# ENVIRONMENTAL IMPACT ASSESSMENT: A REGIONAL OR A NATIONAL DECISION MAKING PROCEDURE?

by

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## ABSTRACT

Today the Canadian administrations and the public are well aware of the impacts of the exploitation of natural resources on the environment. It was only recently, in the early 1970s, that natural resource depletion, scarcity, and environmental pollution came to be regarded as priorities. Who is responsible? In Canada jurisdictional responsibility over natural resources and the environment has suffered from the ambiguity of the terms of the Constitution (1867-1982) dividing the power between a central and ten provincial administrations. Within this Canadian political culture, although they follow their particular paradigm, the regions have all adopted a version of environmental management policy and decision making procedure that assess the possible environmental consequences of natural resource development on the environment.

Considered a source of public revenue, the development of the Canadian natural resource has been analyzed for many years in terms of economic growth and benefit and cost for a region, a province or the country. With the implementation of the environmental impact assessment (EIA) and its subsequent stages, natural resource development has taken a new tangent into environmental management. To attain its full effectiveness the EIA has to be introduced as early as possible into the decisional process attached to an environmental management policy. Its aims are then to decentralize the making of a decision at an early stage and to provide environmental guidance for developmental decisions at the frontier region as well as in developed areas.

Dissatisfaction over participatory activities in the EIA exercise has presented an opportunity to examine how the involved actors connect and communicate together in an activation mode. Furthermore, the review of the EIA practiced in Canada has given the chance again to underline the various shortcomings of its application in a regional country. One region in particular, represented by the province of Quebec, has

distanced itself from the rest of Canada in its quest of modernization. It is perceived not only in its socio-political evolution but also in the protection of its environment, symbolized in the EIA.

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# DEDICATION

Je dédie ma thèse de maîtrise, avec respect et amour à Alastair Reeves, ma famille et tout particulièrement à mon père et ma mère Roger et Hélène Gélinas.

# I.

# INTRODUCTION

Natural resource development in a resource-rich country like Canada is frequently associated with economic growth and prosperity. Today the scope and nature of natural resource projects are often in the form of 'mega' developments. The amplitude of these projects has necessitated such massive capital that foreign investment has been required. Natural resources have also become substantial sources of governmental revenue and corporate profits. Therefore, from several perspectives natural resources have important political significance as well as an obvious economic role.

With the perceived abundance of natural resources, only recently has the danger of exhausting this precious wealth become apparent. Canada, in its quest for natural resource revenue, has followed the trend of many other developed countries in often "skimming' the best quality resources and ignoring or deferring resource exhaustion and concern over the environment.

In Canada the control of natural resource development is specified in the Constitution Act (1867). This Act established the division of power and responsibilities between the federal and the provincial administrations. Natural resource development is one sector where jurisdictional rights of both levels of government are, with a few exceptions, generally clearly recognized. Even so, on many occasions the federal government, in the name of "the Peace, Order and good Government of Canada" (Constitution Act, 1867, section 91, first paragraph) has overruled the provinces on matters previously ascribed to them. On other occasions it has not seen the necessity of intervention abandoning to other jurisdictions its own assigned responsibilities.

The attempts exerted by the federal and provincial governments to acquire or increase control over their natural resources have been central to the debate over resource jurisdiction for many years. The depletion and scarcity of resources and energy shortages in the last

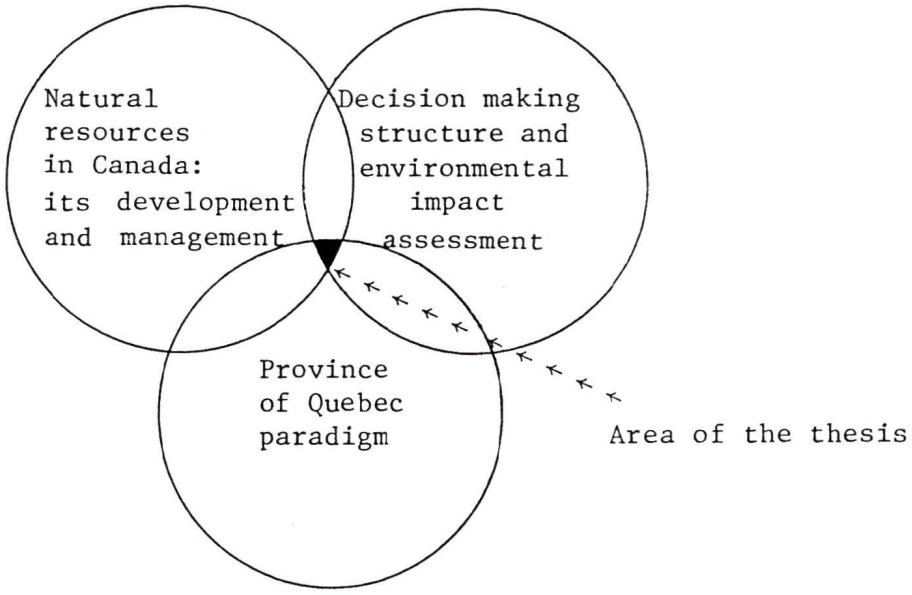
twenty years have intensified competition between jurisdictions. At the same time, concerned people had voiced their opinions about environmental deterioration and the effects of large resource projects. It became clear that public policies in Canada had to be revised to include the management of the environment as a prerequisite of natural resource development. However, national policies could only be launched after clarification of jurisdictional questions. The governments of Canada finally implemented environmental management provisions to help mitigate the urgent problems of pollution in the late 1960s and early 1970s. But regional variations in such policies have persisted.

The introduction of environmental impact assessment into the emerging environmental policies represents an important part of this change. This decision making procedure has been implemented in Canada to provide environmental guidance for development proposals and projects and to bring to light hidden costs—environmental and social as well as economic—*prior* to a decision. Environmental impact assessment (EIA) has been an intrinsic part of the public environmental management process for approximately fifteen years. It has been applied with varying success across the whole country. However, two important and extant issues arise concerning its application. The first concerns the location of EIA within the environmental decision making process, and the second, the regional character or variation of environmental decision making.

The objectives of the thesis are: (1) to review the characteristics of natural resource development in Canada and the implementation of environmental management policies (Chapter II); (2) to examine the environmental management policy structure to determine the significance of the stage or time frame of placement of EIA in the decision making process (Chapter III); and (3) to compare and contrast the regional aspects of the EIA procedure with particular emphasis on the province of Quebec as being distinct from the rest of Canada in its application of environmental impact assessment (Chapters IV and V).

The focus of the thesis is represented by the following Venn diagram, in the intersection of the three major themes: (1) natural

resource development and management in Canada; (2) environmental impact assessment introduced in the environmental decision making structure; and (3) the province of Quebec paradigm.




