remained unchanged from CEAA's definition, part (c) was replaced with:

> (C) the social, economic, recreational, cultural, spiritual and aesthetic conditions and factors that influence the life of humans and communities.[100]

This expanded definition of environment was significant because it allowed the Innu and Inuit to argue for the inclusion of concepts such as landscape ecology during the scoping phases of the review process.[101] Both groups have advocated landscape ecology or similar concepts as approaches to ensure a holistic EA.[102] Landscape ecology describes the patterns and

---

98 Ibid.

99 CEAA, c.37, "Environment."

100 CEAA, Memorandum of Understanding (MOU) on Environmental Assessment of The Proposed Voisey's Bay Mining Development (Hull: Canadian Environmental Assessment Agency, January 1997).

101 See for example, R. Forman and M. Gordron, Landscape Ecology (New York: Wiley and Sons, 1986); S. Naveh, and A. Lieberman, Landscape Ecology: Theory and Application (New York: Springer-Verlag, 1994).

102 Judy Rowell, personal communication, 7 August, 1998; Larry Innes, Personal Communication, 14 August.

movements of people and animals within a regional context. VBNC resisted this broader definition as a departure from more "conventional and well-organized" guidelines, and feared that it would lead to a more subjective, expensive, and lengthy process. In a submission to the Panel they argued:

> Certain definitions in the MOU are of concern, particularly when those definitions are compared with the corresponding definitions in CEAA. ...[T]he effect of the significantly expanded definitions used in the MOU is to transform the process envisioned under CEAA from a conventional environmental assessment process into one that also focuses on issues such as social, spiritual and cultural factors as well. This represents an approach that is outside the scope of applicable environmental legislation.[103]

The four-party MOU also made a specific provision for participant funding, the translation of major documents into Innu-Eimun and Inuktitut as well as the requirement for the proponent to create a video version of the EIS in all languages. Public registries were created in Hull as well as in Nain, where a public information office was established. The MOU also allowed the panel to consider the relationship between the undertaking and ongoing land-claims, and required a review for the need and alternatives to the project, cumulative effects, follow-up and mitigation, and the incorporation of the precautionary principle.

Sustainability Assurances

To determine how the project would affect regional ecological systems and local residents, the Panel interpreted three objectives of sustainable development to guide its review of the EIS. As decision making criteria, the Panel asked whether the Project would provide for:

> -the preservation of ecosystem integrity and maintenance of biological diversity;
>
> -respect for the right of future generations to the sustainable use of renewable

[103] Voisey's Bay Nickel Company Limited, "Voisey's Bay Nickel Company Response to the Draft Environmental Impact Statement Guidelines For the Review of the Voisey's Bay Mine/Mill Project," 13 May 1997.

resources; and

-the attainment of durable and equitable social and economic benefits.[104]

The EA review concentrated on three main themes: ecosystem integrity, durable benefits and precautionary approaches to development based on aboriginal knowledge. The following briefly examines how each of these criteria was incorporated into the Panel recommendations.

Ecosystem Integrity

The Guidelines required VBNC to describe how the company planned to extract the mineral resource without impairing 'ecosystem integrity' and how it would protect the plant and wildlife resources which form a vital part of the economic, social and spiritual well-being of local resource users. VBNC based their design criteria on ways which would minimize the land-based 'footprint' of the Project. This included prevention of disturbance to terrestrial habitat, prevention of direct discharges into the adjacent watershed and Reid Brook, prevention of acidification of streams and lakes and minimization of impacts on wildlife through employee policies and training. During the public hearings, several aboriginal harvesters suggested that in order to protect the environment and resources which support them, VBNC must pay close attention to dust control, water, tailings and waste rock management, and protection of habitat for plants, fish and wildlife. More specifically, winter shipping and the effects of an airstrip on the Gooselands concerned local resource users.[105]

In their Summary Report, the Panel concluded that the project could be constructed, operated and decommissioned without significantly damaging local and regional ecosystem functions, or valued ecosystem components

---

104 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill, p. 6.
105 Ibid, p.7.

(VECs). At the same time, the panel recognized that because of its location, the Project would have to address a number of significant challenges identified by the local users. To ensure no irreversible impacts occur, the Panel recommended a strict environmental management system using the results of a scientific monitoring program to improve the environmental performance throughout the life of the Project. In order to deal with uncertainties like sea ice shipping, the Panel proposed the development of environmental co-management structures, including an Environmental Advisory Board (EAB) designed in a similar way as the four-party negotiation process used for the MOU.

Durable and Equitable Social and Economic Benefits

The Guidelines required VBNC to show how the Project would deliver durable and equitable social and economic benefits to aboriginal people in Northern Labrador and other residents of the province. In the EIS, the proponent justified the project by highlighting morbidity patterns in aboriginal communities on the coast, and by arguing that revenues generated by the project would raise self-esteem amongst residents. The Project, therefore, could be a solution to the social and economic problems plaguing the communities.[106] Just as the Innu and Inuit have reported themselves, high alcohol consumption and solvent abuse are major problems and have weakened the physical and psychological health of residents. Henriksen, on behalf of the Innu Nation, commended the company for its concern with social problems in the region, but argued that VBNC's assumption that increased income will lead to more self-esteem was overly simplistic. Rather, the increase of wealth may alienate workers in a culture where collective

---

106 Voisey's Bay Nickel Company Limited, Voisey's Bay Mine/Mill Project Environmental Impact Statement, Vol.4, chapter 21.

wealth is valued over that of the individual. In the case where a majority of Innu are unemployed, and the mine and its associated activities are negatively interpreted by the majority, the alienation of a mine employee may in fact *decrease* self-esteem.[107] Bringing cash into a community that isn't otherwise cohesive enough to be able to deal with changes in its sharing and family patterns may be socially destructive. As Rowell suggested:

> It's one thing when you're sharing meat and fish, but when you come back with cash and you're expected to share, it just doesn't work. There is the potential for employment and cash to create more disharmony and more dislocation within a community.[108]

While the Panel acknowledged that not all benefits from the Project would be distributed equally, it suggested that an economy solely based on harvesting and subsistence activities is no longer capable of sustaining growing Innu and Inuit populations. Through provisions contained in an impact benefit agreement (IBA), the Panel concluded that the Project could deliver positive social effects while the negative effects would be manageable.[109] At the same time, the Panel acknowledged there remains a degree of uncertainty with predicting how these impacts would affect communities. The Project would however, ensure workers could earn pensions and accumulate savings beyond one generation in order to develop industrial and business skills which could support new economic activities. To do so the Panel argued, the project must have an operative life of at least 20 to 25 years in order to prevent the "boom and bust" cycles associated with non-renewable resource extraction. By undertaking training programs and implementing the adjacency principle, the communities closest to the

---

107 Georg Henriksen, "Voisey's Bay Mine/Mill Project Environmental Impact Statement, Social and Cultural Impacts."

108 Judy Rowell, personal communication, 7 August, 1998.

109 Ibid.

development, likely to sustain the most impact from the activity, will be in a position to benefit the most.

Precautionary Principle and Aboriginal Knowledge

Two areas of environmental assessment where there has been relatively little experience is with the application of the precautionary principle and the incorporation of aboriginal knowledge. The precautionary principle has been endorsed by many governments pursuant to the Rio Declaration of 1992, and while there exists considerable diversity in the way principle has been interpreted, all existing examples share a conceptual core:

> **The precautionary principle stipulates that where the environmental risks being run by regulatory inaction are in some way: a) uncertain; and b) non-negligible, regulatory inaction is unjustified.**[110]

The Voisey's Panel considered the precautionary principle to require a proponent to demonstrate that its actions would not result in serious or irreversible damage. Specifically, the Panel asked VBNC to show that it had:

> **-designed the Project to avoid adverse effects where possible;**
> **- developed mitigation measures, or emergency response plans**
> **-designed monitoring programs to ensure rapid response and correction when adverse effects are detected.**[111]

Throughout the EA study, interpretations about how the precautionary principle should be applied varied greatly. VBNC argued that in its view, the precautionary principle meant 'anticipation and prevention', so designers and planners should incorporate environmental information into all stages of their activities. An example of how VBNC incorporated the precautionary

---

110 J. Cameron & J. Abouchar, "The Status of the Precautionary Principle in International Law," in The Precautionary Principle and International Law: The Challenge of Implementation, eds., D. Freestone & E. Hey (London: Kluwer Law International, 1996) qtd in John Moffet, "Legislative Options for Implementing the Precautionary Principle," Journal of Environmental Law and Practice, 7 (1997): 159.

111 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 9.

principle in planning for waste rock storage illustrates this approach.

Since sulphide content is a good indicator of metal content and therefore the potential for acid mine drainage, VBNC proposed to use sulphur content to distinguish between reactive and non-reactive waste rock. Rock with less than 0.2 percent sulphur would be disposed of on land, while the remaining waste rock would be treated as reactive and disposed underwater in Headwater Pond. The company suggested that this was a precautionary approach since these standards exceeded those demanded in British Columbia where 0.3 percent is the recommended cut-off.[112]

The Innu Nation and LIA on the other hand, argued for more restrictive interpretations of the precautionary principle. One expert appearing on behalf of the Innu Nation argued that the application of the principle to environmental decision-making requires the Panel to begin with the hypothesis that the Project would damage the environment, and to reject the hypothesis only under the weight of contrary evidence.[113] The Innu Nation asserted that any action with long-term or irreversible consequences 'precludes' future options, and is therefore contrary to the principle of sustainability.[114] Further, the Innu Nation argued that adaptive management relies on a monitoring and mitigation approach, which violates both precautionary and sustainability principles. Despite these arguments, the Panel did not reverse the onus of proof onto the proponent, and suggested that it could not be proven with any plausible hypotheses that the Project

---

112 Ibid, p. 43.

113 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 39. A similar argument is made by Kristin S. Shrader-Frechette, "Science, Environmental Risk Assessment, and the Frame Problem," in BioScience, 44 (1994): 548-551.

114 Burnside Environmental Limited, "Review of the Application of the Precautionary Principle to the Environmental Impact Statement Guidelines for the Proposed Voisey's Bay Mine/Mill Project," prepared for the Innu Nation, May 1997.

would cause serious or irreversible environmental effects.[115]

The requirement to fully consider aboriginal knowledge in environmental assessment is a recent one, and experience with its integration into EA is limited.[116] For the purpose of the Voisey's Bay EA, aboriginal knowledge was regarded as:

> [T]he knowledge, understanding, and values held by aboriginal people that bear on the impacts of the Undertaking and their mitigation. This knowledge is based on personal observation, collective experience, and oral transmission over generations.[117]

The EA panel for the 1996 BHP Diamonds Project noted several difficulties in implementing this requirement, which it attributed (amongst other factors) to a lack of direction from government. That panel recommended that a federal policy be developed to help proponents with the inclusion of traditional knowledge when preparing environmental impact statements.[118] The federal government has yet to produce any formal guidelines in this area.[119]

As prescribed in the MOU, the Voisey's Bay Panel was to give "full consideration to traditional ecological knowledge whether presented orally or in writing."[120] As such, the MOU addressed a fundamental concern about whether the incorporation of traditional knowledge and the views of

---

115 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 9.

116 Dene Cultural Institute, "Traditional Knowledge and Environmental Assessment," in Consuming Canada (Copp Clark, 1995): 340-365.

117 Environmental Assessment Panel, Environmental Impact Statement (EIS) Guidelines For the Review of the Voisey's Bay Mine and Mill Undertaking, 20 June, 1997, p. 6.

118 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project.

119 Robert Connelly, Vice-President, Canadian Environmental Assessment Agency, personal communication, 22 September, 1998.

120 Memorandum of Understanding (MOU).

aboriginal peoples would be included in the EA process.[121] In the past, the acceptance of non-technical data provided by non-scientists as a credible source of information has been difficult to establish in EA proceedings.[122] The Panel cautioned however, that "full consideration of aboriginal knowledge in technical sessions does not imply uncritical acceptance, but rather that such knowledge should be examined as carefully as other expert knowledge."[123] Another concern stemming from the experience of EA in aboriginal contexts was access for interested persons to participate in a public review. In many cases, individuals or groups are prevented from full participation because of inadequate financial support, access to 'expert' advice, time to analyze documents, and resources to organize participation.[124] A difficulty for proponents trying to collect aboriginal knowledge from both practical and ethical standpoints also arises when those who have this knowledge do not wish to provide it for purpose of an EIS.[125] As a way to fulfil their obligation to incorporate aboriginal knowledge in the EIS and to encourage local participation, VBNC funded independent Innu Nation and LIA scoping

---

121 Federal Environmental Assessment Review Office, The National Consultation Workshop on Federal Environmental Assessment Reform: Report on Proceedings (Ottawa: Minister of Supply and Services Canada, 1988).

122 Dene Cultural Institute, "Traditional Knowledge and Environmental Assessment," in Consuming Canada (Copp Clark, 1995): 358.

123 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 172.

124 Dene Cultural Institute, "Traditional Knowledge and Environmental Assessment," in Consuming Canada (Copp Clark, 1995): 358.

125 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 172.

studies.[126] Both organizations completed reports on land-use, environmental knowledge and, in the case of the Innu Nation, a video showing Innu family and community conditions. For their part, VBNC collected input from participants at open houses, and held workshops on specific topics such as shipping, archaeological research, and black bear management.[127]

Despite these initiatives, communications and information sharing between local residents and VBNC soon emerged as one of the most contentious issues during the Voisey's Bay study. Because mineral exploration had occurred with such intensity, people felt as though they were caught off-guard. Many expressed resentment that they were not consulted early in the exploration stages. Residents called for better communication from the companies, the provincial government and from the leadership of the LIA and Innu Nation.[128] While it was evident that written material alone was not regarded as a sufficient way to inform the community about the mineral exploration activities, participation in open houses conducted by VBNC was low because they were generally viewed as a public relations exercises, only presenting the positive aspects of mine development.[129] Further, the Innu Nation and the LIA discouraged VBNC from going into communities to collect information and refused to participate with them on

---

126 These include, The Taiga Institute for Land Culture and Economy, "Social Cultural and Economic Issues Scoping Research Report and Terms of Reference for a Socio-Economic Baseline Study," Prepared for Innu Nation Economic Development, 1996; Innu Nation Task Force on Mining Activities, "Ntesinan Nteshiniminan Nteniunan- Between a Rock and a Hard Place, 1996; and the LIA study, Tony Williamson, "From Sina to Sikujaluk: Our Footprint, Mapping Inuit Environmental Knowledge in the Nain District of Northern Labrador," prepared for the Labrador Inuit Association, Nain Labrador.

127 Voisey's Bay Nickel Company Limited, Voisey's Bay Mine/Mill Project Environmental Impact Statement, Vol. 4, p.7-4.

128 Tony Williamson, "From Sina to Sikujaluk: Our Footprint," p. 45; Innu Nation Task Force on Mining Activities, p. 69.

129 Tony Williamson, "From Sina to Sikujaluk: Our Footprint," pp. 7, 22, 45, 53,61; Innu Nation Task Force on Mining Activities, p. 73; Brian and Fran Williams, personal communication, 5 August, 1996.

baseline studies because of what they considered an inadequate project description. The LIA's position was that the results of the information gathering could be used out of context as evidence supporting the company, and the Inuit would then have to denounce themselves during the public hearings.[130]

Nevertheless, the Panel concluded that VBNC "adequately conformed to the Guidelines and commends its efforts in a situation where guidance and experience are lacking."[131] The Panel noted that the elements of aboriginal knowledge relating to values, norms and priorities were particularly important in the scoping phase of the review and strongly informed the Panel's guidelines in matters relating to ecosystem function, resource abundance, resource distribution and quality, land and resource use, and social and economic well-being. For the purposes of the public review, aboriginal knowledge helped to develop baseline information, predict impacts and assess the significance of effects in the EIS.[132] The Panel further recommended that both federal and provincial EA regimes make mandatory the use of aboriginal knowledge in future EA studies. What became clear throughout the Voisey's EA, was that aboriginal knowledge is most effectively used in EA when it is prepared and presented to the Panel by resource users and local residents, rather than requiring a proponent to interpret and present the information. In their recommendations, the Panel advised against the creation of rigid government guidelines which define aboriginal knowledge and ways it should be used in EA. Future panels they

---

130 Judy Rowell, Personal Communication, 7 August, 1998.

131 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 10.

132 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 10.

stressed, must have considerable discretion in developing their own guidelines on how aboriginal knowledge should be based on the specific circumstances and on the information derived from scoping sessions.

The previous pages have outlined the general approach and decision-making criteria established by the MOU and the Panel in the Voisey's Bay environmental assessment to illustrate the potential for EA to guide environmentally-sound decision-making. While there were disagreements about the scope of the study and consultation, the example demonstrates how it is possible for EA to respond to, and reflect the visions of people in communities faced with large-scale resource development. While not all parties agreed on the extent to which a proponent should be held to sustainability assurances, it nevertheless demonstrated that the focus of the debate was on the environmental and social impacts the Project would have. Other events however, demonstrate the susceptibility for the principle of EA to be subverted by discretionary decision-making. The remainder of this chapter considers the attempt by the proponent to split the review process in two, the provincial threat to kill the project unless Inco commits to building a highly-polluting smelter, and the rejection of several key Panel recommendations. Despite the efforts of those involved with the process, these actions suggest that EA continues to be viewed as an administrative hurdle in the march towards economic development rather than being an integral part of economic development and environmental protection in the land planning process. Further, it demonstrates that the north continues to be viewed by industry and government as a resource hinterland, and that concern for local residents and northern ecology is only of secondary importance in resource decision-making.

Exploration Support Works

While scoping sessions were held throughout the province, VBNC filed with the provincial ministry of Environment and Labour, an application to build 'Exploration Support Works' (ESW). The ESW included a 'temporary' airstrip, access road and an off-loading facility near Voisey's Bay. An earlier application by the company entitled 'Advanced Exploration Infrastructure' was filed in January, 1996, and proposed the same construction, but described the infrastructure as 'permanent'. Because the second application proposed to build only 'temporary' structures, the road, airstrip, and loading dock would be excluded from the terms of the MOU as it required that only the 'permanent' infrastructure would be assessed. VBNC's strategy was to begin construction on the required infrastructure while the main proposal was undergoing review to save start-up time.

The LIA and the Innu argued that the proposed ESW was an attempt to fragment the project. VBNC maintained that further exploration was required to "further support the proposed integrated mine/smelter complex".[133] Based on a review of its regulatory obligations, Environment Canada decided it did not have any legal duty in relation to the ESW approval and therefore had no obligation to assess the project.[134] That month, the provincial Minister of Environment and Labour accepted the registration of the document under NEAA.

Lesley Griffiths, Chair of the Voisey's Bay EA Panel responded to the application by writing a letter to the signatories of the MOU, stressing that the

---

[133] Voisey's Bay Nickel Company Limited, Exploration Support Works at the Voisey's Bay Mineral Exploration Site, 22 May, 1997. CEAA Registry.

[134] Garth Bangay, Director General- Atlantic Region, Environment Canada, correspondence with Paul Bernier, President, Process Management, Canadian Environmental Assessment Agency, 22 February, 1996, CEAA Registry.

approval of the ESW by Newfoundland "could jeopardize or delay the review process" and as a result, "the credibility of the review process would be called into question." Griffiths charged that if the project was split in two, communities would likely discontinue their participation. "Residents in adjacent communities," she suggested, "see little difference between the environmental impacts of major construction whether it is 'permanent' or 'temporary.'"[135] By accepting the ESW as a separate undertaking from the main Project, these works would only be subject to the Newfoundland Environmental Assessment Act (NEAA) which provides no intervener funding and requires no EIS or public hearings.

In an application by the Innu Nation and the LIA to the Newfoundland Supreme Court, the two groups argued that the ESW must be subject to the process described under the MOU. In his decision, Justice Raymond Halley concluded that the ESW fell outside the MOU because the definition of 'undertaking' did not include any reference to the exploratory activities.[136] That day, Provincial Minister of Environment and Labour Oliver Langdon notified VBNC that no further assessment of the road or temporary airstrip was required under NEAA, and construction could proceed.[137] Katie Rich, President of the Innu Nation stated that, "the company is just trying to push their project ahead without regard for the environmental assessment process and they are not listening. We hope the

---

135 Lesley Griffiths , Correspondence from the Environmental Assessment Panel Regarding Approval of the Exploration Support Works at Voisey's Bay," 16 June, 1997, CEAA Registry.

136 Kevin F. Stamp, Q.C. "Voisey's Bay Nickel Company Innu Nation and Labrador Inuit Association Application for Judicial Review," correspondence to Ms. Rachel Baxter, Department of Justice, Federal Government, Environmental Assessment Agency, 18 July, 1997, CEAA Registry.

137 Oliver Langdon, Minister of Environment and Labour, Newfoundland and Labrador, "Proposed Exploration Support Works at the Voisey's Bay Mineral Exploration Site," correspondence to Dr. Stewart Gendron, President, VBNC, 18 July, 1997, CEAA Registry.

courts will understand."[138] Four days after the Halley decision, the Innu and Inuit filed an appeal with Newfoundland's Superior Court of Appeals.[139] In the interim, the LIA applied for an injunction to prevent any construction until the appeal could be heard.

By late summer, 1997, the VBNC exploration site at Anaktalak Bay was transformed into a protest camp as Innu and Inuit turned to civil disobedience in order to stop construction of the ESW. Over two days, 250 Innu from communities in Labrador and Québec, and 23 Inuit from the coast protested the ESW construction. Five days later, on August 27, three judges from the Newfoundland Court of Appeal granted an interlocutory injunction preventing any construction until the appeal could be heard. In their decision, the judges ruled that, "The concerns and advice of the Labrador Inuit and the Innu of Labrador are being ignored by VBNC and the Provincial Government...We feel that this is an instance where it can truly be said that justice delayed is justice denied."[140]

One month later, on September 22, the Supreme Court of Newfoundland Court of Appeal blocked the provincial government from allowing the mining company's infrastructure proposal to bypass assessment under the MOU. While the three judges recognized the legitimate interests of investors and the badly needed employment for Newfoundland and Labradorians, they noted that reconciling the use of resources with the protection and preservation of the environment required care and prudence.

---

138 Innu Nation Press Release, "Innu Seek Injunction Against Voisey's Bay Construction Work this Summer," 27 June 1997.

139 Kevin F. Stamp, Q.C., Martin,Whalen, Hennebury & Stamp, Barristers & Solicitors, correspondence to the Canadian Environmental Assessment Agency, 22 July, 1997, CEAA Registry.

140 Supreme Court of Newfoundland Court of Appeal, "Judgment re. the Environmental Assessment of Voisey's Bay Infrastructure," rendered 22 September, 1997 by Judges Marshall, Steel and Green.

As such, they argued:

> [I]ndiscriminate development without regard to environmental impact translates eventually into agonizing problems for generations yet unborn from every corner of this province, whether it be the depleted fishery; forestry harvesting in the absence of silvaculture; uncontrolled effluent and emissions from plants; or the tragedies of fluorospar or asbestos mines...We are sure that all parties involved would not want the mining development at Voisey's Bay placed in the same category.[141]

Argentia Smelter

At the same time, but on a different front in VBNC's quest for project approval, the company reached an impasse with the province over the construction of a smelter to process the ore concentrates from Voisey's Bay. Premier Tobin was adamant that if VBNC was to mine in Labrador, they would have to process the ore in-province. The provincial Cabinet even passed an amendment to the Minerals Act making it mandatory for companies to process Newfoundland ore in the province if economically feasible.[142] VBNC argued that as a result of plummeting nickel prices and the excess capacity to process ore in Ontario and Manitoba,[143] investing $800 million into the construction of a smelter at a site in Argentia, would clearly *not* be economically feasible. Tobin responded by suggesting that without a commitment from VBNC to build a smelter, the province would simply wait until it could get the right benefits from 'whichever company' developed the Voisey's site. Tobin clearly implied he would withhold permits from the proponent unless a financial commitment for both projects could be made.[144]

---

141 Ibid.

142 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 20.

143 Brad Keats, "Voisey's Bay project called off?" Voisey's Bay News [Happy Valley-Goose Bay] August, 1998: 1.

144 Allan Robinson, "Inco to halt Voisey's Bay work," The Globe and Mail, [Toronto] 28 July, 1998: B1.

Brian Tobin's crusade for a smelter in Argentia illustrates the hypocrisy of the government's responsibility to environmental protection and the assessment process in the province. While he clearly viewed the mine and smelter as separate undertakings for the purpose of environmental assessment, from Tobin's economic vantage point, the two are inseparable.

In reviewing VBNCs application to build and operate the smelter, the federal and provincial governments decided that the proposal should undergo a federal Comprehensive environmental review, independent from the review for the mine and mill. A Comprehensive review under CEAA does not guarantee public participation or intervener funding. The LIA and the Citizens' Mining Council of Newfoundland and Labrador protested that these applications represented one project simply because the smelter could not be justified without the mine.[145] The federal Ministry of Public Works and Government Services (PWGS), defended their decision because it cited that as a result of the distance between the two sites, the smelter could not be considered the same project as the mine and mill.[146]

Panel Recommendations and Project Approval

When the EA Panel recommended that the Voisey's Bay Project should proceed in March 1999, they stressed that if their recommendations were carried out, the undertaking would not seriously harm the natural environment, or country foods and people's ability to harvest them. Further, the Project would have the potential to offer lasting social and economic

---

145 Chesley Andersen, Labrador Inuit Association, "Re: Argentia Smelter and Refinery proposed by Voisey's Bay Nickel Company Limited," correspondence to The Honourable Sergio Marchi, Minister of Environment, 17 January, 1997, CEAA Registry.

146 Pierre Tremblay, Executive Assistant, Office of the Minister of Public Works and Government Services, Canada, correspondence to L.D. Whalen, Citizens' Mining Council of NF/LD, 12 August, 1997, CEAA Registry.

benefits through employment and business opportunities.[147] The federal government responded by formally approving the project on August 3, 1999. While it generally agreed with the 'intent' of the Panel suggestions, it was less committal on others including the lifespan of the project, and clearly rejected the key recommendations which advised governments to settle land claims and impact benefit negotiations prior to final approval. After more than two years of study, the Panel stressed that these recommendations are critical if the 'durable and equitable benefits' associated with the project are to be achieved. As they argued in their final report, proceeding by way of land claims or other binding measures is essential and an "important element of sustainability assurance and is, therefore sound public policy."[148] By refusing to fulfil these terms in advance of project approval, the federal government has undermined the Panel recommendations and perhaps the potential for EA to contribute to environmentally sound decision-making. The following paragraphs briefly discuss the implications of rejecting these recommendations.

Life of the Project

By recommending the Project would last at least 20-25 years, more than one generation of residents could benefit from the mine. As a result of the opportunities for new economic development based on the increased incomes from the Project, communities may be in an economically stable position when the mine closes, and the problems associated with 'boom and bust' development may be avoided. Attempting to maximize the opportunities for local communities, the Panel recommended that the

147 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. vii-viii.
148 Ibid, p. 29.

mining lease include guarantees to ensure that if VBNC found less nickel underground than it expected, the company would reduce its production rates to extend the life of the mine. In response, the federal government, while agreeing with the 'intent' of the Panel's recommendation, refused to guarantee a minimum period for its lease, noting that the Project must be economically viability before it can provide any benefits.[149] This response suggests that the economic viability of the project, rather than the welfare of residents is the primary decision-making criteria for establishing how long the mine should be required to operate. The danger is that if reserves turn out to be less than anticipated and the mine is forced to close early, local populations, while assuming the environmental and social impacts of the mine, will not accrue the long-term economic benefits promised by the proponent.

Land Claims and IBAs

As the LIA, Innu Nation and many individuals have argued, land claims agreements would be compromised if the Project was approved before any settlement could be reached. Under the terms of the MOU, both aboriginal groups established significant cooperation with governments in the environmental assessment of the Project. The Province also made a discretionary commitment to enable the aboriginal groups to review permits associated with the Project. Without a land-claims agreement however, there are no assurances that these arrangements would continue during the environmental management of the Project, or for co-management for any other development in the region. With regard to resource royalty sharing, if

---

149 Government of Canada, Response to the Environmental Assessment Panel Report of the Proposed Voisey's Bay Mine and Mill Project (Ottawa: Minister of Public Works and Government Services Canada, 1999).

compensation in the form of rent revenues is not guaranteed through a land-claims agreement or an IBA, aboriginal groups won't benefit from the financial resources which they could use to address their own concerns according to their own priorities. Further, while VBNC is negotiating IBAs with the LIA and Innu Nation on critical matters such as aboriginal rights and culture, benefits, and environmental, economic and social mitigation measures, it regards these as discretionary arrangements, not required before project start-up. If land claims were already in place, IBAs would be non-discretionary and any mining could not proceed without them.

While the Voisey's Bay EA was underway, the Supreme Court of Canada rendered a judgment which provided guidance for aboriginal title and rights which has direct implications for the Voisey's Bay Project. The Delgamuukw decision, as interpreted by the Panel, meant that where aboriginal people have title to traditional lands, governments have specific obligations to ensure that aboriginal people participate the development, are consulted, and receive fair compensation before resource development is allowed to take place.[150] Further, when the Crown grants third party rights on Aboriginal title land, the Delgamuukw decision suggests that it cannot permit development unless it has met its obligations for participation, consultation, and compensation. The Crown's current position that development can proceed on aboriginal title land in advance of these obligations, is therefore no longer tenable. In the context of land claims negotiations, interim measures to protect the interests of Aboriginal title holders are no longer

[150]Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. vii.

discretionary; they are mandatory.[151] While the Supreme Court did not decide whether land claims are required before resource development may begin, the judgment ruled that where aboriginal title exists, "the Crown is under a moral, if not a legal, duty to enter into and conduct those negotiations in good faith."[152] It is for these reasons that the Panel strongly urged the Provincial and federal governments to conclude land claims before the project proceeds. In response to this ruling and the federal rejection of key Panel recommendations, the Innu Nation has filed a court application to quash the federal and provincial decisions to approve the project, based on the argument that both governments acted in bad faith, and since the Delgamuukw decision, have a legal obligation to further negotiate with the Innu before the project can proceed.[153]

In 1999, more than two years since the Voisey's EA process began, global nickel prices continue to hover just over US$2 per pound, well below the US$ 3.60 when Inco purchased the Voisey's claim block. While the federal and provincial governments have authorized the Project to proceed to the permitting stage, a standoff between the province and Inco continues over the issue of the smelter. As one analyst put it, given the current economic situation, "it doesn't make sense to build a smelter and a refinery and basically create a monster, mega-mine project out there when the mine can't sustain the economic returns to shareholders."[154] Experts agree, however,

---

151 See John Donihee, "Delgamuukw and Natural Resource Allocation Decisions," Resources, 62 (Spring, 1998): 1; S. Bradley Armstrong. "Defining the Boundaries of Aboriginal Title after Delgaamuukw," Resources, 62 (Spring, 1998): 2-5; David Schulze, "Delgamuukw Confirms Broad Aboriginal Rights over Resources," Resources, 62 (Spring, 1998): 6-7.

152 Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, p. 25.

153 Innu Nation, "Innu Nation Mounts Court Challenge Over Voisey's Bay Project," news release, 3 September, 1999.

154 James Stevenson, "Can Inco still go it alone?" Montreal Gazette [Montreal] 16 April, 1999: D2.

that there is little doubt that the cheapest nickel source in the world will eventually be developed.[155]

Discussion

Both the ecological and human context of Northern Labrador provided unique challenges for the Voisey's Bay assessment process. The mine and mill will be the first major industrial development on the coast, and while mining is inherently a non-renewable form of resource development, in the context of massive unemployment, alcohol and substance abuse, housing shortages, stressed infrastructures, and poverty in coastal communities near the mineral deposit, revenues generated by its development may act as a 'bridge' to allow for more sustainable and environmentally-benign activities after the mine's decommissioning. Subsistence activities, while economically, culturally and spiritually necessary, can no longer support the material needs of rapidly growing aboriginal communities in Labrador. Like at Great Whale, many residents of Northern Labrador have not rejected any resource development per se, but want some level of control over these activities and their own futures. Many made it clear that while development at any cost must not be an option, new economic activity is important, provided the environmental effects, the timing and the level of control are satisfactory.