Two statements are postulated to help focus the major objectives of the study:

(1) In order to validate the significance of EIA's outcomes (EIA statement and recommendations) and to maintain the credibility of the information generated by the various participants, it is argued that the stage at which EIA has to be performed is very significant. This can be demonstrated by focussing on "activation," that is *hypothesized* as being the way pairs of actors may deal within participation.

(2) The EIA procedure adopted by all the Canadian governments has been adapted to serve regional priorities, needs, and socio-cultural contrasts. It is argued that the EIA developed in Quebec has to be examined in the context of Quebec's uniqueness in Canada.

The study will be undertaken by reviewing first the literature concerning the decision making process and its application to the environmental management field; and second the statutes and regulations of Canada

regarding the implementation of EIA. Thirdly, information requested from the key persons involved in the formulation of the laws or in the execution of EIA at the federal and provincial levels of government will be assessed. Based on the appraisal of past working experiences in particular EIA activities, the author has observed the participatory exercise (theory and practice) and has formulated it as the *concept of activation*. The main emphasis of the review of theory and concepts has been to provide a general conceptual framework to understand the particular context of the province of Quebec, illustrated as a case study approach.

The author's motivation to pursue the research is threefold. There has been little written in English on Quebec experiences with its EIA procedure, except to present the controversy over the development of the Baie James projects. Compounded with this is the problem of Quebec's identity and its perception by the rest of Canada. Finally, the author believes that there is a misunderstanding of the articles of laws and regulations or of prescriptions of EIA procedures together with a general lack of understanding of the complete environmental process by individual users, be they inside or outside the government sphere.

# II.

## RESOURCE DEVELOPMENT AND MANAGEMENT IN CANADA: THE CONTEXT

Despite the value of resource development, Berger (1983) reminds Canadians that there is a problem in our general inclination being in terms of expanding our industrial machine to the limit. One of the major costs is that current technologies are capable of inflicting environmental damage on a far larger scale and of a more drastic kind than in previous eras. Canadian and international examples are abundant: oil tanker accidents (*Arrow, Amoca-Cadiz*), nuclear reactor spills (Three Mile Island, Gentilly), drilling platform explosion (*Ixtoct*), toxic chemical contaminations (Minamata, English-Wabigoon Rivers, Bhopal), acid rain (Eastern Canada), to name but a few.

The magnitude of resource development projects has necessitated not only large investments of capital and labour, but also the evolution of effective assessment techniques known as Benefit-Cost Analysis, Environmental Impact Assessment and Social Impact Assessment. The pace of resource consumption has forced the governments of Canada to seek natural resources in more difficult and dangerous locations, at the frontier regions, beyond existing urban areas, and to transport them over long distances. Many mega projects have been undertaken in frontier areas where the environment has been recognized for its sensitivity and vulnerability and where groups of people noted for their special culture and social patterns have enjoyed a relatively undisturbed existence (Berger, 1983; MacDonald, 1979; Milbraith, 1984; O'Riordan and Sewell, 1981). Clearly, from several perspectives the management of natural resources is an important 'mega issue' in Canada.

The first section of this chapter examines briefly the constitutional ambience of the context of natural resources. It is followed by

a short overview of the pattern of resource development in Canada and by the preponderance of foreign investment and control. The third section considers the cycle of attention (Downs' Issue Attention Cycle) given to environmental concerns in Canada and the transformation of policy priorities from 'unbridled' resource development to environmental management.

## 2.1 The Constitutional Setting of Natural Resources

The ubiquitous question, "Who gets what?" has been a major theme of the federal-provincial conferences. It also suggests that although the provinces and the central administration share the same federal political culture, the Canadian provinces present historical, geographical, religious, social, and economic disparities dictating local, regional, provincial reactions and courses of action of 'nations within a nation'. That is to say, regional or provincial goals can conflict with national goals. The long debates over the repatriation of the Constitution emphasize that national perspectives are not always synonymous with the provincial viewpoint. The provinces have asked for the recognition of their points of view, but not all were acknowledged. In 1982, all of the provinces except Quebec ratified the Constitution Act setting this time in the Act the dissension between the two governments.

After a 115-year exile (1867-1982), the old Constitution was amended, enlarged and brought home to Canada without usurping fidelity to the British monarch. The new Constitution Act, 1982 includes not only the written parts of the British North America Act (now called the Constitution Act, 1867) but also new prescriptions.* They are:

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*Although the judicial is not an essential point in the development of the thesis, it should be noted here that the Constitution Act, 1867 in addition to the exclusive legislative power of the federal and

- the recognition of native rights;
- the Charter of Rights and Freedoms, including the official languages of Canada;
- a commitment to the principle of equalization or revenue sharing between rich and poor provinces;
- three restructuring parts (constitutional conference, procedure for amending the Constitution of Canada, general provisions); and
- the strengthening of provincial control over natural resources.

It is the last prescription which is pertinent to the course of the present research.

Does stronger control by the provinces of their natural resources change any of the responsibilities given to Ottawa and the provinces in the Constitution Act, 1867? According to Chandler and Chandler (1979), Cheffins and Tucker (1976, 1979), Hogg (1972, 1982), Langford (1982), Mitchell (1980), Russell (1982, and Smiley (1976, 1980), the jurisdictional responsibility for natural resource development in the Constitution Act, 1867 is established for:

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provincial administrations assigned the Criminal Law to Parliament of Canada and the administration of justice in the provinces to the provincial jurisdictions. While civil or common law is practiced in nine of the Canadian provinces, Quebec has a Civil Code (2615 articles) based on Napoleonic civil law. In spite of the differences between the Civil Code and the Rule of Precedent, in many cases the results are very much the same. There is one inconvenience with the common law system and environmental matters in Canada (compared to the United States): it does not grant citizens easy access to court action. Class actions or standing by groups have generally been rejected by the Canadian courts: group rights are guaranteed in statutory laws and political actions. That has serious ramifications for the conduct of natural resource development and management when not only an individual but a whole community may be affected by a project.

the federal government in Part VI:

> 91(preamble) ... for the peace, order and good government of Canada, in relation to all matters not coming directly within the classes of subjects by this Act assigned exclusively to the legislatures of the provinces....
> (2) The regulation of trade and commerce.
> (3) The raising of money by any mode or system of taxation....
> (10) Navigation and shipping....
> (12) Sea coast and inland fisheries....
> (24) Indians and lands reserved for Indians....
> (29) Such classes of subjects as are expressly expected in the enumeration of the classes of subjects by this Act assigned exclusively to the legislatures of the provinces.

the provincial government in Part VI:

> 92(2) Direct taxation within the province in order to the raising of a revenue for provincial purposes....
> (5) The management and sale of the public lands belonging to the province and of the timber and wood thereon....
> (10) Local works and undertakings other than such as are of the following classes:
> (a) Lines of steam or other ships, railways, canals, telegraphs and other works and undertakings connecting the province with any other or others of the provinces, or extending beyond the limits of the province;
> (b) lines of steamships between the province and any British or foreign country;
> (c) such works as, although wholly situated within the province, are before and after their execution declared by the Parliament of Canada to be for the general advantage of Canada or for the advantage of two or more of the provinces....
> (13) Property and civil rights in the province....
> (16) Generally all matters of merely local or private nature in the province.

And, in Part VIII, s. 109: "All lands, mines, minerals and royalties belonging to the several provinces of Canada...."

Section 109 confirms that the provinces own the bulk of public lands and the resources within their boundaries. In essence, at the time of Confederation, its purpose was to provide a revenue source for provincial governments. In reality, the land has to be owned by the provinces (Table 1). Newfoundland, Quebec, Ontario, Manitoba and British Columbia own over 75% of their lands; Saskatchewan and Alberta

TABLE 1: Total Area Classified by Tenure

| | Nfld. | P.E.I. | N.S. | N.B. | Quebec | Ontario | Manitoba | Sask. | Alberta | B.C. | Canada[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total area[1] $km^2$ | 404,517 | 5,657 | 55,490 | 73,437 | 1,540,680 | 1,068,582 | 650,087 | 651,900 | 661,185 | 948,596 | 9,976,138 |
| Provincial Crown,[2] $km^2$ | 383,746 | 685 | 16,510 | 31,502 | 1,418,486 | 939,673 | 506,626 | 389,312 | 414,111 | 884,572 | 4,989,103 |
| Privately owned,[3] $km^2$ | 17,992 | 4,927 | 37,354 | 39,754 | 119,420 | 119,023 | 138,078 | 246,939 | 183,521 | 55,040 | 962,292 |
| Federal Crown,[4] $km^2$ | 2,779 | 45 | 1,626 | 2,181 | 2,775 | 9,886 | 5,382 | 15,649 | 63,553 | 8,984 | 4,024,644 |
| Water area, $km^2$ | 34,033 | - | 2,650 | 1,344 | 183,890 | 177,389 | 101,593 | 81,632 | 16,796 | 18,068 | 755,169 |
| % Provincial Crown | 94.86 | 12.10 | 29.75 | 42.89 | 92.06 | 87.93 | 77.93 | 59.71 | 62.63 | 93.20 | 50.00 |
| % Privately owned | 4.47 | 87.09 | 67.31 | 54.13 | 7.75 | 11.13 | 21.23 | 37.87 | 27.75 | 5.80 | 9.64 |
| % Federal Crown | 0.67 | 0.81 | 2.94 | 2.98 | 0.19 | 0.94 | 0.84 | 2.42 | 9.62 | 1.00 | 40.30 |
| % Water area | 8.41 | - | 4.77 | 1.83 | 11.93 | 16.60 | 15.62 | 12.52 | 2.54 | 1.90 | 7.56 |

[1]Total area classified by tenures based on data 1978, in *Canada Year Book 1980-1981*.
[2]Provincial Crown: provincial area, provincial parks and provincial forests.
[3]Or in process of alienation from the Crown.
[4]Federal Crown: federal area, national parks, Indian reserves, federal forests experimental stations.
[5]Yukon and Northwest Territories are included.

around 60%; the three other provincial governments—Prince Edward Island, Nova Scotia and New Brunswick—share as minority the revenue of the provincial land with the private sector; they own less than 50% of the provincial land. The source of provincial natural resource revenue comes from the exploitation of abundant resources and their use in the province. When the exploitation of primary products is external to the resource holding province, it comes under federal control through sections 91(2) and 91(3) of the Constitution Act, 1867. A province has not only to own the Crown land but also to be resource rich, in order to obtain the maximum revenue from its natural resources (see section 2.2). The ownership of natural resources by the provinces is reinforced by the prescriptions of section 92(5) of the Constitution Act, 1867, which at the same time provides the provinces with legislative power over them. A province may then, at its own discretion, decide whether to develop its natural resources; by whom, when and how such resources should be developed; the degree of processing that is to take place within the province; whether to restrain the use of the land in a certain way, in certain places, or by certain people; and to control the sale price of the processed products.

It is in resource pricing power (taxation) that the old Constitution is far from clear. Section 92(5) gives provincial governments total control over natural resources so long as they remain in the ground or are stored in the provinces. When, for example, oil and gas are stored in pipelines, trucks or tank cars to be sold outside the province, they are no longer a matter of local concern as provided for in section 92(16). The power then shifts from the province to the central government. Oil and gas are no longer regarded solely as natural resources but also as commodities for sale. It is the federal government which has the authority under sections 91(2) and 91(3) to regulate the flow, price and taxation of commodities sold outside provincial boundaries. Added to that is the sweeping power given to the provinces but by which the federal government in section 92(10.C) could declare a work for the general advantage of Canada and

thereby assume total control over it (Leitch, 1977).

The Constitution Act (1982) attempts to clarify these confusions by reaffirming provincial ownership of natural resources (see section 92A below) and by giving provincial governments greater power over their development, production, export and taxation (Langford, 1982). The new section (Part VI, s. 50(92A)) of the Constitution, makes provincial export regulations legal only if they do not conflict with federal laws. By the same token, subsection 92A dissipates the frustration of the provinces in their efforts to influence the production and marketing of natural resources as in the CIGOL (Saskatchewan) and Central Canada Potash (Alberta) cases (1978)(Gélinas, 1983). The Constitution Act, 1867 is amended by adding, immediately after section 92, the following heading and section (Part VI, s. 50(92A):

> Non-Renewable Natural Resources, Forestry Resources and Electrical Energy
> (1) In each province, the legislature may exclusively make laws in relation to
>
> (a) exploration for non-renewable natural resources in the province;
> (b) development, conservation and management of non-renewable natural resources and forestry resources in the province, including laws in relation to the rate of primary production therefrom; and
> (c) development, conservation and management of sites and facilities in the province for the generation and production of electrical energy.
>
> (2) In each province, the legislature may make laws in relation to the export from the province to another part of Canada of the primary production from non-renewable natural resources and forestry resources in the province and the production from facilities in the province for the generation of electrical energy, but such laws may not authorize or provide for discrimination in prices or in supplies exported to another part of Canada.
> (3) Nothing in sub-section (2) derogates from the authority of Parliament to enact laws in relation to the matters referred to in that subsection and, where such a law of Parliament and a law of a province conflict, the law of Parliament prevails to the extent of the conflict.
> (4) In each province, the legislature may make laws in relation to the raising of money by any mode or system of taxation in respect of

> (a) non-renewable natural resources and forestry resources in the province and the primary production therefrom, and
> (b) sites and facilities in the province for the generation of electrical energy and the production therefrom,
> whether or not such production is exported in whole or in part from the province, but such laws may not authorize or provide for taxation that differentiates between production exported to another part of Canada and production not exported from the province....
> (6) Nothing in subsections (1) to (4) derogates from any powers or rights that a legislature or government of a province had immediately before the coming into force of this section.