The Voisey's Bay EA process is notable because it created a public forum wherein clearly established goals of environmental and societal protection were sought in light of the mine and mill proposal. The example also marked the first time aboriginal people have been so centrally involved in the design and undertaking of EA in Canada. The inclusion of the LIA and Innu Nation to the MOU process reflects the growing legal and moral imperative to

---

155 Paul Pigott, "VBNC needs more time on EIS," Voisey's Bay News [Happy Valley-Goose Bay] October 1997: 1.

include aboriginal people in resource and development planning. Through their participation in setting the terms of reference, these groups helped to establish the most rigorous EA process in the history of Canadian mining. The study of the independent Panel was primarily concerned with the central questions about whether the Project would cause irreversible harm to the environment, whether the impacts stemming from the mine and mill would prevent locals from harvesting wildlife, and whether the project would bring social and equitable benefits to a wide number of people in Northern Labrador. This approach tested whether a mine and mill development could be consistent with the aspirations of local communities to achieve and maintain ecological integrity, cultural stability, and a sustainable economy. In its conclusions, the Panel stressed that if its recommendations are carried out, the Project would not seriously harm the natural environment, and has the potential to offer the people of northern Labrador lasting social and economic benefits though employment and business opportunities.

Despite the conceptual and procedural advances made by the Voisey's Bay review, the Panel recommendations were only partially accepted by regulators as conditions for project approval. Key recommendations including the settlement of land claims and impact benefit agreements prior to project approval could go a long way towards ensuring equity in the distribution of benefits, and would ensure local participation in monitoring and environmental management. The 'disconnection' of the EA process from final decision-making, therefore, undermines not only years of study by an independent panel and the value of local participation in resource decision-making, but the potential of EA to benefit northern communities. The environmental assessment at Voisey's Bay gave Canada and the province of

Newfoundland and Labrador an historic opportunity to reverse the legacy of disregard for Innu and Inuit rights and at the same time to realize the potential for EA as an environmental planning tool with which to undertake cooperative resource management. The lack of political commitment to realize with any sincerity the goals of sustainability in Labrador suggests that the Voisey's Bay EA may represent a missed opportunity and mark the continued failure of EA for communities in the Canadian North.

Other than fulfilling their legal requirements as outlined in the memorandum of understanding (MOU), there is little evidence to suggest that either the proponent, or the federal and provincial governments have internalized environmental values in resource decision-making. The proponent, by trying to split the review and begin construction the Exploration Support Works before the review of the mine had been completed, demonstrated that its commitment was to develop the site as quickly as possible, with or without the cooperation of local residents. By claiming jurisdictional constraints and by rejecting Panel recommendations, the federal government highlighted its reluctance to interfere with a major economic development in the province by passing the environmental buck. Not wanting to jeopardize the potential economic benefits of the project, the provincial and federal governments (as determined by the courts) breached their regulatory duties under the MOU by approving construction and subjecting the ESW to a less rigorous form of environmental assessment. The actions of VBNC and both levels of government suggest that the outcome of EA depends as much on the intentions of proponents and regulators as on the proficiency of those conducting the EA studies. The extent to which EA may benefit local residents, therefore, depends largely on the political and

economic context in which it takes place, and is only secondarily a question of technical skill.

As this report has established, environmental assessment is a complex socio-political process with ample room for subjective value judgment. The accommodation of different interest groups even within mainstream society is an ongoing challenge. Native people have made it clear that they do not want to be treated as special interest groups, but as people with special rights, their own level of government, a distinct culture and economy, and their own goals and aspirations for the future. In a system where much decision-making power is at the discretion of governments whose focus is on ensuring resource development, political and economic power are decisive factors determining the degree to which groups can make themselves heard in the review process. To date, this situation has put aboriginal people at a distinct disadvantage, and it highlights a major source of conflict in modern resource development in the Canadian North.

The events surrounding the Voisey's Bay and the Great Whale EAs point to more general implications about environmental protection and social equity in the context of large-scale resource development in Canada. It was suggested previously that the core requirements for sustainability require the reconciliation of three 'pillars of sustainability'. These pillars consist of living within the global biophysical carrying capacity, providing a decent living standard for all people and ensuring a reasonable measure of distributional fairness in access to resources and their economic benefits. While the focus of this report has been on the potential for environmental assessment to contribute toward this end, as Fenge has noted, sustainability is not just about tools and techniques. At heart, sustainability is about power,

values, and knowledge, for these determine the scale, pace, and timing of development and the priority given to competing resources.[156] This is particularly so for the Canadian North where power over this region continues to reside in southern metropolitan centres. While northern and aboriginal peoples have been gaining a voice in resource development, aboriginal rights remain a third-order priority suborned to the competing interests of the two levels of government and to the demands for power, and and resources for the dominant society which they represent.

Environmental assessment is and should be an invaluable process for determining whether or not economic development is likely to negatively or positively affect communities, and for ensuring that environmental and human equity concerns serve as the ethical base for decision-making about what development should be able to proceed and at what pace. As pressure on northern resources increases and threatens to open up northern regions for development, EA will gain more importance. The final chapter now considers the future role of EA in northern resource decision-making.

[156]Terry Fenge, "Toward Sustainable Development in the Circumpolar North," (Ottawa: Canadian Arctic Resources Committee, no date), http://www.carc.org/pubs/briefs/brief1.htm.

Conclusions
Environmental Assessment on the Canadian Frontier

> [G]overnments... even strongly pro-environment ones, are subject to many countervailing social and economic forces, sometimes legitimate and sometimes not. Their agendas are often influenced by non-environmental considerations. The legislation, if it is to do its job, must therefore be applied in a manner that will counteract the ability of immediate collective economic and social forces to set their own environmental agendas. It must be regarded as something more than a mere statement of lofty intent. It must be a blueprint for protective action.
>
> -Judges Marshall, Steel, and Green[1]

As the previous chapters have suggested, the Canadian North remains to outside interests a resource hinterland. At the same time however, the Canadian North is a series of homelands for its predominantly aboriginal residents whose cultural and economic ties are intimately tied to the land. The task of reconciling the rights and interests of native peoples, industry, and government with environmental and cultural protection has been characterized as the 'Canadian Dilemma'.

Environmental assessment (EA) was designed to change the way governments 'think' about their actions by requiring the consideration of environmental and social concerns in decision-making. In its most basic form, the process attempts to reduce the probability of unforeseen negative ecological or socio-economic impacts stemming from development activities. As such, EA has been recognized internationally as a key policy for achieving

---

[1] Supreme Court of Newfoundland Court of Appeal, "Judgment re. the Environmental Assessment of Voisey's Bay Infrastructure," rendered 22 September, 1997, Judges Marshall, Steel and Green.

sustainable development. As it is coming to be interpreted in Canada, sustainable development involves more than ecological sustainability; it also includes economic and socio-cultural sustainability. This requires living within our ecological means, providing a decent living standard for all people, and ensuring a reasonable measure of distributional fairness in access to resources and their economic benefits. Environmental assessment, anchored in ecological rationality, can be an effective strategy to guide decision-making towards environmental and socially sustainable practices by identifying development activities which destroy the long-term life-support capability of ecological systems, and by ensuring that the benefits derived from these activities are distributed in an equitable manner.

While the practice of EA highlights the challenges associated with evaluating development including uncertainty and risk evaluation, conflicts in interest, and the weighing of facts and values, in the Canadian North, these challenges are exacerbated by a number of factors. A critical difference for EA practice in the North is that the majority of residents in these regions are aboriginal, with needs, value systems, and cultures which are fundamentally different than those of the mainstream Canada. Other challenges for northern EA include the evolving political landscape in the north, social change, economies based on a mix of wage and subsistence activities, and sensitive ecosystems for which there often exists little or no baseline information.

Despite these challenges however, the Berger Inquiry as well as other examples throughout the years have demonstrated that the basic conditions for creating 'good' environmental assessment in cross-cultural situations are known, and are reasonable. These conditions include adequate time for

review, thorough research and analysis which gives full value to aboriginal knowledge, inclusive and accessible procedures for public participation, adequate intervener funding, and clearly defined strategies for monitoring the impacts and enforcement of recommendations.[2] Yet after more than two decades experience with EA in Canada, the process continues to fail northern and aboriginal communities by allowing mega-scale development to override local preferences, and to cause serious and irreversible environmental devastation to northern ecological systems. The challenge, in light of the existing expertise and experience, is to determine *why* EA continues to fail in Northern Canada.

The central premise of this thesis is that while EA represents a powerful strategy to internalize environmental and social concerns in resource decision-making, in its present political context, EA continues to fail northern communities because final resource decision-making may be 'disconnected' from the assessment process. While the effectiveness of EA may be curtailed by a number of limiting factors including who is included in the process, and what forms of expertise is represented throughout the evaluation, the principal shortcoming of the process does not result because of bad technique. As demonstrated, northern EA has made advances both procedurally and conceptually over its administrative and legislative life. Rather, EA fails northern communities because it is not required that decisions about large-scale resource development be used in the final approval process, and therefore concern about environmental and social factors may be undermined by competing economic and political influences.

Since its adoption by the federal government in 1973, both government

---

2 Susan Wismer, "The Nasty Game: How Environmental Assessment is Failing Aboriginal Communities in Canada's North," Alternatives, 22.4 (1996):16.

and industry have consistently resisted full and comprehensive implementation of environmental assessment. Further, the Canadian Environmental Assessment Act, (CEAA) remains a policy characterized by principles which favour economic growth over environmental sustainability. From this perspective, environmental concerns are weighted against, but do not take precedence over, political and economic considerations. In its most progressive form, federal EA speaks in terms of the 'integration' of environment and economic development in resource planning. As such, the process favours development activities over actions which contribute to environmental sustainability. This is significant for the application of EA in Canada's northern regions because it exposes a policy bias for resource development and helps to identify the underlying value assumptions which are often at odds with those held by aboriginal populations living in 'hinterland' regions.

While the focus of this thesis is the role of environmental policy in resource decision-making, it is at the same time as much about power relationships and the authority to make decisions about the exploitation of natural resources. Environmental assessment should be expected to challenge the fundamental questions of project justification and alternatives which promote economic activities which reinforce, rather than override choice of lifestyle, local self-sufficiency, and community traditions, specifically those held by native peoples and others whose values differ from the urbanised mainstream of Canadian society. These considerations are important elements for sustainability assurance and therefore, sound public policy. The failure of both provincial and federal government to undertake with any sincerity the EA process, undermines the core principles of sustainability and

perpetuates the legacy of the 'master narrative' and hegemony over aboriginal people by denying communities any control over their futures. As suggested, sustainability is about more than tools and techniques. At heart, it is as much about power, values, and knowledge, as these determine the scale, pace, and timing of development and the priority given to competing resources. While northerners have been gaining a voice in decisions about resource development, aboriginal rights remain a third-order priority suborned to the competing interests of the two levels of government and to the demands for power and resources for the dominant society which they represent.

The reluctance of governments to adhere to the broad and consistent application of EA may best be understood in terms of the concentrated costs and diffuse benefits associated with stringent environmental and cultural protection. For activities triggering several jurisdictions, the ambiguity of the environment under the Canadian Constitution, especially in the case of large-scale development in the provincial norths, further creates the possibility for both levels of government to pass off environmental protection to the other.

As chapter three described, governments motivated to claim credit and avoid blame from voters will favour policies with concentrated benefits and resist policies with concentrated political costs. Since opponents of environmental protection are likely to be better organized and better informed than the general public who may be 'unappreciative' of improvements in environmental quality, governments are likely to be more responsive to concentrated interests (such as regulated industries) because they offer valuable direct and indirect benefits, including the creation of jobs and revenues. The logic of collective action, therefore, is weighted against strong environmental protection.

Provincial interests are likely to be protective over environmental jurisdiction, not for the sake of resource conservation or protection, but to defend their authority over resource exploitation, and thus a valuable source of income. As the federal government's interest in environmental protection is less closely tied to the development of natural resources, it has historically taken a narrow view of its jurisdiction and conceded the field to the provinces. Since there is no explicit provision in the constitution related to environmental matters, the responsibilities of the federal government and the provinces are overlapping and ambiguous. It is the federal government which is most likely to take a narrow view of its environmental jurisdiction, however, which creates opportunities for interjurisdictional buck-passing. By conceding the field of environmental protection to the provinces who have vested interests in the development of large-scale resource development, minorities who stand 'in the way' of development, posses in relative terms, few economic resources or political leverage with which to oppose undertakings which may adversely impact them.

As suggested in chapter three however, public concern for environmental issues can prompt shifts in the roles of the federal and provincial governments. While federal involvement is more likely to emerge during periods of heightened salience, when voters are paying attention, the balance of federal and provincial roles is likely to shift back toward the provinces during periods of public inattentiveness.

This remainder of this chapter considers the degree to which the case studies support the theoretical arguments raised in chapters two and three, before returning to broader questions about the utility of environmental assessment in resource decision-making and its contribution to

environmental and social sustainability in the Canadian North.

Advances in Northern EA

Throughout its administrative and legislative history, no government in Canada has embraced EA with any enthusiasm. As chapter three demonstrated, reform of federal environment assessment has been the direct result of advocacy by the environmental community directed toward politicians and bureaucrats as well as the courts. The 1995 Canadian Environmental Assessment Act follows what has been described as a development model of environmental assessment. In its most progressive form, the development paradigm seeks to integrate environmental and economic considerations in decision-making. From this perspective, the commitment to economic growth remains unquestioned, and there is no guarantee that the process will ensure environmentally-responsible decisions. The federal legislation allows considerable political discretion as to when EAs are required, and what they should take into consideration during their course of investigation. Further, CEAA is not required to be used as a basis in final decision-making, creating the possibility for competing values- economic, political or other- to override environmental concerns.

The unique characteristics of northern regions demand flexible EA systems which allow a broader scope and which go beyond the confines and developmental characteristics embedded within CEAA. The terms of reference for an EA comprising several jurisdictions are normally outlined in a Memorandum of Understanding (MOU). As both case studies demonstrated, the participation of aboriginal representatives in setting the terms of reference for the studies, created processes which were more comprehensive and dynamic than ones developed solely under the ambit of

federal or provincial EA systems. The results in Québec and Labrador were structures which cultivated conditions whereby the potential of EA was more likely to be realized.

The Evolution of EA

The Great Whale environmental assessment broke new ground for northern EA because it reversed the burden of proof onto the proponent by requiring Hydro-Québec to prove that it was in society's best interest that the project proceed.The guidelines for the Great Whale EA subscribed to the core principles of sustainable development, with a focus on the cumulative effects of hydro development in the region, and the mandatory use of aboriginal knowledge for describing valuable ecosystem components (VECs). The guidelines required the proponent to assess not only the economic, environmental and social impacts of the proposed project, but also at the possible alternatives to such an undertaking. Hydro-Québec was also required to prove that the project would not create unacceptable inequities for residents, and would not bring with it impacts which would diminish the possibility for future economic development in local communities. Consultation with the local population and access to the decision-making process were also recognized as critical conditions for an equitable environmental assessment. Following the release of the guidelines for the Great Whale EA, experts suggested that if followed through, the study could have been the most significant environmental review ever undertaken.

The Voisey's Bay EA procedures were equally inclusive and forward-looking. The Panel's recommendations were informed by widespread public consultation, which included submissions on both general and technical aspects of the project, and reflected many local concerns about the

environmental and social impacts in the region. Among the Panel's primary concerns was whether the project would bring social and economic benefits to a wide (rather than a narrow) range of people in Northern Labrador. This approach, like the one taken by Justice Berger more than two decades earlier, was designed to ensure that the Project would be consistent with the aspirations of local communities to achieve and maintain ecological integrity, cultural stability, and a sustainable economy. Where impacts remain uncertain, the Panel recommended comprehensive mechanisms for monitoring. The process also established a precedent for aboriginal participation in federal EA by formally acknowledging the interests of the Innu and Inuit who have overlapping land claims in the area. As the proponent suggested after its completion, the review was the "most comprehensive in Canadian mining history".[3]

The Failure of Northern Environmental Assessment

While the Voisey's Bay and Great Whale environmental studies are remarkable for their approach to northern resource decision-making, these examples also highlight a fundamental weakness of EA in its present form, and one which may undermine its potential to deliver both durable and equitable benefits to northern communities. Environmental assessment is only effective when there is a political commitment to the process. As the two case studies demonstrate, in the present political context, there exists a major gap between panel recommendations and final decision-making.

At Voisey's Bay, despite the mistrust local Innu and Inuit felt towards EA generally, the Panel recommendations were well received by both groups. The Panel stressed that if their recommendations were followed, the mine

---

[3] Maura Hanrahan, "Mining for Community Benefits," Alternatives, 25.3 (1999): 4.

and mill could bring economic opportunities for local residents and would not seriously damage the environment or interfere with harvesting activities. The Panel's recommendations however, were only partially accepted by regulators as conditions for project approval. Key recommendations including the settlement of land claims and impact benefit agreements prior to project approval which could ensure fair distribution of benefits and local participation in monitoring and environmental management, were rejected. Further, by claiming interjurisdictional immunity and allowing (in advance of the completion of the main review) the province to approve construction on the mine's infrastructure, the federal government passed their environmental responsibilities to the province which had been at the same time aggressively promoting the Project. The courts determined the federal government to be in breach of its environmental responsibilities as specified under the MOU.

Further, the decision to subject the proposed Argentia smelter to a separate, lower form of assessment also underlines the reluctance of regulators to compromise economic development for environmental protection, and at the same time demonstrates the weakness of the project-specific approach to EA. While the province and federal government viewed the mine and smelter proposals as separate undertakings for the purpose of environmental assessment, from an ecological perspective, the cumulative impacts of both proposals are inseparable. Without the ore from the mine, the construction of a smelter can not be justified. The implication is that the project-specific assessment of possible effects may not be adequate to measure their cumulative impacts. As both scientists and aboriginal people have argued in EA reviews, the overall impact of several projects may be greater

than the sum of their individual effects.[4]

An examination of the Great Whale project also demonstrates the disconnection of the EA process and resource decision-making. The Great Whale served as an example where an EA process surpassed the limited potential of a development model of EA, to one which may be considered a 'sustainability' model of EA. The example also illustrates the competing interests and political nature of large-scale resource development, proposed by the powerful provincial utility. The Great Whale case showed that in practice, decision-making related to the project was motivated not by concern for the environment, but by economic, political, and consumer pressures. In the end, poor consumer demand, project delays, cancelled contracts, international opposition, a newly-elected provincial government, and to a lesser extent, the ground-breaking EA contributed to the beaching of the Great Whale project.

In the early days of the proposal, the federal government, while initially making an effort to coordinate a single EA review, eventually tried to pass off environmental responsibility to the province. Ottawa claimed jurisdictional immunity and could not stop Québec from splitting the review process in two, or from beginning construction before the review of the main project had been completed. Not eager to provoke a conflict with the Québec government over the environment, the federal government took a narrow view of its jurisdiction and conceded to splintering the EARP review, and abstaining from the more authoritative James Bay and Northern Québec Agreement which would allow for Cree and Inuit representation on the

---

[4] Fikret Berkes and Helen Fast, "Aboriginal Peoples: The Basis for Policy-Making toward Sustainable Development," in Achieving Sustainable Development, eds., Ann Dale and John B. Robinson (Vancouver: UBC Press, 1996): 232.

review committees and decision-making powers for the Inuit.

For their part, the government of Québec fiercely defended what they perceived to be sole provincial jurisdiction over the development of Great Whale because the province viewed the federal presence in arena of environmental protection as a threat to its ability to control the development of hydroelectric generation, an activity which has had a strong nationalist connection since Hydro-Québec was created. While the federal government sought to avoid conflict with Québec over the environment, in the wake of the Rafferty-Alameda decision, it had little choice. In a court challenge launched by the Cree, the judge chided the federal government for appearing to renege on its responsibilities toward native people and environmental protection.

Despite the legal obligation to undertake a more stringent review, the fatal blows to the project came when New York cancelled a $17 billion hydro contract with the utility and added complications for any future exports by passing legislation to ensure that any project built to provide the state with electricity adhere to the same standards New York requires under its environmental review process. Finally, after the Review Bodies released their highly-critical review of the utility's impact statement, the newly elected Premier of Québec, Jacques Parizeau shelved the project, diffusing a politically volatile situation for a government seeking support for sovereignty. The decision also denied opponents the opportunity to criticize the government for wasting hundreds of millions of tax dollars on a flawed environmental impact study.

Both these case studies demonstrate that environmental assessment, given the right conditions, can begin to address the complexities of northern

development. However, given the reluctance of governments to address the matter of equitable distribution of power in decision-making, aboriginal people will be forced to pursue other routes for asserting their need to act as the legitimate stewards of their territories. Unfortunately, as these examples have shown, their choices are limited. Land claims processes are the preferred route, but are lengthy and expensive to negotiate, as the plight of the Innu and Inuit of Labrador have shown. Further, even when comprehensive agreements are in place, they may be subject to varied interpretation. While the James Bay and Northern Québec Agreement was touted as a model for land claims agreements, the Cree point to several significant shortcomings for its implementation. The failings of the JBNQA include an environmental protection regime which the Cree say does not work, no direct and indirect employment opportunities, a shortage of housing, and only partial implementation of native control over areas such as education. Impact and Benefits Agreements (IBAs), negotiated separately between individual communities and corporations do not represent a solution because they are difficult for both parties to enforce outside of a completed land claims agreement. While litigation seems to be an effective recourse, it is often serves as little more than a delaying tactic. Further, litigation is expensive and does not usually provide a forum for the negotiation of agreements. Organized protests also buy time and can result in a shift in positions, but they too are potentially dangerous and destructive in the public's eye, and may lead to difficulties for future public relations.

Given the diffuse benefits and concentrated costs of environmental protection however, these case studies do reveal a course of action for those advocating stringent environmental protection. The combination of political

strategy and unusual events can capture the public's attention, and cause those 'diffusely' affected to sit up and take notice. This dynamic also has the potential to prompt electorally-minded politicians to do the same. When this happens, those who are normally poorly informed-or the beneficiaries of environmental protection- may outnumber the 'victims' of stronger environmental regulations, and tip the balance of political costs in favour of environmental protection and equitable development strategies.

Over the last few years, many northern organizations not believing their concerns would be addressed by any levels of government have appealed to the international public, the media, and to international groups to provoke shifts in public attentiveness. The Cree targeted the end-users of Great Whale electricity in New England and concerned groups in Europe. They also lobbied the U.S. state legislatures, ran print campaigns abroad, and established contacts with several prominent U.S. public-interest groups including the Natural Resources Defense Council led by lawyer and activist Robert Kennedy Jr.. While these efforts alone may not have been forced the cancellation of the Great Whale project, they clearly heightened political costs of building dams and reservoirs before the environmental and social concerns were addressed. These initiatives also contributed to the cancellation of several large energy contracts. The gaze of the international community eventually forced the province to undertake a more comprehensive environmental review. The Innu and Inuit of Labrador have also been successful with organized appeals to European parliaments, the international public, media, and international organizations. While unsuccessful in stopping the low-level flying in their territories, their collective action was successful in placing the DND and its EA under much public scrutiny.

It is significant to note that while the federal and provincial governments have been described above as unitary actors, there may exist important differences of opinion between departments or individuals within these departments. While these differences are likely to be resolved internally, with both sides backing the final government position, in practice, dissenting members may look to outside sources for support of their positions. The implication for 'victim' groups may be to identify individual actors, and lobby the support of these members.

At Voisey's Bay, The Department of Fisheries and Oceans (DFO) was active and highly critical of the proponent's EIS. While the Panel had to go as far as to solicit the participation of other federal departments for their participation in the review hearings, the expertise of the DFO on fish and marine environments clearly improved the quality of the review and influenced the recommendations of the Panel.

In the case of Great Whale, the federal environment minister, Lucien Bouchard, supported a federal review of the Great Whale proposal, arguing that the environment was clearly Ottawa's responsibility. He declared that "...some nationalists in Québec must thank God for that [support], because Québec is not taking care of the environment now."[5] Similarly, the provincial environment minister sought backup from the federal government to support his tenuous position within the provincial cabinet for a single review. The minister even went so far as to join environmentalists in pressuring the federal government to secure an injunction in the Rafferty-Alameda case, arguing that environmental reviews must be completed before

[5] Graeme Hamilton, "Quebec Lax on Environment: Bouchard,," Montreal Gazette [Montreal] 30 October, 1990: A1.

any construction should be allowed to begin.[6]

While the involvement of northern residents in planning is seen as a desirable objective, the power for allowing northern participation, and the discretion for accepting or rejecting development proposals in many regions remains in Canada's southern centres. As such, imposition of EA has been reactive in the North, arising in response to specific development pressures from outside these regions. A culturally and socially inappropriate setting of public hearings have added to the alienation of native people. Even the basic question of whether or not to participate in EA has not always been an easy one to decide. As Shapcott has described, securing land claims agreements prior to EA must a priority:

> For many native people across the North and for the Haida, the settlement of claims to territory is central to the examination of whether environmental impact assessment can be a meaningful process. Participation in the process is rejected by some natives as a legitimization of the status quo that asserts foreign sovereignty, laws and regulations over their land. To not participate, however, means even less control. Either way, they have reason to anguish.[7]

As the Voisey's Bay case study demonstrated, there is place to question the appropriateness of EA procedures as a forum for the expression of native rights. Assessment procedures were not designed to address issues related to the settlement of land claims. Without formal land claims or equivalent agreements, there are no assurances that aboriginal organizations will be granted a role in the design EA process, or a guarantee that they are included in the environmental management of a project, or for the co-management for any other development in the region. The Voisey's Bay Panel stressed that the settlement of claims prior to project approval would not only allow for the durable and equitable benefits of resource activity to be achieved, it is

---

[6] Kathryn Harrison, Passing the Buck, p. 150.

[7] Catherine Shapcott, "Environmental Impact Assessment and Resource Management," p. 64.

sound public policy. In the wake of the Delgamuukw ruling however, interim measures to protect aboriginal title holders without settled claims may no longer be discretionary before resource development may take place; they are mandatory.

The Canadian experience with EA has demonstrated that the process can be highly discretionary, and the approval for large and influential projects, largely predetermined. In the Canadian north, concern for local aboriginal and environmental interests have, for the most part, been incidental and dependent more on the intentions of the proponents than on the proficiency of those conducting the impact assessments. The foregone conclusions as to whether a project should proceed, or the reluctance of regulators to undertake an EA study with any sincerity, has subverted and undermined EAs potential to guide and support sustainable decision-making. Just as Livingston has suggested, environmental assessment not grounded in consistent, sound, and pertinent premises, can become as "whatever you make of it".[8] In northern contexts, the sheer level of investment and the prospects for job creation, massive spending, and tax revenues, may undermine a process concerned with environmental and social protection. As both the experiences of Great Whale and Voisey's Bay have demonstrated, any project which involves billions of dollars by nature poses a potential threat to the democratic character of decision-making and to the ecological integrity of its site.

Environmental assessment can and should be a key process to determine whether the outcomes of resource development may harm the northern environment and its human residents. As natural resources are

---

[8] John Livingston, The Fallacy of Wildlife Conservation (Toronto: McClelland and Stewart, 1981).

depleted, exploration will seek more northern oil, gas, and minerals and potential sites for hydroelectric generation. The favourable market prices for gas and oil have recently led a consortium to propose the development of the proven reserves in the Beaufort Sea.[9] With these incessant pressures to develop resources, it is necessary to evaluate the processes which determine whether, or under what conditions these initiatives should proceed. If policy directions are not in themselves environmentally sustainable, there is an ecological as well as an ethical obligation develop ones which are. As this thesis has argued, in the present political context, EA is failing northern regions by favouring resource development at the expense of northern residents and environmental protection.

While EA procedures continue to evolve, the potential of the process is ultimately dependent on where the authority to make decisions resides. In the future, northern EA will likely continue to push the boundaries of design and practice. Until there is a political commitment to true ecological sustainability and the equitable distribution of the benefits however, EA will continue to used to pacify the general public into believing that the social and environmental impacts of resource development are taken into consideration before projects are formally approved. At the same time, and in its present form, EA will continue to facilitate the exploitation of natural resources on the Canadian frontier.

---

[9] Steven Chase, "Massive pipeline proposed for North," Globe and Mail [Toronto] 4 Nov., 1999 : B1-B9.

Appendix 1
Research Methodology

Just as the Canadian North is made up of a patchwork of differing social, ecological, and economic systems, it follows that the opinions about the role resource development should play in its future are just as diverse. Therefore, a brief overview of the methods used to gather primary information, as well as the types of questions asked during the course of this research may help the reader develop a sense of how these views shaped its conclusions.

The main sources of primary information about the Great Whale and the Voisey's Bay Projects were: verbatim transcripts of public hearings; correspondence between stakeholders obtained through the Canadian Environmental Assessment Agency's (CEAA) public registry, and; personal communication with residents of communities, political leaders, and advisors.

Transcripts

While transcripts for the public hearings into the Great Whale project were unavailable from CEAA, those from the community hearings for the Voisey's Bay project were reviewed to establish the general concerns and views of residents and others who appeared before the Voisey's Panel. These presentations described the general conditions in coastal communities including the quality of life, reliance on traditional activities, and attitudes toward the project. While opinions varied greatly- not only between presentations, but between communities- most recognized that in light of their social and economic contexts, the need for some form of economic development is necessary, so long as the pace of development and level of

local participation are satisfactory.

Correspondence

Correspondence between stakeholders, obtained through CEAA, included communiqués between the Cree and Inuit of Québec, the provincial and federal governments, and Hydro-Québec. In Labrador, correspondence between the Labrador Inuit Association (LIA), the Innu Nation, the Voisey's Bay Nickel Company (VBNC), and the provincial and federal governments helped to characterize the complex nature of intergovernmental coordination, and more specifically, the positions of these organizations on matters relating to the MOU and the EA process. These documents were especially useful in demonstrating how responsive decision-makers (including the Panel) were to both the company's appeals, and those of the Inuit, Cree, and Innu.

Personal Communication

Formal interviews between the author and local residents, political advisors, and policy makers were instrumental for gaining an understanding of the challenges surrounding EA practice, specifically in the cross-cultural and multi-jurisdictional contexts of Northern Québec and Labrador. For residents in Labrador, interview questions were focused on determining the level of satisfaction with public consultation and the dissemination of information about the proposed mine. In light of the intensity of mineral exploration in the regions, the author was also interested in whether residents had benefited from mineral development activities, and whether they believed the project could bring them any future benefits. While most responded that they felt the EA process was necessary, most were skeptical about whether the project could be stopped, and whether their concerns

would be taken into consideration, especially by VBNC and the provincial government which had been actively promoting the project.

Interviews with representatives of the Grand Council of the Cree of Québec (GCCQ), the Innu Nation, and the LIA also played a significant role in influencing the research. These interviews were primarily concerned with establishing the kinds of challenges faced by these organizations throughout the EA process, and in particular, for the negotiations of a memorandum of understanding (MOU).

While these organizations may differ in their approaches to EA and to resource development generally, the common experiences of these groups illustrate the intense political nature of large-scale resource development and for the practice of EA. In Québec, the Cree's negative experiences with the La Grande development and with Hydro-Québec shaped the GCCQ's aggressive and highly strategic opposition to the Great Whale Complex. In Labrador, the Voisey's Bay proposal sparked fast-track land claims negotiations, which not only concerned a new mine and mill, but new governments and territories for the Inuit and Innu of Labrador.

While this interview strategy helped chart the evolution of EA practice and to identify many of the hurdles which remain, it should also be acknowledged that *because* these cases are politically charged, stakeholders and policy makers were, in many instances, wary about delving heavily into detail, or matters of a strategic nature. As a result, the author suggests that there is likely more to this story than what appears on the surface or what was revealed in the interviews that were conducted. Further study and a greater cross-section of interview participants may reveal further detail about the motivations of governments and stakeholders.

Appendix 2

Interviews

Philip Raphals, energy consultant, Centre Hélios, Montréal, Québec. July 24, 1998.