Thus subsection 92A(2) authorizes the provinces to make laws in relation to the export of the resources "to another part of Canada," but not to another country. The subsection also prohibits discrimination in prices or supplies between different parts of Canada. It is now clear with subsection 92A(3) that the power conferred on provincial legislatures by subsection 92A(2) is not exclusive but concurrent with the federal Parliament's trade and commerce power (ss. 91(2)). In the event of conflict the normal rule of federal paramountcy applies. It is subsection 92A(4) that confers upon each provincial legislature the power to raise money "by any mode or system of taxation" in respect of the matters listed in paragraphs (a) and (b) of the said subsection. This phrase has in fact been taken from the federal power provided for by subsection 91(3); it is apt to include indirect as well as direct taxation when, in the past, provincial legislatures were limited to direct taxation by subsection 92(2). This limitation has proved to be an impediment to the taxation of natural resources (CIGOL and Central Canada Potash). "The raising of money by any mode or system of taxation" or this new power of taxation given to the provinces (ss. 92A(4)) exists even if the production "is exported in whole or in part from the province," and unlike subsection 92A(2) it does not confine to production exported "to another part of Canada." However, at the end of the article there is a stipulation which differentiates between "production exported to another part of Canada" and "production not exported from the province." This carries the implication that a province could discriminate against or in favor of production exported to another

country.

The amendment of the Constitution Act, 1867 concerning natural resources is too recent to direct all due beneficial results for the provinces. In the meantime, it has given more assurance to the eastern provinces in negotiating rights, privileges and responsibilities of their offshore resources with Ottawa. Recently the Conservative government of Brian Mulroney ratified (Feb. 11, 1985) an agreement with the Premier of Newfoundland Brian Peckford concerning revenue sharing of Newfoundland's offshore resources.

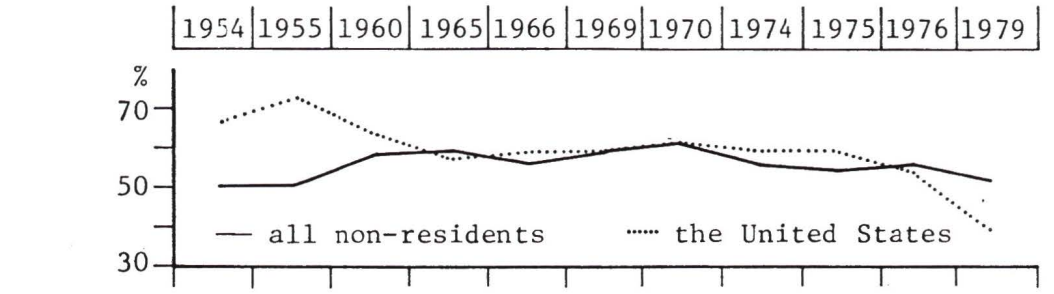
## 2.2 The Development of Natural Resources in Canada

Natural resources have been and are presently considered an attractive, substantial source of public revenue. Their development and management have been synonymous with economic growth and prosperity. In a resource rich country like Canada, the abundance of primary products insulates the nation against imaginable world shortages and overshadows any danger of exhausting the resources. Until the late 1960s, the historical pattern of exploitation of natural resources had shown a tendency of skimming only the most desirable resources in an area and then moving on with little regard for the consequences on the environment (Woodrow, 1980). In many instances the renewing of the harvested resources was totally ignored.

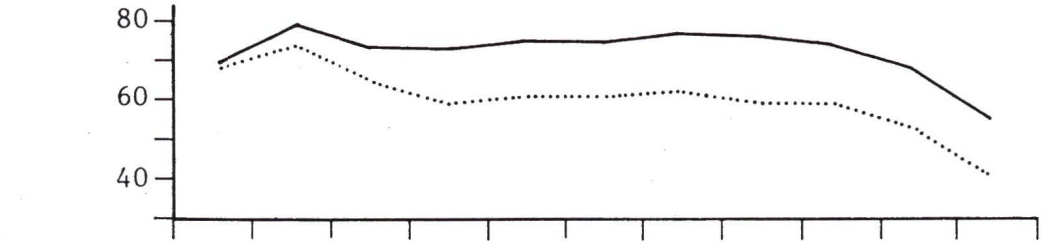
To develop its vast natural resource holdings, Canada has required new and sophisticated technology as well as massive investments. Until the early 1970s, Canadian assets appeared relatively inexpensive to foreigners. Furthermore they were particularly attracted by the protected and preferential Canadian tariff to establishing manufacturing industries. The Canadian governments did not discourage foreign multinational corporations; on the contrary they were welcomed by any administration anxious to promote and sustain economic growth and prosperity (Niosi, 1982). The United States accounts for a substantial volume of

investment in the Canadian economy (Table E.1 and Figure 1). This reflects not only the discount of the Canadian dollar for American investors but also the geographical proximity of the two countries, their social and cultural similarities, the structure of industry in the North American economy promoting bilateral trade flows, and the perspective of new preferential markets provided by Canada within the Commonwealth. It is evident from Figure 1 that the largest concentions of foreign control are found in the manufacturing sector, in petroleum and natural gas, and in mining. In fact, the access of these industries to the world market is the determining factor for attracting substantial foreign investments.

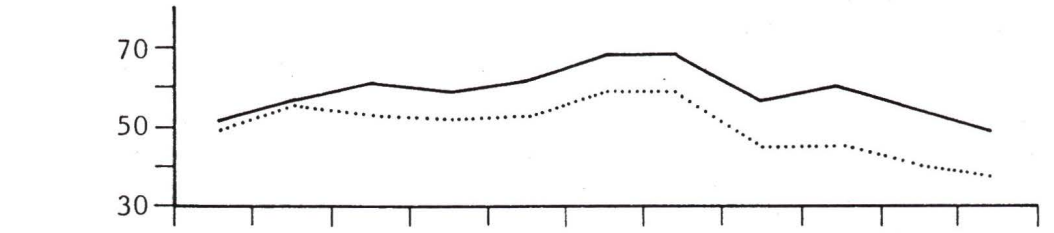
After 1970, however, a downward trend of growth of foreign investment is noticeable (Table E.1 and Figure 1). It coincides with the emergence in Canada of a renewed and strong spirit of nationalism raised by the spectre of continentalism, entrenched by the increasing control of the Canadian economy in the hands of American financial institutions, and by the gradual weakening of the Canadian domestic manufacturing industries and technology in the face of foreign competition. The downward trend is also associated with the appreciation of the Canadian dollar, the gradual easing of Canadian monetary conditions, the acceleration of inflation and relative reduction of international economic activities, and the new direction of Canadian policies towards natural resource development. With the 1970s, Canada was no longer a particularly attractive investment location for manufacturing industries and activities; both inflation and appreciation of the Canadian dollar increased production costs (labour) and forced foreign investors to look to newly developing countries. Any direct foreign investment since 1974 has been subject to screening and approval of the Foreign Investment Review Agency. The growing Canadian nationalism of the 1970s has also stimulated Canadian institutions to repatriating assets which were formerly controlled outside the country. With the latter half of the eighties, however, Canadians may see a change in the revived free trade discourses of Mulroney's Conservative government.



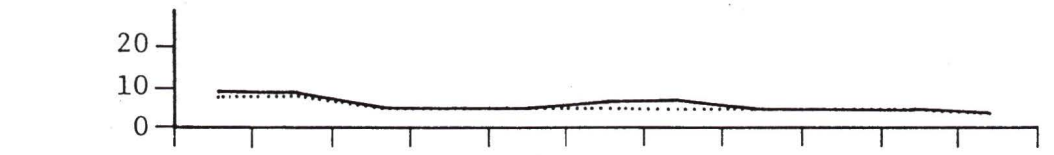

Foreign control in manufacturing



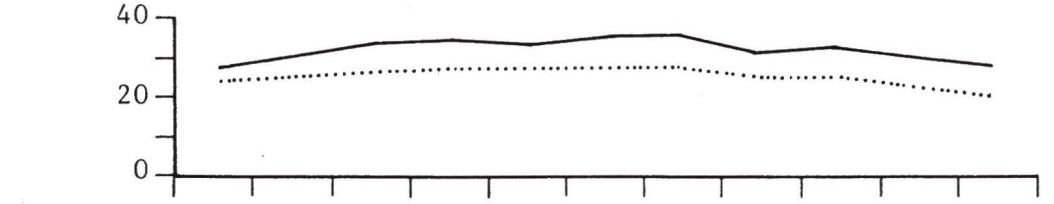

Foreign control in petroleum and natural gas




Foreign control in mining and smelting




Foreign control in utilities other than railways




Total foreign control (manufacturing, petroleum and gas, mining and smelting, railways, other utilities, merchandising; re Table E.1)

FIGURE 1: Foreign control in Canada.

Clearly, the development of natural resources in resource rich Canada has necessitated capital intensive development to maintain the economic expansion of post-war industrialization. It is appropriate to remember here that land ownership in Canada is shared by the federal Crown—40% of Canadian land, the provincial Crown—50% of the land, and private owners—the remaining 10% (see Table 1). Furthermore, the mega scale of natural resource development projects has asked for substantial investments to sustain their realization. Foreign contributions have provided short term economic benefits for Canada as a nation and for the provinces, but in the long run any control by outsiders restrains any propensity towards autonomy. It even questions whether natural resources represent a substantial source of public revenue for Canada and for the provinces.

Chandler and Chandler (1970) mention that before the Second World War natural resources represented 20% of the Gross National Revenue (GNR or GGR) of Canada. The jurisdictional responsibility established by the Constitution Act, 1867 has greatly favored the federal government, giving it monopoly control when resources are addressed to the external market. Historically, it has been the situation; the natural resources as export goods have continually crossed the jurisdictional boundaries. As reviewed in the previous section (2.1), the provisions of section 91 of the Act (1867) overruled the provincial power.

A change has occurred since the 1940s. From 1952 to 1984 the Gross Natural Resource Revenue (GNRR) dropped half a score, thereby accounting for only 9% of the GGR/GNR of Canada (Table E.2). Eight provinces were also experiencing negative fluctuations of their natural resource revenue during the 32-year period between 1952-1984. Among them only British Columbia had a sudden increase of natural resource revenue in 1980 which coincided with the development of its mining reserves (coal), the high level of GNRR was not maintained. On the contrary, Saskatchewan's natural resource revenue increased considerably over the same period and Alberta maintained high natural resource revenue. In fact these two western Canadian provinces have benefited from their high

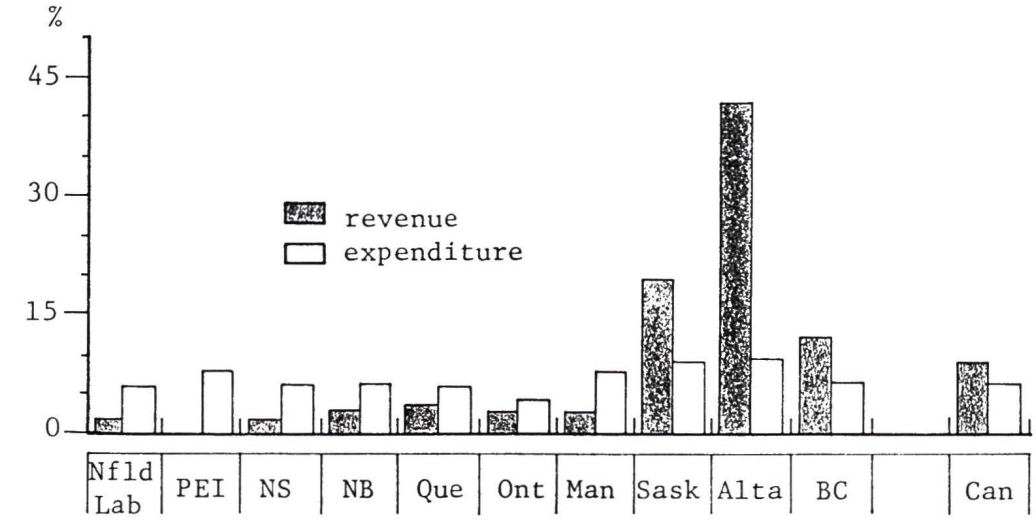



FIGURE 2: Thirty-two year average of GGNRR and GGNRE, by provinces (based on data of Tables E.2 and E.3).