Brian Craik, anthropologist, Grand Council of the Cree (GCCQ). Ottawa, July 22, 1998.

Dr. Husain Sadar, Professor and Executive Director Impact Assessment Centre, Carleton University. July 23, 1998.

Larry Innes, Environmental Advisor, Innu Nation, Sheshashit, Labrador. August 14, 1998.

Judy Rowell, Environmental Advisor, Labrador Inuit Association, Nain, Labrador. August 10, 1998.

Fran Williams, OkalaKatiget Society/resident, Nain, Labrador. 5 August 1998.

Brian Williams, resident Nain, Labrador. August 5, 1998.

Mary Webb, Information Officer, Environmental Assessment Office, Nain Labrador. August 8, 1998.

Ronald Webb, resident, entrepreneur, public hearings participant, Nain, Labrador. August 10, 1998.

Brent Denniston, Economic Development Advisor, Labrador Inuit Association. Nain, Labrador, August 6, 1998.

Ms. Vicki Williams, Town Manager, Town Council of Nain, Nain, Labrador. August 8, 1998.

Eva Kojak, Senior Radio Producer, OkalaKatiget Society, Nain, Labrador. August 9, 1998.

Katie Rich, President Innu Nation, Davis Inlet. August 12, 1998.

Christine Cleghorn, Voisey's Bay Assessment Coordinator, Davis Inlet, Labrador. August 12, 1998.

Appendix 2, cont'd

Robert Connolly, Vice-President Policy Development, Canadian Environmental Assessment Agency (CEAA). Hull, Québec, September 22, 1998.

Fred Schwarz, Archaeologist, Innu Nation, Goose Bay. August 2, North West River, Labrador. August 14, 1998.

Robbie Keith, Executive Director, Canadian Arctic Resources Committee (CARC), Peterborough, Ontario. November 16, 1998.

Andrew Orkin, Barrister and Solicitor, legal counsel to James Bay Cree and Pimicikamak Cree Nation of Cross Lake and Norway House, Manitoba. November 21, 1998.

James Dumont, Barrister and Solicitor, legal counsel to the James Bay Cree. November 21, 1998.

Harvey Feit, Professor of Anthropology, McMaster University. Cree representative for negotiation of the James Bay and Northern Québec Agreement. November 21, 1998.

Annette Arsenault, Band Council employee, Utshimassits, Labrador. August, 1988.

Brian Torrie, Voisey's Bay Mine and Mill Project Panel Manager, Canadian Environmental Assessment Agency, June 1998.

Appendix 3

Informed Consent

Hello, my name is Neal Burnham. I am a student in Canadian Heritage and Development Studies at Trent University and am conducting research on Impact Assessment (IA) in the North. The purpose of the research is to identify strengths and weaknesses of these processes. The inclusion of your responses to interview questions would add valuable information to the accuracy of the study. This project is part of my research for my Master's thesis.

The participation of community residents in this project is greatly appreciated. Before we start this interview, I need to assure you of your rights as a participant in this project and also get your written consent.

-First, your participation in the research is entirely voluntary.
-You are free to not answer any question at any time.
-You are free to cancel or withdraw from the survey at any time.
-Also, names and identifying information will not be used in the final report unless specified otherwise.
-Data will be stored in a secure place only accessible by the researcher (me) and will be destroyed after the final document is produced.

If you have any questions about this project, please ask me at any time. I can also provide the phone number for my supervisor, Dr. Robert Paehlke, should you have any concerns. I would be grateful if you would consent to this interview for my Trent research project.

a)Do you agree to have our conversation recorded in notes?	Yes	No
b)Do you agree to have our conversation recorded by tape recorder?	Yes	No
c)Would you agree to have your name used in the final report?	Yes	No
d) If yes to the (c) above, do you require to see a copy of the final report before you agree to have your name attributed?	Yes	No

Signature _____

Date _____

If you would like to see the final report, it will be kept on file at the Frost Centre for Canadian Heritage and Development at Trent University. Copies will also be sent to the respective Regional Authorities (Grand Council of the Cree, Makivik Corporation, Labrador Inuit Association, Innu Nation).

Thank you.

Appendix 4

Chronology of Events Leading to the James Bay and Northern Québec Agreement

April 1971 : Québec Premier Robert Bourassa launches the "project of the century," announcing the government's decision to develop the river systems draining into James Bay.

July 1971 : The Québec government adopts the law creating the Société de development de la Baie James (SDBJ) to develop the territory's resources and economic activity.

Fall 1971: Construction began on the road to the La Grande Complex.

Dec. 1971 : The Québec government created the Société l'énergie de la Baie James (SEBJ) to develop hydroelectric projects in the James Bay region. The SEBJ became a wholly owned subsidiary of Hydro-Québec in 1978.

Fall 1972 : The Québec Association of Indians applies to the Québec Superior Court for an injunction to stop construction work in the James Bay territory.

Nov. 1973 : Judge Albert Malouf orders work on the La Grande complex to stop immediately. Malouf finds that the Québec government had not yet honoured its obligations to the territory's natives as required by the 1912 legislation extending Québec's boundaries.

Nov. 1973 (one week later): An appeals court stays the injunction, allowing on-site work to resume pending the outcome of an appeal by the SDBJ and SEBJ.

Nov. 1975: The James Bay and Northern Québec Agreement (JBNQA) is signed.

Appendix 5

Québec Environment Quality Act Provisions Applicable to the James Bay and Northern Québec Region.

Under the James Bay and Northern Québec Agreement, several joint committees were established in order to allow equal input for future development in the territory. These committees evaluate the environmental and social impacts and review projects in the James Bay and northern Québec.

Because most of the 10,000 Crees live south of the 55 th parallel, and the 7000 Inuit north of the 55 th parallel, two sets of guidelines were established to review proposed projects depending on the geographical location of the development. The location of the proposed Great Whale project was unique in that it straddled the 55th parallel, requiring both sets of provisions. Listed below are the commissions established under the JBNQA.

South of the 55 th parallel

1) Advisory Committee

13 members: 4 appointed by Québec government
4 appointed by Governor General of Canada
4 elected by the Cree Regional Authority

The Advisory Committee provides evaluating Committee secretarial services.

2) Evaluating Committee

6 members: 2 appointed by Québec Government
2 appointed by Governor General of Canada
2 appointed by Cree Regional Authority

The Evaluating Committee recommends to the Minister of the Environment the type of EA, as well as the scope of the assessment statements that must be prepared by the proponent.

Appendix 5, cont'd

3) Review Committee

5 members: 2 appointed by the Québec Government, including one chairperson,
2 appointed by the Cree Regional Authority.

The Review Committee reviews submitted environmental impact assessments, soliciting responses from Cree, bands, and villages. The Review Committee only make recommendations to the minister, however the minister must have the recommendations of Review Committee before rendering any decision.

North of the 55 th parallel

Kativik Advisory Committee

9 members: 3 appointed by Québec Government
3 appointed by Governor General of Canada
3 appointed by Inuit, Kativik Regional Authority

The purpose of the Kativik Advisory Committee is to oversee the exchange of views and information in order to create recommendations for environmental, social and land uses.

Kativik Environmental Quality Commission

9 members: 4 members appointed by the Québec government, plus one chairperson to be approved by both groups.
4 appointed by Inuit, Kativik Regional Authority (2 of whom must be Inuit)

The Kativik Environmental Quality Commission reviews EIS's and has authoritative power which only provincial cabinet can overrule. In Kativik's 11-year history, that has never happened.

Source: Québec Ministry of the Environment, Environment Quality Act, Updated to 3 Sept. 1996 (Québec: Editeur officiel du Québec, Sept 1996): ch. 2, Div.2-3.

Appendix 6

Members of the Great Whale Review Bodies

Provincial Review Committee (Comex)

Gaston Moisan, Chairman (Government of Québec)
Daniel Berrouard, Biologist, Ministère de L'Environment et de la Faune, Gouvernement du Québec (Gouvernement du Québec)
Brian Craik, Anthropologist (Cree Regional Authority)
Chief Billy Diamond, Waskaganish First Nation (Cree Regional Authority)
Clément Tremblay, President, NIRLIQ Inc. (Gouvernement du Québec)

Environmental and Social Impact Review Panel North of the 55th Parallel (Cofex-North)

Paul Lacoste, Chairman, former Rector, Université de Montréal (Gouvernement du Canada)
Claude E. Delisle, Professor, Environmental Engineering, Civil Engineering Department, École polytechnique de Montréal (Government of Canada)
Jules Dufour, Professor, Geography and Environment, Département des sciences humaines, Université du Québec à Chicoutimi (Kativik Regional Government)
Claude Grenier, Montréal (Kativik Regional Government)
Grant Ingram, Professor, Oceanography, Department of Atmospheric and Oceans Sciences, McGill University (Government of Canada)

Federal Environmental Assessment Panel (FEAP) of the Proposed Great Whale Project

Paul Lacoste, Chairman, former Rector, Université de Montréal (Gouvernement du Canada)
Claude E. Delisle, Professor, Environmental Engineering, Civil Engineering Department, École polytechnique de Montréal (Government of Canada)
Grant Ingram, Professor, Oceanography, Department of Atmospheric and Oceans Sciences, McGill University (Government of Canada)

Appendix 6, cont'd

Environmental and Social Impact Review Panel South of the 55th Parallel (Cofex-South)

Paul Lacoste, Chairman, former Rector, Université de Montréal (Gouvernement du Canada)
Philip Awashish, Consultant, Aboriginal Affairs (Cree Regional Authority)
Claude E. Delisle, Professor, Environmental Engineering, Civil Engineering Department, École polytechnique de Montréal (Government of Canada)
Grant Ingram, Professor, Oceanography, Department of Atmospheric and Oceans Sciences, McGill University (Government of Canada)
Andrew J. Orkin, Barrister and Solicitor (Cree Regional Authority)

Kativik Environmental Quality Commission (KEQC)

Peter Jacobs, Chairman, Professor of Landscape Architecture, Faculté de l'aménagement, Université de Montréal (Gouvernement du Québec)
Bernard Arcand, Professor, Anthropology, Department d'anthropologie, Université Laval (Kativik Regional Government)
Daniel Berrouard, Biologist, Ministère de L'Environment et de la Faune, Gouvernement du Québec (Gouvernement du Québec)
Bertrand Bouchard, Engineer, Ministère de L'Environment et de la Faune, Gouvernement du Québec (Gouvernement du Québec)
Neil Greig, Consultant, Makivik Corporation (Kativik Regional Government)
Claude Grenier, Montréal (Kativik Regional Government)
Gilles Harvey, Biologist, Ministère de L'Environment et de la Faune, Gouvernement du Québec (Gouvernement du Québec)
David Okpik, Quaqtaq (Kativik Regional Government)
Georges Simard, Geological Engineer, Ministère de L'Environment et de la Faune, Gouvernement du Québec (Gouvernement du Québec)

Appendix 7

Panel Membership, Environmental Assessment of Voisey's Bay Mine and Mill Project

Lesley Griffiths, Chair

Ms. Griffiths is an environmental and community planning consultant, based in Halifax, with 20 years of experience in public consultation and consensus building, environmental impact assessment, waste and water resource management, oil and gas development, and tourism and recreation planning. She was a member of the Joint Canada-Nova Scotia environmental assessment panel that reviewed the proposed Halifax Harbour Wastewater Management System.

Mr. Samuel Metcalfe

Mr. Metcalfe is Inuk-born and a former resident of the Inuit community of Nain near the proposed Voisey's Bay Mine and Mill Project. He has a wide range of experience in both the public and private sectors. He is a former federal public servant who served as head of the culture and linguistics division of Indian and Northern Affairs Canada in Ottawa.

Ms. Lorraine A. Michael

Ms. Michael is active in the Canadian social justice movement with extensive regional, national and international experience. She is the former program coordinator, women and economic justice for the Ecumenical Coalition for Economic Justice. Ms. Michael has experience in assessing the social impact of economic development activities in Newfoundland and Labrador, her home province.

Appendix 7, cont'd

Dr. Charles Pelley

Dr. Pelley is a Newfoundland-born geologist and mining engineer. He served as a member of the federal environmental assessment panel reviewing the Rabbit Lake, Saskatchewan uranium mine. In positions held with the Iron Ore Company of Canada, Canada Wide Mines and Asbestos Corporation Limited, he gained considerable experience in mine planning and operations. Dr. Pelley holds a Ph.D. in Engineering from McGill University and is currently the Stollery professor of mining engineering at Queen's University in Kingston, Ontario.

Dr. Peter J. Usher

Dr. Usher is an Ottawa-based consultant in the fields of social and environmental impact assessment, land use and resource management, and Aboriginal claims. His client base is chiefly in northern Canada, where he worked for many years. Dr. Usher holds a Ph.D. in geography from the University of British Columbia. He is currently the chair of the Wildlife Management Advisory Council (NWT).

Source: Voisey's Bay Environmental Assessment Panel, Report on the Proposed Voisey's Bay Mine and Mill Project, (Ottawa: Minister of Public Works and Government Services Canada, March, 1999): Appendix 2.

Bibliography

"Alcohol ban imposed after suicides." Globe and Mail [Toronto] 27 July, 1999: A5.

Amy, Douglas J. "Decision Techniques For Environmental Policy: A Critique." Managing Leviathan: Environmental Politics and the Administrative State. Eds. Robert Paehlke and Douglas Torgerson. Peterborough: Broadview Press, 1990. 59-79.

Andersen, Chesley. "Re: Argentia Smelter and Refinery proposed by Voisey's Bay Nickel Company Limited." Correspondence to The Honourable Sergio Marchi, Minister of Environment. 17 January, 1997. CEAA Registry.

Armstrong, S. Bradley. "Defining the Boundaries of Aboriginal Title after Delganuukw." Resources. 62 (Spring, 1998): 2-5.

Ashini, Daniel. Correspondence to Lesley Griffiths, Panel Chair. 23 April, 1997. Hull: CEAA Public registry. Document VB/DGL-085.

—. "The Innu Struggle." On The Land: Confronting the Challenges to Aboriginal Self-Determination in Northern Québec and Labrador. Eds. Bruce W. Hodgins and Kerry A. Cannon. Toronto: Betelgeuse Books, 1995. 29-41.

Associated Press, "Massachusetts considers review of Great Whale." Montreal Gazette, [Montreal] 8 April, 1994: A5.

Authier, Philip and Graeme Hamilton. "Quebec shelves Great Whale." Montreal Gazette [Montreal] 19 Nov. 1994: A1.

—. "We'll accept one impact study of Great Whale, minister says." Monteal Gazette [Montreal] 3 Oct. 1991: A7.

—. " Quebec shelves Great Whale." Montreal Gazette [Montreal] 19 Nov. 1990: A1.

Authier, Philip and Paul Wells. "Quebec eases up on Great Whale and will allow time or full review." Montreal Gazette [Montreal] 22 Aug. 1991: A10.

Authier, Philip. "Great Whale ad campaign defended by Bacon." Montreal Gazette [Montreal] 11 Dec, 1990: A11.

Bangay, Garth. Correspondence with Paul Bernier, President, Process Management, Canadian Environmental Assessment Agency. CEAA Registry. 2 February, 1996.

Barbour, William. President, Labrador Inuit Association. Correspondence to Mr. Stewart Gendron, President, VBNC. 22 May, 1997. CEAA Registry.

Barker, Mary L. and Dietrich Soyez. "Think Locally, Act Globally? The Transnationalization of Canadian Resource-Use Conflicts." Environment. 36.5 (1994): 12-36.

Bartlett, Richard H. Aboriginal Water Rights in Canada: A Study of Aboriginal Title to Water and Indian Water Rights. Calgary: Canadian Institute of Resources Law, 1988.

Bartlett, Robert V. "Ecological Rationality: Reason and Environmental Policy." Environmental Ethics. 8.3 (1986): 221-239.

—. ed. Policy Through Impact Assessment. Connecticut: Greenwood Press, 1989.

—. "Ecological Reason in Administration: Environmental Impact Assessment and Administrative Theory." Managing Leviathan: Environmental Politics and the Administrative State. Eds. Robert Paehlke and Douglas Torgerson (Peterborough, Ont.: Broadview Press, 1990. 81-96.

—. "Rationality and the Logic of the National Environmental Policy Act." Environmental Policy and NEPA. Eds. Ray Clark and Larry Canter. Boca Raton, Florida: St. Lucie Press, 1997. 51-60.

Beanlands, G.E. and P.N. Duinker. An Ecological Framework for Environmental Impact Assessment in Canada. Halifax: Institute for Resource and Environmental Studies, Dalhousie University, 1983.

Beattie, Robert B. "Everything You Already Know About EIA (But Don't Often Admit)." Environmental Impact Assessment Review. 15 (1995): 109-114.

Berger, Thomas R. Northern Frontier, Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry, Volume 1. Ottawa: Minister of Supply and Services, 1977.

---. Northern Frontier, Northern Homeland: The Report of the Mackenzie Valley Pipeline Inquiry, Volume 2. Ottawa: Minister of Supply and Services, 1977.

Berkes, Fikret. "The Intrinsic Difficulty of Predicting Impacts: Lessons from the James Bay Hydro Project." Environmental Impact Assessment Review. 8 (1988) : 201-220.

---. "Some Environmental and Social Impacts of the James Bay Hydroelectric Project, Canada." Journal of Environmental Management. 12 (1981) : 157-172.

Berkes, Fikret and Helen Fast. "Aboriginal Peoples: The Basis for Policy-Making toward Sustainable Development." Achieving Sustainable Development, eds., Ann Dale and John B. Robinson. Vancouver: UBC Press, 1996. 204-264.

Bodaly, R.A. and T.A. Johnston. The Mercury Problem in Hydro-Electric Reservoirs with Predictions of Mercury Burdens in Fish in the Proposed Grande Baleine Complex, Quebec. James Bay Publication Series, Paper #3. December, 1992.

Boggs, J.P. "Procedural vs. Substantive in NEPA Law: Cutting the Gordian Knot." The Environmental Professional. 15.1 (1993) : 25-33.

Bone, Robert M. The Geography of the Canadian North. Toronto: Oxford University Press, 1992.

Boardman, Robert, ed. Canadian Environmental Policy: Ecosystems, Politics, and Process. Toronto: Oxford University Press.

Botkin, Daniel and Edward Keller. Environmental Science: Earth as a Living Planet. New York: John Wiley & Sons, 1995.

Bourassa, Robert. James Bay. Toronto: Harvest House, 1973.

Bourassa, Robert. Power From the North. Toronto: Prentice Hall, 1985.

Brice-Bennett, C., ed. Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador. Nain: Labrador Inuit Association, 1977.

Brody, Hugh. "Permanence and Change Among the Inuit and Settlers of Labrador." Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador. Nain: Labrador Inuit Association, 1977. 311-347.

Brouard, D. et. al., Evolution of Mercury Levels in Fish of the La Grande Hydroelectric Complex, Québec (1978-1989) Summary Report. Montreal: Vice-présidence Environment, Hydro-Québec & Groupe Environment Shooner, Inc., 1990.

Brown, M. Paul. "Organizational Design as Policy Instrument: Environment Canada in the Canadian Bureaucracy." Canadian Environmental Policy: Ecosystems, Politics, and Process. Ed. Robert Boardman. Toronto: Oxford University Press, 1992. 24-42.

Bueckert, Dennis. "Deal with Quebec on Great Whale is collapsing, Ottawa official says," Montreal Gazette [Montreal] 24 Nov. 1990: A6.

Bueckert, Dennis. "Ottawa appeals Great Whale ruling." Montreal Gazette [Montreal] 11 Oct. 1991: A6.

Burnham, Neal. "More Damnation in Quebec: Hydro-Québec plans to divert eight more rivers to generate additional electricity for the U.S." Alternatives. 24. 2 (1998): 5-6.

---. "The Great Whale Complex: Ambiguous Jurisdiction and Environmental Decision-Making in the 1990s. Avancer: The Student Journal for the Study of Canada. (1997): 66-80.

Burnside Environmental Limited. "Review of the Application of the Precautionary Principle to the Environmental Impact Statement Guidelines for the Proposed Voisey's Bay Mine/Mill Project." Prepared for the Innu Nation, May 1997.

Cahn, Robert. "Books (Not Thneeds) Are What Everyone Needs." Media and the Environment. Eds. Craig L. LaMay and Everette E. Dennis. Washington D.C.: Island Press, 1991. 225-244.

Caldwell, Lynton K. "The Contextual Basis for Environmental Decision Making: Assumptions are Predeterminants of Choice." The Environmental Professional. 9 (1987): 302-308.

---. "Environmental Impact Analysis (EIA): Origins, Evolution, and Future Directions." Policy Studies Review. 8.1-2 (1988-89): 75-83.

—. "Understanding Impact Analysis: Technical Process, Administrative Reform, Policy Principle." Policy Through Impact Assessment. Ed. Robert V. Bartlett. Connecticut: Greenwood Press, 1989. 7-16.

—. Science and the National Environmental Policy Act: Redirecting Policy Through Procedural Reform. Alabama: University of Alabama Press, 1982.

Canadian Arctic Resources Committee (CARC). "Comparing the Final Guidelines with those for BHP: CARC"s Comments, and the Government Response." Diamond Alert Bulletin, Ottawa: CARC, 18 September, 1998.

—. "The EIS Guidelines: Pushing Hydro-Québec into the 21st Century." Northern Perspectives. 20.2 (1992): 10.

—. "Of Gigawatts and GRAND Designs." Northern Perspectives. 15.3 (1987): 1.

—. "Northern Resource and Land Use Policy and Study." Northern Perspectives 7.3 (1979) : 3.

Canadian Council of Resource and Environment Ministers (CCREM). Report of the National Task Force on Environment and Economy. Ottawa: CCREM, 1987.

Canadian Environmental Assessment Act (CEAA). Third Session, Thirty-fourth Parliament, 40-41 Elizabeth, 1991-1992. Ch. 37, Bill C13. Assented to 23rd June, 1992.

Canadian Environmental Assessment Agency (CEAA). Environmental Assessment Panel Report on the Proposed Voisey's Bay Mine and Mill Project. Ottawa: Minister of Public Works and Government Services Canada, 1999.

—. Memorandum of Understanding (MOU) on Environmental Assessment of The Proposed Voisey's Bay Mining Development. Hull: Canadian Environmental Assessment Agency, January 1997.

—. Military Flying Activities in Labrador and Quebec : Report of the Environmental Assessment Panel. Ottawa: Ministry of Supply and Services, 1995.

---. "The Environmental Assessment Process for Policy and Program Proposals," (Hull: CEAA, 1990).

---. The Canadian Environmental Assessment Process: A Citizen's Guide. Ottawa: Minister of Supply and Services Canada, 1996.

---. The Canadian Environmental Assessment Act: Training Compendium. Ottawa: Minister of Supply and Services Canada, 1996.

Canadian Environmental Assessment Research Council (CEARC), Community Perspectives on Sustainability: Australia-New Zealand-Canada Environmental Assessment Workshop. Ottawa: CEARC, 1989.

Canadian Press, "Cree, Hydro to wage public-relations war." Montreal Gazette [Montreal] 15 April, 1993: A4.

Carson, Rachel. Silent Spring. Boston: Houghton Mifflin, 1962.

Chase, Steven. "Massive pipeline proposed for North." Globe and Mail [Toronto] 4 Nov., 1999 : B1-B9

Christensen, Bev. Too Good to Be True: Alcan's Kemano Completion Project. Vancouver: Talon, 1995.

Chociolko, Christina. "The Experts Disagree: A Simple Matter of Facts Versus Values?" Alternatives. 21.3 (1995) : 18-25.

Clark, Brian D. "Environmental Impact Assessment (EIA): Origins, Evolution, Scope and Objectives." Paper presented at the 11th International Seminar on Environmental Impact Assessment and Management, 8-21 July 1990, University of Aberdeen, Scotland.

Clément, Daniel. Innu Ecological Knowledge and EIS Guidelines for the Review of Voisey's Bay Project. A Report Presented on Behalf of the Innu Nation to the Environental Assessment Panel During the Public Hearings Held in Utshimassits and Sheshatshiu. Innu Nation, April 1997.

Coates, Ken and William Morrison. The Forgotten North: A History of Canada's Provincial Norths. Toronto: James Lorimer & Company, 1992.

Coates, Kenneth. "The Discovery of the North: Towards a Conceptual Framework for the Study of Northern/Remote Regions." The Northern Review. 12/13 (Summer 1993/Winter 1994): 16.

Conca, Ken and Geoffrey D. Dabelko, eds. Green Planet Blues: Environmental Politics from Stockholm to Kyoto. 2nd ed. Boulder, Co.: Westview Press, 1998.

Coon-Come, Matthew. "Treaty Promises Block Quebec grab of vast Cree lands." Canadian Speeches. 10.2 (May, 1996): 35-43.

--. "Clearing the Smokescreen." On the Land: Confronting the Challenges to Aboriginal Self-Determination in Northern Quebec and Labrador. Eds. Bruce W. Hodgins and Kerry A. Cannon. Toronto: Betelgeuse with Frost Centre for Canadian Heritage and Development Studies, 1995. 4-17.

CROP. Study of the Public's Attitude To Issues Relating To the Great Whale Project. Research report prepared for Environment Canada. July, 1991.

Crowe, Keith. "Claims on the Land." Arctic Circle Magazine 1.3 (1990): 14-22.

Curran, Peggy. "Ottawa can't stop Quebec building roads, de Cotret says." Montreal Gazette [Montreal] 21 Nov. 1990: A5.

Dacks, D. A Choice of Futures: Politics in the Canadian North. Toronto: Methuen, 1981.

Dakers, Sonya. Mining and Regulation: Voisey's Bay. Background Paper, Library of Parliament. Ottawa: Minister of Supply and Services Canada, 1996.

Delicaet, Alison. "The New Canadian Environmental Assessment Act: A Comparison With the Environmental Assessment Review Process." Environmental Impact Assessment Review, 15 (1995): 497-505.

Dene Cultural Institute. "Traditional Knowledge and Environmental Assessment." Consuming Canada (Copp Clark, 1995): 340-365.

Department of Indian Affairs and Northern Development. Québec Indian Community Guide. Québec: Communications Section, Québec Regional Office, 1995).

Diamond, Billy. "Villages of the Dammed: The James Bay Agreement Leaves a Trail of Broken Promises." Arctic Circle 1.3 (1990): 24-34.

---. Highlights of the Negotiations Leading to the James Bay and Northern Quebec Agreement, 1976.

Dirschl, H.J. The Lancaster Sound Region: 1980-2000. Ottawa: Ministry of Indian and Northern Affairs, 1982.

Doelle, Meinhard. "The Canadian Environmental Assessment Act: New Uncertainties, but a Step in the Right Direction." Journal of Environmental Law and Practice. 4 (1994): 59-91.

Doern, Bruce G. and Thomas Conway. The Greening of Canada: Federal Institutions and Decisions. Toronto: University of Toronto Press, 1994.

Doern, Bruce G. "Getting it Green: Canadian Environmental Policy in the 1990s." The Environmental Imperative: Market Approaches to the Greening of Canada. Ed. Bruce G. Doern. Publication of the C.D. Howe Institute, Policy Study no. 9. Toronto/Calgary: C.D. Howe Institute, 1990.

Donihee, John. "Delgamuukw and Natural Resource Allocation Decisions." Resources. 62 (Spring, 1998): 1.

Dryzek, John S. Rational Ecology. New York: Basil Blackwell, 1987.

---. "Ecological Rationality." International Journal of Environmental Studies 21 (1983): 5-10.

---. The Politics of the Earth: Environmental Discourses. New York: Oxford Press, 1997.

Elder, P.S. "Environmental and Sustainability Assessment." Journal of Environmental Law and Practice. 2 (1992): 125-148.

Emond, D.P. Environmental Assessment Law in Canada. Toronto: McClelland & Stewart, 1978.

Environmental Assessment and Review Process Guidelines Order. PC1984-2123: Canada Gazette Part II. 11 July 1984.

Environment Canada. Task Force on Environmental Impact Policy and Procedure. Ottawa: Environment Canada, 1972.

Environmental Assessment Panel, Voisey's Bay Mine/Mill Project. Transcript of Proceedings of the Scoping Sessions. Community Hall, Nain, Labrador. 17 April, 1997.

Environmental Assessment Panel, Voisey's Bay Mine/Mill Project. Transcript of Proceedings of the Scoping Sessions. Community Hall, Nain, Labrador. 16 April, 1997.

Environmental Mining Council of British Columbia. "Mining in Remote Areas: Issues and Impacts." Victoria, EMCBC, 1998).

Estrin, David and John Swaigen, eds. Environment on Trial. Toronto: Emond-Montgomery, 1993.

Evaluating Committee, et. al., Guidelines: Environmental Impact Statement for the Proposed Great Whale River Hydroelectric Project. Quebec: Bibliotheque Nationale du Quebec, 1992.

Evans, Peter and William Kalleo. "The Deal's In The Making: don't celebrate just yet, but the Labrador Inuit Association is nearing a land claim settlement." Kinatuinamut Ilingajuk. [Nain] Winter 1997/1998 : 28.

—. "Hopedale gets toxic cleanup." Kinatuinamut Ilingajuk. [Nain] Summer/Fall, 1997: 7.

—. "Saglek gets long overdue cleanup." Kinatuinamut Ilingajuk. [Nain] Summer/Fall 1997: 12.

Eye of the Storm. Prod. Paul Pope and Mary Sexton. Dir. Nigel Markham. National Film Board, 1997.

Federal Environmental Assessment Review Office (FEARO). Report of the Environmental Assessment Panel: Military Flying Activities in Labrador and Quebec, February 1995. Ottawa: Minister of Supply and Services Canada, 1995.

—. The National Consultation Workshop on Federal Environmental Assessment Reform: Report on Proceedings. Ottawa: Minister of Supply and Services Canada, 1988.

—. Report of the Hibernia Environmental Assessment Panel, Hibernia Development Project, December 1985. Ottawa: Minister of Supply and Services, 1986.

Feit, Harvey. "Colonialism's Northern Cultures: Canadian Institutions and the James Bay Cree." On the Land: Confronting the Challenges to Aboriginal Self-Determination in Northern Quebec and Labrador. Eds. Bruce W. Hodgins & Kerry A. Cannon. Toronto: Betelgeuse, 1995. 105-128.

Fenge, Terry. "Toward Sustainable Development in the Circumpolar North." Ottawa: Canadian Arctic Resources Committee, no date. Http://www.carc.org/pubs/briefs/brief1.htm.

—. "Hydroelectric Power on the Great Whale River: Toward Environmentally Sustainable Development." Northern Perspectives. 20. 2 (1992): 2.

—. "The Great Whale Review and the Federal Government's Disappearing Act." Northern Perspectives, 20. 2 (1992): 2-5.

Fenge, Terry and William E. Rees, eds. Homeland or Hinterland: Land-Use Planning in Northern Canada. Ottawa: Canadian Arctic Resources Committee, 1987.

Finnish Ministry of the Environment. Guidelines For Environmental Impact Assessment (EIA) in the Arctic: Arctic Environmental Protection Strategy. Helsinki, Finland: Finnish Ministry of the Environment, 1997.

Fouillard, Camille and Innu Nation, eds., Gathering Voices: Finding Strength to Help Our Children. Vancouver: Douglas & McIntyre, 1995.

Franson, Robert T. and Alistair R. Lucas. Canadian Environmental Law, (Vancouver: Butterworths, 1976).

"Freshwater seal symbolizes fears for wildlife." Globe and Mail [Toronto] 17 April, 1991 : A1.

Gagné, Marie-Anik. A Nation Within a Nation: Dependency and the Cree. Montreal: Black Rose, 1994.

Gamble, Donald J. "The Grand Canal and the National Interest: When Should Rational Thinking Apply to Water Policy?" Northern Perspectives. 15.3 (1986): 2-7.

Gardner, Julia E. "The Elephant and the Nine Blind Men: An Initial Review of Environmental Assessment and Related Processes in Support of Sustainable Development." Sustainable Development and Environmental Assessment: Perspectives on Planning for a common Future. Ottawa: Canadian Environmental Assessment Research Council, 1989. 35-66.