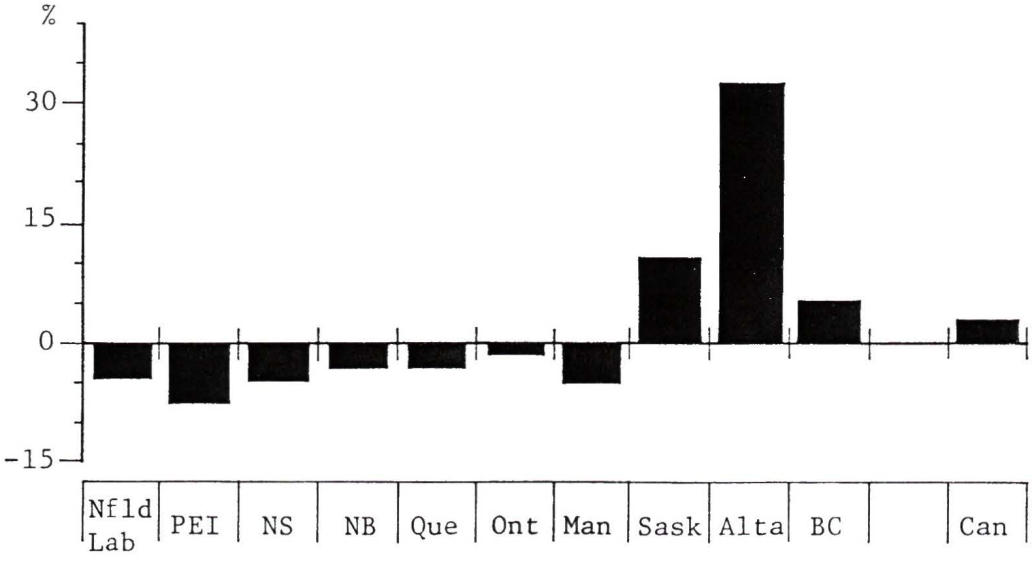



FIGURE 3: Thirty-two year average of GGNRR minus thirty-two year average of GGNRE (based on Table E.3).

natural reserves of fuel, the key resource in the era of erupting energy crisis of the 1970s.

The natural resource expenditures between 1952 and 1984 do not present as obvious a trend as that found in the case of natural resource revenue. Each province has had to deal yearly with unexpected problems evident in budgetary expenditures on natural resources (Table E.3). The unexpected can come from different sources, such as natural occurrence, administrative prerogative, international fluctuation, or financial backlash. When the average revenue and expenditure on natural resources by provinces are examined (see Figure 2), one thing is clearly illustrated: only three provinces—Saskatchewan, Alberta and British Columbia—and Canada as a whole have their natural resource revenues overshadowing their natural resource expenditures. The statement can be further verified in Figure 3, where the same three provinces and Canada show benefits from their resources; in other words the natural resource revenue exceeds the natural resource expenditure. This answers the question asked earlier as to whether natural resources were a significant source of provincial revenue. (Saskatchewan and Alberta are the two provinces which resurrected in the 1970s the proverbial debate concerning jurisdictional power over resources.)

But what makes Saskatchewan, Alberta and British Columbia fiscally resource rich provinces since all the Canadian provinces are known to have wealth in one or another natural resources (Table 2). The Atlantic provinces are renowned for their fisheries, the Prairies for their agriculture, Quebec and Ontario for their power generation, Alberta for its fuel, and British Columbia for its forests. However, some are recognized as participating to a greater extent than others in the national total wealth due to their inheritance of key resources. To be considered a key resource, a natural resource is at the mercy of factors which influence both the course of natural revenue sharing and the recognition of becoming a Canadian monetary resource rich province.

One of the major factors is the chronology of discovery and development of the Canadian provinces. Quebec, for example, had between the

TABLE 2: Provincial Shares of Major Natural Resources as a Percentage of National Totals (% calculated by the author)

| | Energy Generation[1] | | | | Value of Mineral Production[4] | | Agriculture | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Hydropower | | Total Generation | | | | Use of Land[5] | | Net Income[6] | |
| | 1967 | 1978 | 1967[2] | 1978[3] | 1967 | 1978 | 1967 | 1978 | 1967 | 1978 |
| Nfld. and Labrador | 3.08 | 18.81 | 2.43 | 13.37 | 5.90 | 3.10 | 0.02 | 0.04 | - | - |
| Prince Edward Island | - | - | 0.18 | 0.06 | 0.03 | 0.01 | 0.53 | 0.41 | 0.40 | 0.67 |
| Nova Scotia | 0.67 | 0.32 | 2.21 | 1.82 | 0.18 | 1.03 | 1.06 | 0.59 | 0.98 | 1.43 |
| New Brunswick | 1.12 | 0.86 | 2.52 | 2.29 | 2.00 | 1.55 | 1.04 | 0.59 | 0.69 | 0.89 |
| Quebec | 46.32 | 36.50 | 34.92 | 25.59 | 16.71 | 9.30 | 7.40 | 5.44 | 11.52 | 13.86 |
| Ontario | 25.77 | 16.73 | 30.33 | 30.44 | 27.09 | 13.20 | 10.23 | 8.88 | 24.61 | 22.53 |
| Manitoba | 4.77 | 7.20 | 4.37 | 5.20 | 4.23 | 2.30 | 10.95 | 11.33 | 11.44 | 11.53 |
| Saskatchewan | 1.75 | 1.08 | 3.22 | 2.63 | 8.39 | 7.90 | 37.56 | 39.35 | 25.35 | 27.28 |
| Alberta | 3.03 | 0.78 | 6.42 | 5.68 | 22.63 | 49.60 | 28.13 | 29.83 | 19.43 | 18.32 |
| British Columbia | 13.25 | 17.35 | 13.13 | 12.64 | 8.19 | 9.20 | 3.03 | 3.50 | 5.53 | 3.44 |

- continues -

Table 2 continues

| | Forestry | | | | Fisheries[9] | | | |
|---|---|---|---|---|---|---|---|---|
| | Productivity[7] | | Shipments[8] | | Quantity | | Value | |
| | 1967 | 1978 | 1967 | 1978 | 1967 | 1978 | 1967 | 1978 |
| Nfld. and Labrador | 3.52 | 11.41 | 0.15 | 0.10 | 25.83 | 31.82 | 15.00 | 16.01 |
| Prince Edward Island | 0.08 | - | 0.02 | - | 2.21 | 1.86 | 3.47 | 3.37 |
| Nova Scotia | 1.57 | 1.36 | 1.99 | 0.90 | 26.84 | 32.35 | 27.08 | 28.20 |
| New Brunswick | 2.48 | 2.21 | 3.89 | 2.46 | 13.30 | 11.17 | 6.45 | 7.21 |
| Quebec | 22.98 | 14.82 | 14.16 | 15.72 | 5.57 | 4.94 | 4.21 | 4.36 |
| Ontario | 17.14 | 19.42 | 9.85 | 7.90 | 2.14 | 1.84 | 3.47 | 2.47 |
| Manitoba | 6.06 | 8.55 | 0.26 | - | - | - | - | - |
| Saskatchewan | 4.39 | 4.22 | 0.76 | 1.05 | - | - | - | - |
| Alberta | 12.14 | 10.83 | 2.49 | 3.26 | - | - | - | - |
| British Columbia | 21.71 | 16.42 | 66.35 | 67.86 | 21.84 | 14.48 | 35.15 | 36.40 |

Source: *Canada Year Book*, 1969 and 1980-81.

[1]Table 3, p. 677 (1969); Table 13.15, p. 523 (1980-81).
[2]Total generation: hydro and thermal power.
[3]Total generation: hydro, thermal and nuclear power.
[4]Tables 6 and 7, p. 600 (1969); Tables 12.6 and 12.7, p. 476 (1980-81).
[5]Table 47, p. 517 (1969); Table 11.28, p. 440 (1980-81).
[6]Table 9, p. 486 (1969); Table 11.3, p. 428 (1980-81).
[7]Table 1, p. 530 (1969); Table 10.1, p. 391 (1980-81).
[8]Table 10, p. 538 (1969); Table 10.6, p. 392 (1980-81).
[9]Table 3, p. 562 (1969); Table 10.14, p. 395 (1980-81).

1920s and the 1960s, a flourishing forest industry. Its reserve of valuable trees were however depleted at a faster pace than the regeneration cycle of its forests. The same pattern was repeated as stands in British Columbia became economically accessible and it too is now entering the critical phase in which restocking has failed to keep pace with the timber harvest. Another influential factor is demand. Over the years the national and international demand for wood and its derivated products have changed considerably. What satisfied the market ten to fifteen years ago is today passé. New markets have opened either asking for specific quality products or offering competing goods.

The reputation of a resource and its popularity contribute to its importance. Prince Edward Island appears in Table 2 to be rescued by the other provinces. Prince Edward Island has beautiful landscapes and vast sandy beaches. The island with its qualities is the resource; the resource can them be quantified in number of tourists. Unfortunately, tourism has not yet obtained the status of a natural resource (in Statistics Canada's pamphlet as well); if it be so, with the 1980s and the increasing leisure time of the population, the obscurity of this province can change.

The costs and benefits of developing natural resources are, if not the most important, certainly major factors to elevate a resource to the reputation of key resource. Schefferville, Quebec, is today a closed town; its iron ore is still there in abundance, but other regions of the world yield a higher grade of ore necessitating less treatment, and consequently providing a better cost-benefit ratio. Added to that, developing countries impose fewer restrictive policies concerning the development and exploration of their resources. These countries have attracted multinational enterprises and foreign capital which otherwise would not have found any interest for investment.

These major factors, briefly discussed above, are only a small facet of the complexity surrounding natural resource development. Over the years, the Canadian governments inspired by various external forces have instituted a bureaucracy and adopted policies to *develop* the various resource sectors (Table 3). Their emphasis has been upon

TABLE 3: Evolution of Departments or Ministries Dedicated to the Development and Management of Natural Resources, 1956-1984

| | 1956 | 1960 | 1964 | 1968 | 1972 | 1976 | 1980 | 1984 |
|---|---|---|---|---|---|---|---|---|
| NEWFOUNDLAND | | | | | | | | |
| Fisheries | ■ | ■ | ■ | | ■ | ■ | ■ | ■ |
| Fisheries, community and social development | | | | ■ | | | | |
| Mines and resources | ■ | ■ | ■ | | | | | |
| Mines, agriculture, resources | | | | ■ | ■ | | | |
| Mines and energy | | | | | | ■ | ■ | |
| Development and mines | | | | | | | | ■ |
| Energy | | | | | | | | ■ |
| Forestry and agriculture | | | | | | ■ | | |
| Forest resources and lands | | | | | | | ■ | ■ |
| Consumer affairs, environment | | | | | | ■ | ■ | |
| Environment | | | | | | | | ■ |
| PRINCE EDWARD ISLAND | | | | | | | | |
| Agriculture | ■ | ■ | ■ | ■ | | | | ■ |
| Agriculture and forestry | | | | | ■ | ■ | ■ | |
| Public works, industry and natural resources | ■ | | | | | | | |
| Industry and natural resources | | | | ■ | | | | |
| Tourism, industry, energy | | | | | | | ■ | |
| Energy and forestry | | | | | | | | ■ |
| Fisheries | | ■ | ■ | ■ | ■ | ■ | ■ | |
| Fisheries and labour | | | | | | | | ■ |
| Environment and tourism | | | | | ■ | | | |
| Environment | | | | | | ■ | | |
| NOVA SCOTIA | | | | | | | | |
| Agriculture and marketing | ■ | | | ■ | ■ | ■ | ■ | ■ |
| Agriculture | | ■ | ■ | | | | | |
| Mines | ■ | ■ | ■ | ■ | ■ | ■ | | |
| Mines and energy | | | | | | | ■ | ■ |
| Fisheries | | | | ■ | ■ | ■ | ■ | ■ |
| Lands and forests | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Environment | | | | | | ■ | ■ | ■ |
| NEW BRUNSWICK | | | | | | | | |
| Lands and mines | ■ | ■ | ■ | | | | | |
| Natural resources | | | | ■ | ■ | ■ | ■ | ■ |
| Agriculture | ■ | ■ | ■ | | | | | |
| Agriculture, rural developmt. | | | | ■ | ■ | ■ | ■ | ■ |
| Fisheries | | | ■ | ■ | | ■ | ■ | ■ |
| Fisheries and environment | | | | | ■ | | | |
| Environment | | | | | | ■ | ■ | ■ |