Gibson, Robert. "Comments on the March 14, 1997 draft 'Environmental Impact Statement (EIS) Guidelines for the Review of the Voisey's Bay Mine and Mill Project.'" Hull: Canadian Environmental Assessment Agency. 25 April, 1997.

Gibson, Robert B. "Punching Dummies in the North. " Alternatives 22.4 (1996) : 1.

—. "Environmental Assessment (Canada)." Conservation and Environmentalism. Ed. Robert Paehlke. New York: Garland, 1995. 223-225.

—. "Basic Principles of Environmental Assessment Process Design: Lessons from the Canadian Experience." The Environmental Professional. 15 (1993).

—. "The New Canadian Environmental Assessment Act: Possible Responses to its Main Deficiencies," Journal of Environmental Law & Practice. 2 (1992) : 223-255.

Glen, John Edward. Decision-Making Regimes Covering EA in Canada. Hull: Canadian Environmental Assessment Research Council, 1992.

Gorrie, Peter. "The James Bay Power Project," Canadian Geographic February/March. 1990: 20-31.

Government of Canada. "The Government of Canada Responds to Voisey's Bay Environmental Panel Report." News release. 3 August, 1999.

—. Response to the Environmental Assessment Panel Report of the Proposed Voisey's Bay Mine and Mill Project. Ottawa: Minister of Public Works and Government Services Canada, 1999.

—. Minister of Indian Affairs. James Bay and Northen Quebec Assessment Implementaion Review. Ottawa: Minister of Indian Affairs, 1984.

Government of Newfoundland and Labrador. Department of Mines and Energy. "Managing Your Mineral Licence."

"Great Whale may be beached, but it's not dead." Editorial. Windspeaker. December 18, 1994: 4.

Great Whale Public Review Support Office. "Beginning of a 45-day Consultation Period on the Great Whale Project Impact Assessment Draft Guidelines" Press Release. 30 April, 1992.

Great Whale Public Review Support Office. Guidelines for the Environmental Impact Statement for the Proposed Great Whale River Hydroelectric Project. Background Information. October, 1992. 1-6.

Griffiths, Lesley. Correspondence from the Environmental Assessment Panel Regarding Approval of the Exploration Support Works at Voisey's Bay." 16 June, 1997. CEAA Registry.

Grima, A.P. "Participatory Rites: Integrating Public Involvement in Environmental Assessment." Environmental Assessment: The Canadian Experience. Eds. J. Whitney & V. Maclaren. Toronto: Institute for Environmental Studies, University of Toronto, 1985.

Hamelin, Louis-Edmond. Canadian Nordicity: It's Your North Too. Montreal: Harvest House, 1979.

Hamilton, Graeme. "Great Whale study needs work five federal ministries conclude." Montreal Gazette. [Montreal] 3 Aug. 1994: A4.

---. Hamilton, Graeme. "It's a deal for Hydro and Inuit, but Cree are upset by Great Whale agreement," Montreal Gazette [Montreal] 15 April, 1994: A1, A2.

---. "$256 million down the drain." Montreal Gazette. [Montreal] 18 Nov. 1994: A1.

—. "Kennedy vows to intensify Hydro battlle." Montreal Gazette [Montreal] 13 Aug. 1993: A4.

—. "Great Whale hearings turn ugly as business, labour bash natives." Montreal Gazette [Montreal] 23 March, 1992: A4.

—. "Hold off on Great Whale till review is done: panel." Montreal Gazette [Montreal] 21 Feb. 1992: A2.

—. "Great Whale review panel stands firm. " Montreal Gazette, [Montreal] 11 Aug. 1991: A5.

—. "Flaw seen in Hydro Great Whale study," Montreal Gazette, [Montreal] 11 Feb. 1991: A3.

—. "Ottawa reversed its position on hydro project, letters show." Montreal Gazette [Montreal] 21 Nov. 1990 : A5.

—. "Quebec Lax on Environment: Bouchard." Montreal Gazette [Montreal] 30 Oct. 1990: A1.

—. "Cree seek court order to block Great Whale." Montreal Gazette [Montreal] 4 Apr. 1990: A5.

—. "Ottawa gives Quebec the go-ahead on Great Whale." Monteal Gazette [Montreal] 20 Nov. 1990: A1.

Hanebury, Judith. "The Environment in the Current Constitution." Alternatives. 18.4 (1992) : 14-17.

—. "The Federal Role in Environmental Assessment." Diss. University of Calgary, Faculty of Law, 1991.

Hanrahan, Maura. "Mining for Community Benefits." Alternatives. 25.3 (1999) : 4-5.

Harrison, Kathryn. Passing the Buck: Federalism and Canadian Environmental Policy. Vancouver: UBC Press, 1996.

—. "Federalism, Environmental Protection, and Blame Avoidance." New Trends In Canadian Federalism. Eds. Francois Rocher and Miriam Smith. Peterborough: Broadview Press, 1995. 414-438.

Harvey, Janice. Sustainable Development and Small Communities: Tools for Analysis and Action. Hull: Canadian Environmental Assessment Research Council (CEARC), 1989.

Haysom, Veryan. "Labrador Inuit Land Claims: Aboriginal Rights and Interests v. Federal and Provincial Responsibilities and Authorities." Northern Perspectives. 18. 2 (1990): 6-10.

Hazell, Stephen. Canada v. The Environment: Federal Environmental Assessment, 1984-1998. In print.

Henriksen, Georg. "Social and Cultural Impacts, Voisey's Bay Mine/ Mill Project, Environmental Impact Statement." Utshimassits: Innu Nation, October 16, 1998.

Hessing, Melody and Michael Howlett. Canadian Natural Resource and Environmental Policy. Vancouver: UBC Press, 1997.

Higgs, Eric, and Mary Richardson and Rick Riewe, eds. The Role of Science in Environmental Impact Assessment. Canadian Circumpolar Institute Occasional Publication #34. Athabasca, Alta: Athabasca University, 1994.

Hodgins, Bruce and Kerry A. Cannon. On the Land: Confronting the Challenges to Aboriginal Self-Determination in Northern Quebec & and Labrador. Toronto: Betelegeuse with the Frost Centre for Canadian Heritage and Development, 1995.

Hood, George N. Against the Flow: Rafferty-Alameda and the Politics of the Environment. Saskatoon: Fifth House Publishers, 1994.

Howe Verhovek, Sam. "Power Struggle." New York Times Magazine. 12 January, 1992. 16-21, 26-27.

Hurtubise, F.G. and R.G. Connelly. Public Participation in The Canadian Environmental Assessment And Review Process. Occasional Paper No. 2. Hull: Federal Environmental Assessment Review Office, 1979.

Hydro-Québec. Grande Baleine Complex: Bulletin 6. Hydro-Québec, 1993.

—. Grande Baleine Complex: Feasibility Study, Summary. August, 1993.

—. The Natural and Human Environment of the La Grande Complex. Quebec: Hydro-Québec, Vice-présidence Communications et Relations publiques, 1992.

—. Grande Baleine Complex: Bulletin 5. Hydro-Québec, 1991.

—. The La Grande Complex: Phase 1. Hydro-Québec, 1991.

Inco Ltd. 1997 Annual Report. Toronto: Inco, 1997.

Inco Ltd. "Nickel Stainless Steel," "Copper," "Cobalt," http://www/.inco.com/info.

Innis, Harold. Problems of Staple Production in Canada. Toronto: Ryerson Press, 1933.

Innu Nation. "Innu Nation Mounts Court Challenge Over Voisey's Bay Project." News Release. 3 September, 1999.

—. Money Doesn't Last, The Land is Forever. Innu Nation Community Consultation and Land Rights Negotiations. 1 July, 1998.

—. Press Release. "Innu Seek Injunction Against Voisey's Bay Construction Work this Summer." 27 June 1997.

—. "Discussion Paper: An Innu Vision of Environmental Assessment." December, 1997.

—. "Ntesinan Nteshiniminan Nteniunan- Between a Rock and a Hard Place. Task Force on Mining Activities. 1996

—. Innu Nation Country Report on Mining Activities. No date.

—. "Mineral Exploration at Emish." April 1996.

—. Mineral Exploration in Nitassinan: A Matter of Respect: Innu Nation Guidelines for the Mining Industry. Innu Nation, 1995.

Jacobs, Peter and Barry Sadler, eds. Sustainable Development and Environmental Assessment: Perspectives on Planning for a Common Future. Hull: Canadian Environmental Assessment Research Council, 1990.

Jacobs, Peter and David A. Munro, eds. Conservation with Equity: Strategies for Sustainable Development. Gland, Switzerland: IUCN, 1986.

Johnston, Margaret, ed. Geographic Perspectives on the Provincial Norths. Vol. 3. Thunder Bay: Copp Clark and Longman, 1988.

Johnson, William. "Quebec-Ottawa agreement fails." Montreal Gazette [Montreal] 28 Nov. 1990: B3.

"Judicial warfare promised," Globe and Mail [Toronto] 24 June 1992: A4.

Kalbfuss, Elisabeth, Hamilton, Graeme. "Hands off Great Whale, Ottawa told." Montreal Gazette [Monteal] 11 July, 1991: A1-A2.

Kansky, Marilyn. Native Indian and Inuit Views on the Federal Environmental Assessment and Review Process. Alberta: Environmental Law Centre, 1988.

Keats, Brad. "Voisey's Bay project called off?" Voisey's Bay News [Happy Valley-Goose Bay] August, 1998: 1.

Keith, Robert. "The Ecosystem Approach: Implications for the North." Northern Perspectives. 22.1 (1994): 3-6.

Keith, Robert and Peter Mulvihill. "Organizational Development and Environmental Assessment in Canada's North." Environments, 23.1 (1995) : 71-80.

Keith, Robert F. and Mary Simon. "Sustainable Development in the Northern Circumpolar World." Conservation with Equity: Strategies for Sustainable Development. Eds. Peter Jacobs and David A. Munro. Gland, Switzerland: IUCN, 1986 : 209-226.

King, Thomas. Green Grass, Running Water. Toronto: HarperCollins, 1993.

Krier, Betty and Ian Goodman and Matthew Clark. "Employment Effects of Electricity Provision in Quebec: The Grande-Baleine Hydro-Electric Project and the Electricity Efficiency Alternative." James Bay Publication Series, Paper #1. December, 1994.

Kuujjuarapik Agreement-in-Principle Respecting the Great Whale Complex, 1993.

Labrador Inuit Association. "Highlights of the Agreement in Principle." http://www.cancom.net/~franklin/Land_Clai...hts_of_the_AIP, 1999.

—. "Mineral Development in Labrador." No date.

—. "Labrador Inuit Fact Sheet." No date.

Lampe, Joanna and Katie Harris and Frances Murphy. Eco-Research Project: Environmental Health Study Final Report. Prepared for the Labrador Inuit Association. October, 1997.

Langdon, Oliver. Minister of Environment and Labour, Newfoundland and Labrador. "Proposed Exploration Support Works at the Voisey's Bay Mineral Exploration Site." Correspondence to Dr. Stewart Gendron, President, VBNC. 18 July, 1997. CEAA Registry.

Lanthem, Alexis. "Aboriginal People Speak Out on Mineral Development in Labrador." Nitassinan News. [Burlington, VT.] August 1997: 1.

Lawrence, David P. "The Need for EIA Theory-Building." Environmental Impact Assessment Review. 17 (1997) : 79-107.

Lélé, Sharachchandra M. "Sustainable Development: A Critical Review." Green Planet Blues: Environmental Politics from Stockholm to Kyoto. 2nd ed. Eds. Ken Conca and Geoffrey D. Dabelko. Boulder, Colorado: Westview Press, 1998. 245-256.

Leopold, Aldo. A Sand County Almanac. Commemorative 1989 Ed. 1989 New York: Oxford University Press, 1949.

Lindblom, Charles E. Politics and Markets: The World's Political-Economic Systems. New York: Basic Books, 1977.

Livingston, John A. The Fallacy of Wildlife Conservation. Toronto: McClelland and Stewart, 1981.

Lowe, Mick. Premature Bonanza: Standoff at Voisey's Bay. Toronto: Between the Lines, 1998.

Macdonald, Don. "No risk at Churchill: Caillé." Montreal Gazette. [Montreal] 11 March, 1998 : F1, F3.

MacDonald, Doug. The Politics of Pollution. Toronto: McLelland & Stewart, 1991.

Mackay, Donald. Heritage Lost: The Crisis in Canada's Forests. Toronto: Macmillan, 1985.

Mailhot, José. Traditional Ecological Knowledge: The Diversity of Knowledge Systems and Their Study. Great Whale Environmental Assessment : Background Paper No. 4. Great Whale Public Review Support Office, 1993.

Makivik Corporation. Report on Adequacy Analysis of Voisey's Bay Nickel Company Environmental Impact Statement. March, 1998.

McAllister, Mary Louise and Cynthia Jacqueline Alexander. A Stake in the Future: Redefining the Canadian Mineral Industry. Vancouver/Kingston: UBC/Queen's University Press, 1997.

McCully, Patrick. Silenced Rivers. London: Zed Books, 1996.

McCutcheon, Sean. Electric Rivers: The Story of the James Bay Project. Montreal: Black Rose, 1991.

McNish, Jacquie. The Big Score. Toronto: Doubleday, 1998.

—. "Friedland on Offensive over Toxic Spill Incident." Globe and Mail [Toronto] 13 March, 1996: B1, B24.

Meredith, Thomas. "Environmental Impact Assessment and Monitoring." Resource Management and Development. Ed. Bruce Mitchell. London, UK: Oxford Press, 1991. 224-243.

—. "Environmental Impact Assessment, Cultural Diversity, and Sustainable Rural Development." Environmental Impact Assessment Review. 12 (1992) : 125-138.

Milbrath, Lester W. "Sustainability." Conservation and Environmentalism. Ed. Robert Paehlke. New York: Garland, 1995. 612-613.

Mitchell, Bruce, ed. Resource Management and Development. London, UK: Oxford Press, 1991.

Mittelstaedt, Martin and Kelly Haggart. "U.K. group calls treatment of Innu 'Canada's Tibet'." Globe and Mail [Toronto] 8 November, 1999 : A3.

Moffet, John. "Legislative Options for Implementing the Precautionary Principle," Journal of Environmental Law and Practice. 7 (1997): 157-173.

Mulvihill, Peter Royston. Adaptive Environmental Assessment in Canada's North. Hull, Quebec: Canadian Environmental Assessment Research Council, 1990).

Mulvihill, Peter R. and Robert F. Keith. "Institutional Requirements For Adaptive EIA: The Kativik Environmental Quality Commission." Environmental Impact Assessment Review. 9 (1989) : 399-412.

Nikiforuk, Andrew. The Nasty Game: The Failure of Environmental Assessment in Canada. Toronto: Walter and Duncan Gordon Foundation, 1997.

Northey, Rodney. The 1995 Annotated Canadian Environmental Assessment Act and EARP Guidelines Order. Toronto: Carswell, 1994.

Northey, Rodney and John Swaigen. "Environmental Assessment." Environment on Trial. Eds. David Estrin and John Swaigen. Toronto: Emond-Montgomery, 1993. 185-202.

Notzke, Claudia. Aboriginal Peoples and Natural Resources in Canada. North York, Ontario: Captus Press, 1994.

Odum, Eugene P. Basic Ecology. Philadelphia: Saunders, 1983.

Okrainetz, Glen. "Towards a Sustainable Future in Hudson Bay." Northern Perspectives 20.2 (1992): 12-16.

O'Reilley, James A. "The Courts and Community Values: Litigation Involving Native Peoples and Resource Development." Alternatives. 15.2 (1988): 40-47.

O'Reilly, Kevin. "Diamond Mining and the Demise of Environmental Assessment in the North." Northern Perspectives. 24, 1-4 (1996): 1-4.

Paehlke, Robert C., ed. Conservation and Environmentalism, An Encyclopedia. New York: Garland, 1995.

—. "Sustainable Development." Conservation and Environmentalism. Ed. Robert Paehlke. New York: Garland, 1995. 615-616.

—. "James Bay Project: Environmental Assessment in the Planning of Resource Development." Resources and the Environment: Policy Perspectives for Canada. Ed. O.P. Dwivedi. Toronto: McClelland & Stewart, 1980. 133-152.

Page, Robert. Northern Development: The Canadian Dilemma. Toronto: McClelland and Stewart, 1986.

—. "Berger Inquiry." Conservation and Environmentalism. Ed. Robert Paehlke. New York: Garland, 1995. 70-71.

Pannell, Brian. "When They Don't Show up to Play the Feds are on the Proponent's Team," Northern Perspectives 20.2 (1992) : 7-9.

Penney, Steven. "Assessing CEAA: Environmental Assessment Theory and the Canadian Environmental Assessment Act." Journal of Environmental Law and Practice. 3 (1994) : 243-269.

Peters, Evelyn J. "Whose North?: The James Bay and Northern Quebec Agreement and its Implementation." Geographic Perspectives on the Provincial Norths. Ed. Margaret Johnston. Vol. 3. Thunder Bay: Copp Clark and Longman, 1988. 279-302.

Picard, André. "Ottawa chided by judge over Great Whale project." The Globe and Mail. [Toronto] 18 July, 1991: B1.

Pigott, Paul. "VBNC needs more time on EIS." Voisey's Bay News [Happy Valley- Goose Bay] October, 1997: 1.

---. "Inco turns its attention south." Voisey's Bay News. [Happy Valley-Goose Bay] October 1997: 5.

Place of the Boss: Utshimassits. Producers Mike Mahoney and Peter d'Entremont and John Walker. Director John Walker. National Film Board of Canada, 1996.

Power. Producer Glen Salzman. Director Magnus Isacsson. National Film Board of Canada, 1996.

Powers, Timothy A. "The Green Grass of Home: The Musuau Innu of Davis Inlet, Labrador." Avancer: Beyond the Postcard, Missing Snapshots of Canada. Peterborough: Frost Centre for Canadian Heritage and Development Studies, 1997. 38-52.

Provincial Review Committee (Comex) et. al., Joint Report on the Conformity and Quality of the Environmental Impact Statement for the Proposed Great Whale River Hydroelectric Project. Montreal: Great Whale Public Review Support Office, 1994.

Purvis, Andrew. "Whose Home And Native Land?" Time Magazine. Canadian Edition. 15 February, 1999. 16-23.

Quebec Ministry of the Environment, Environment Quality Act, Updated to 3 Sept. 1996, (Quebec: Editeur officiel du Quebec, Sept 1996) ch. 2 Div.2-3.

"Quebec Says, 'hands off' energy policy." Ottawa Citizen [Ottawa] 26 October 1990: F5.

"Questions about Great Whale." Montreal Gazette. [Montreal] 3 Sept. 1993: B2.

Raphals, Philip. "Effectiveness of Environmental Assessment in Canada: The Acceptability and Optimality Paradigms." Transcript from presentation at the Eighth Workshop of the NATO/CCMS Pilot Study on Methodology, Focalisation, Evaluation and Scope of Environmental Impact Assessment. 26-30 April, 1995. Kusadasi, Turkey.

Raphals, Philip et Philippe Dunsky (Centre Hélios). Ouverture des marchés de l'électricité au Québec: Options, impératifs d'une réelle concurrence et conséquences pour les prix. Montréal: Option Consommateurs, 1997.

Rees, William and Peter Boothroyd. "Impact Assessment from Pseudo-Science to Planning Process: An educational Response." Impact Assessment Bulletin. 3.2 (1984).

---. "A Rationale for Northern Land-Use Planning." Homeland or Hinterland: Land-Use Planning in Northern Canada. Eds. Terry Fenge and William E. Rees. Ottawa: Canadian Arctic Resources Committee, 1987. 1-15.

---. "Sustainable Development: Economic Myths and Ecological Realities." Trumpeter. 5.4 (1988) : 133-138.

---. " Economics, Ecology, and the Role of Environmental Assessment in Achieving Sustainable Development." Sustainable Development and Environmental Assessment: Perspectives on Planning for a Common Future. Eds. Peter Jacobs and Barry Sadler. Hull: Canadian Environmental Assessment Agency Research Council, 1990. 123-141.

Richardson, Boyce. The Plot to Drown the North Woods. Boulder, CO.: Sierra Club, 1972.

---. Strangers Devour the Land: The Cree Hunters of the James Bay Area versus Premier Bourassa and the James Bay Development Corporation. Toronto: Macmillan, 1975.

Robinson, Allan. "Inco to halt Voisey's Bay work." Globe and Mail [Toronto] 28 July, 1998: B1, B6.

Roots, Fred E. "Some Concepts and Issues Surrounding the Place of Science in Assessment of Impacts on the Environment." The Role of Science in Environmental Impact Assessment. Eds. Eric Higgs, Mary Richardson and Rick Riewe. Canadian Circumpolar Institute Occasional Publication #34. Athabasca, Alta: Athabasca University, 1994.

Ross, Monique. "An Evaluation of Joint Environmental Impact Assessments" Growing Demands on a Shrinking Heritage: Managing Resource-Use Conflicts. Eds. Monique Ross and J. Owen Saunders. Calgary: Canadian Institute of Resources Law, 1992. 322-343.

Ross, Monique and J. Owen Saunders, Eds. Growing Demands on a Shrinking Heritage: Managing Resource-Use Conflicts. Calgary: Canadian Institute of Resources Law, 1992.

Rowell, Judy. "Northern Labrador's Biggest Developer: The Department of National Defence." Northern Perspectives. 18.2 (1990): 11-15.

Sadar, M. Husain. Environmental Impact Assessment. Ottawa: Carleton University Press for the Impact Assessment Centre, Carleton University, 1996.

—. "EIA Without Follow-up is a Wasted Effort." Text of the Rose-Hulman Acceptance Speech, Christchurch, New Zealand. April, 1988.

Sadler, Barry. "Sustainability Strategies and Green Planning: Recent Canadian and International Experience." Achieving Sustainable Development. Eds. Ann Dale and John B. Robinson. Vancouver: UBC Press, 1996. 23-70.

—. International Study of the Effectiveness of Environmental Assessment. Hull: Canadian Environmental Assessment Agency, 1996.

Sadler, Barry and Terry Fenge. "Project de Société: A National Sustainable Development Strategy and the Territorial North." Supplement to Northern Perspectives. 21.4 (1993-4): 1-8.

—. "Sustainable Development, Northern Realities and the Design and Implementation of Regional Conservation Strategies." Achieving Sustainable Development Through Northern Conservation Strategies. Calgary: University of Calgary Press, 1990.

Sadler, Barry and Peter Jacobs. "A Key to Tomorrow: On the Relationship of Environmental Assessment and Sustainable Development." Sustainable Development and Environmental Assessment: Perspectives on Planning for a Common Future. Eds. Peter Jacobs and Barry Sadler. Hull: Canadian Environmental Assessment Research Council, 1990. 3-33.

Salisbury, Richard. A Homeland for the Cree: Regional Development in James Bay, 1971-1981. Kingston: McGill-Queen's University Press, 1986.

Sallenave, John. "Giving Traditional Ecological Knowledge its Rightful Place in Environmental Impact Assessment." Northern Perspectives. 22.1 (1994): 16-19.

Schrecker, Ted. "Of Invisible Beasts and the Public Interest." Canadian Environmental Policy: Ecosystems, Politics, and Process. Ed. Robert Boardman. Toronto: Oxford University Press, 1992. 83-105.

—. "The Canadian Environmental Assessment Act: Tremulous Step Forward, or Retreat into Smoke and Mirrors?" Canadian Environmental Law Reports. 5 (1991) : 192-246.

Schulze, David. "Delgamuukw Confirms Broad Aboriginal Rights over Resources." Resources. 62 (Spring, 1998) : 6-7.

Scott, Sandy. "Environmental Considerations in Decision Making: A Role For EIA at the Policy Level?" Diss. Dalhousie University, 1992.

Scott, Sarah. "N.Y. pulls plug on $17 billion deal; Great Whale might die , Cree say." Montreal Gazette [Montreal] 28 March, 1992: A1.

Seguin, Rhéal. "Ottawa accused of totalitarianism." The Globe and Mail [Toronto] 18 March, 1992: A6.

Shapcott, Catherine. "Environmental Impact Assessment and Resource Management, A Haida Case Study: Implications for Native People of the North." Canadian Journal of Native Studies 9.1 (1989) : 55-83.

Shpyth, Albert A. The Effectiveness, Efficiency and Fairness of Environmental Impact Assessment in Alberta and Saskatchewan: A Case Study of the Oldman and Rafferty Dams. Hull: Canadian Environmental Assessment Research Council (CEARC), 1991.

Shrader-Frechette, Kristin S. "Science, Environmental Risk Assessment, and the Frame Problem." BioScience. 44 (1994) : 548-551.

Simon, Mary May. Inuit: One Future-One Arctic. The Trent University Nothern Chair lecture series. Peterborough: Cider Press, 1993.

Skene, Wayne. Delusions of Power: Vanity, Folly and the Uncertain Future of Canada's Hydro Giants. Vancouver: Douglas & McIntyre, 1997.

Skogstad, Grace and Paul Kopas. "Environmental Policy in a Federal System: Ottawa and the Provinces." Canadian Environmental Policy: Ecosystems, Politics, and Process. Ed. Robert Boardman. Toronto: Oxford University Press, 1992. 43-59.

Smythe, R.B. "The Historical Roots of NEPA." Environmental Policy and NEPA: Past, Present, and Future. Eds. Ray Clark and Larry Canter. Boca Raton, Fla.: St. Lucie Press, 1997. 3-14

Societe d'énergie de la Baie James. Environment First. Fourth Quarter, 1991.

Stamp, Kevin F. Q.C., et. al. Correspondence to the Canadian Environmental Assessment Agency. 22 July, 1997. CEAA Registry.

Stamp, Kevin F., Q.C. "Voisey's Bay Nickel Company, Innu Nation, and Labrador Inuit Association: Application for Judicial Review." Correspondence to Ms. Rachel Baxter, Department of Justice, Federal Government. 18 July, 1997. CEAA Registry

Stevenson, James. "Can Inco still go it alone?" Montreal Gazette [Montreal] 16 April, 1999: D2.

Supreme Court of Newfoundand Court of Appeal. "Judgement re. the Environmental Assessment of Voisey's Bay Infrastructure." Rendered 22 September, 1997. Judges Marshall, Steel and Green.

Taggart, Malcolm. "The Free-entry Mineral Allocation System in Canada's North: Economics, Sustainability, and Alternatives." Northern Perspectives. 22.3 (1998-1999): 8-11.

(The)Taiga Institute for Land, Culture and Economy. "Social Cultural and Economic Issues Scoping Research Report and Terms of Reference for a Socio-Economic Baseline Study." Prepared for Innu Nation Economic Development, 1996.

Tatoosh, Susan and Jim Lotz. "Insiders and Outsiders." Report by the Canadian Executive Services Association (CESO) team to Nain. 16 March, 1996.

Tester, Frank J. "Reflections on Tin Wis: Environmentalism and the Evolution of Citizen Participation in Canada." Alternatives. 19.1 (1992): 34-41.

Toman, Michael A. "The Difficulty in Defining Sustainability." Resources. 106 (Winter 1992): 3-6.

Torrie, Brian. Voisey's Bay Environmental Assessment Panel Manager. Correspondence to Larry Coady, Department of Fisheries and Oceans. 12 April 1997. CEAA registry document VB/Cor.074.

Town Council of Nain. "Presentation to Environmental Assessment Review Panel, Voisey's Bay Mine and Mill Project-Draft Environmental Impact Statement (EIS) Guidelines." 16 April, 1997.

—. "Town of Nain Information Directory." December, 1996.

Tremblay, Pierre. Executive Assistant, Office of the Minister of Public Works and Government Services, Canada. Correspondence to L.D. Whalen, Citizens' Mining Council of NF/LD. 12 August, 1997, CEAA Registry.

Usher, Peter J. "Northern Development, Impact Assessment, and Social Change." Anthropology, Public Policy, and Native Peoples in Canada. Eds. Noel Dyck and James B. Waldram. Montreal & Kingston: McGill and Queen's University Press, 1993. 98-130.

—. "Modelling Subsistence Systems for Social Impact Assessment." On file with theVoisey's Bay Public Registry, Canadian Environmental Assessment Agency.

Vaillancourt, Jean-Guy. "James Bay." Conservation and Environmentalism: An Encyclopedia. Ed. Robert Paehlke. New York: Garland Publishing, 1995. 276-277.

VanderZwaag, David and Linda Duncan. "Canada and Environmental Protection: Confident Political Faces, Uncertain Legal Hands." Canadian Environmental Policy: Ecosystems, Politics, and Process. Ed. Robert Boardman. Toronto: Oxford University Press, 1992. 3-23.

Vincent, M.K. "The Citizen as an Obstacle to Efficiency." Northern Perspectives. 3.3 (1975) : 1.

Voisey's Bay Environmental Assessment Panel. Report on the Proposed Voisey's Bay Mine and Mill Project. Ottawa: Minister of Public Works and Government Services Canda, March 1999.

—. Environmental Impact Statement (EIS) Guidelines For the Review of the Voisey's Bay Mine and Mill Undertaking. Hull, Quebec: CEAA, June 20, 1997.

Voisey's Bay Nickel Company Limited. Voisey's Bay Mine/Mill Project Environmental Impact Statement: Summary and Conclusions, Volume 1. St. John's: VBNC, December, 1997.

—. Voisey's Bay Mine/Mill Project Environmental Impact Statement: Project Description and Planning, Volume 2. St. John's: VBNC, December 1997.

—. Voisey's Bay Mine/Mill Project Environmental Impact Statement: Socioeconomic Assessment,Vol.4. St. John's: VBNC, December 1997.

—. Exploration Support Works at the Voisey's Bay Mineral Exploration Site. 22 May, 1997.

—. "Voisey's Bay Nickel Company Response to the Draft Environmental Impact Statement Guidelines For the Review of the Voisey's Bay Mine/Mill Project." 13 May 1997.

Wallace, Ron. "Assessing the Assessors: An Examination of the Impact of the Federal Environmental Assessment Review Process on Federal Decision Making." Arctic. 39. 3 (1986) : 240-246.

Walsh, A. Public Review: Neither Judicial, nor Political, but an Essential Forum for the Future of the Environment. Ottawa: Minister of Supply and Services Canada, 1987.

Wandesforde-Smith, Geoffrey. "EIA, Entrepreneurship, and Policy Change." Policy Through Impact Assessment. Ed. Robert V. Bartlett. Connectictut: Greenwood Press, 1989. 155-166.

Wathern, Peter. "An Introductory Guide to EIA." EIA: Theory and Practice. Ed. P. Wathern. London: Unwin Hyman, 1988. 3-30.

Watkins, Mel. "The Staple Theory Revisited." Journal of Canadian Studies. 12.5 (1977) : 573-589.

Webb Family. "Voisey's Bay Environment Impact Statement Adequacy Review." Submission to the Voisey's Bay Environmental Assessment Panel. 28 March, 1998.

Wells, Paul. "Great Whale review under pressure, Watchdog's integrity at stake, Kativik chairman says." Montreal Gazette. [Montreal] 5 Jan. 1991: A1-A2.

White, Winston. LIA press release. 21 August, 1997.

Whitney J. and V. Maclaren, eds. Environmental Assessment: The Canadian Experience. Toronto: Institute for Environmental Studies, University of Toronto, 1985.

Wildavsky, Aaron. "The Political Economy of Efficiency." Public Administration Review. 26 (1966) : 292-310.

Williams, Susan. Hydro-Québec and the Great Whale Project: Hydroelectric Development in Northern Quebec. Washington: Investor Responsibility Research Centre, 1993.

Williamson, Tony. From Sina to Sikujaluk: Our Footprint, Mapping Inuit Environmental Knowledge in the Nain District of Northern Labrador. Nain: Labrador Inuit Association, 1997.

—. Seeing the Land is Seeing Ourselves. Report prepared for the Labrador Inuit Association. 4 July, 1996.

Wismer, Susan. "The Nasty Game: How Environmental Assessment is Failing Aboriginal Communities in Canada's North." Alternatives. 22.4 (1996) : 10-16.

World Commission on Environment and Development (WCED). Our Common Future. New York: Oxford, 1987.