- continues -

Table 3 continues

| | 1956 | 1960 | 1964 | 1968 | 1972 | 1976 | 1980 | 1984 |
|---|---|---|---|---|---|---|---|---|
| QUEBEC | | | | | | | | |
| Agriculture | ■ | ■ | ■ | | | ■ | | |
| Agriculture and colonization | | | | ■ | ■ | | | |
| Agriculture, fisheries, food | | | | | | | ■ | ■ |
| Hydraulic resources | ■ | ■ | | | | | | |
| Mines | ■ | ■ | | | | | | |
| Natural resources | | | ■ | ■ | ■ | ■ | | |
| Land and forests | ■ | ■ | ■ | ■ | ■ | ■ | | |
| Energy and resources | | | | | | | ■ | ■ |
| Game and fisheries | ■ | ■ | ■ | | | | | |
| Tourism, fish and game | | | | ■ | ■ | ■ | | |
| Leisure, hunting, fishing | | | | | | | ■ | |
| Recreation, fish and game | | | | | | | | ■ |
| Municipal affairs, environment | | | | | | ■ | | |
| Environment | | | | | | | ■ | ■ |
| ONTARIO | | | | | | | | |
| Agriculture | ■ | ■ | ■ | | | | | |
| Agriculture and food | | | | ■ | ■ | ■ | ■ | ■ |
| Mines | ■ | ■ | ■ | ■ | | | | |
| Mines and northern affairs | | | | | ■ | | | |
| Lands and forests | ■ | ■ | ■ | ■ | | | | |
| Energy and resources | | ■ | ■ | ■ | ■ | | | |
| Natural resources | | | | | | ■ | ■ | ■ |
| Energy | | | | | | ■ | ■ | ■ |
| Environment | | | | | ■ | ■ | ■ | ■ |
| MANITOBA | | | | | | | | |
| Agriculture | ■ | | | ■ | ■ | ■ | ■ | ■ |
| Agriculture and conservation | | ■ | ■ | | | | | |
| Mines and natural resources | ■ | ■ | ■ | ■ | | | | |
| Mines, resources and environmental management | | | | | ■ | ■ | | |
| Renewable resources and transportation | | | | | | ■ | | |
| Natural resources | | | | | | | ■ | ■ |
| Energy and mines | | | | | | | ■ | ■ |
| Consumer/corporate affairs and environment | | | | | | | ■ | |
| Environment, workplace safety and health | | | | | | | | ■ |

- continues -

Source: *Canadian Parliamentary Guide*, 1956-1984.

Table 3 continues

| | 1956 | 1960 | 1964 | 1968 | 1972 | 1976 | 1980 | 1984 |
|---|---|---|---|---|---|---|---|---|
| SASKATCHEWAN | | | | | | | | |
| Agriculture | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Mineral resources | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| Energy and mines | | | | | | | | ■ |
| Natural resources | ■ | ■ | ■ | ■ | ■ | | | |
| Tourism and natural resources | | | | | | ■ | ■ | |
| Parks and renewable resources | | | | | | | | ■ |
| Environment | | | | | | ■ | ■ | ■ |
| ALBERTA | | | | | | | | |
| Agriculture | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Lands and forests | ■ | ■ | ■ | ■ | ■ | | | |
| Mines and minerals | ■ | ■ | ■ | ■ | ■ | | | |
| Energy and natural resources | | | | | | ■ | ■ | ■ |
| Energy | | | | | | | | ■ |
| Recreation, parks, wildlife | | | | | | ■ | | |
| Public lands and wildlife | | | | | | | ■ | ■ |
| Environment | | | | | ■ | ■ | ■ | ■ |
| BRITISH COLUMBIA | | | | | | | | |
| Agriculture | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| Agriculture and food | | | | | | | | ■ |
| Lands and forests | ■ | ■ | | | | | | |
| Lands, forests, water resources | | | ■ | ■ | ■ | | | |
| Forests | | | | | | ■ | ■ | ■ |
| Lands, parks and housing | | | | | | | ■ | ■ |
| Mines | ■ | ■ | | | | | | |
| Mines and petroleum resources | | | ■ | ■ | ■ | ■ | | |
| Energy, mines, petro. resources | | | | | | | ■ | ■ |
| Environment | | | | | | ■ | | ■ |
| FEDERAL GOVERNMENT | | | | | | | | |
| Agriculture | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Mines and technical surveys | ■ | ■ | ■ | | | | | |
| Energy, mines and resources | | | | ■ | ■ | ■ | ■ | ■ |
| Fisheries | ■ | ■ | ■ | ■ | | | | |
| State for fisheries | | | | | ■ | | | |
| Fisheries and environment | | | | | | ■ | | |
| Fisheries and ocean | | | | | | | ■ | ■ |
| Forestry | | | ■ | | | | | |
| Forestry and rural developmt. | | | | ■ | | | | |
| Northern affairs and national resources | ■ | ■ | ■ | | | | | |
| Indian affairs and northern development | | | | ■ | ■ | ■ | ■ | ■ |
| Environment | | | | | ■ | | ■ | ■ |

unbridled development for raw material export using foreign capital and with relatively weak environmental management. Projects have increased in size, complexity and hence probable impacts.

## 2.3 Towards the Management of the Canadian Environment

While Canadian governments were implementing policies for the development of natural resources, concern were voiced over depletion and scarcity of the resources. By the late 1960s, the world was suddenly realizing the possibility of an energy shortage. Inflation was rampant; population was continually growing as were the rate of resource consumption and the demand for more natural resources. Complex arrays of pollution and health problems produced by industrial growth, and heavier demand on existing waste collection, disposal facilities and sewage treatment were imposing higher costs on the natural environment. Governments of developed countries including Canada were faced with a serious need to reorient their resource policies to resolve surging environmental problems.

By 1970, public opinion was increasingly aware of the need for conservation of the environmental and social dangers of uncontrolled resource exploitation. The issues (pollution, overpopulation, depletion) were becoming visible and threatening, they affected large enough segments of the population to generate interest and thereby require responses. Both social climax and environmental crisis became inseparable. René Dubos (in Rodgers, 1976, p. 3) outlines the situation in these words: "Environmental ugliness and the rape of nature can be forgiven when they result from poverty, but not when they occur in the midst of plenty and indeed are produced by wealth." These issues gradually forced the governments to recognize the necessity to involve the public in management of natural resources and to encourage its inputs into the formulation of policies (Sewell and O'Riordan, 1976).

The period leading to the environmental crisis, as mentioned earlier, was one of relative stability, marked by steady economic growth

in the 1960s and low rates of inflation and unemployment. Thus, in the midst of this frail opulence, the environment could easily become the dominant issue. This is explained by Parlour (1977) who indicates that environmental protection as an issue has no significant displacement effect on the coverage of any other national issue. It is not so emotional a topic as poverty, starvation and so forth, consequently it tends to be the last to be politically recognized and remains the most vulnerable if other higher priority objectives are threatened (Musolf, 1975; T. O'Riordan, 1976b).

The reaction of the Canadian government to environmental problems was slower than its American counterpart. Nevertheless the enthusiasm of mass media, public opinion polls and parliamentary interests over environmental problems reached their greatest intensity during the period from early 1970 to late 1971 (Parlour, 1977; Sandback, 1980). Lundqvist (1974), the OECD (1979) and Lee (1983) have suggested that the Constitution Act (1867) hinders any national policy of intervention since it cannot be launched until the constitutionality and the jurisdictional matters have been clarified, and an agreement reached between the Prime Minister and his peers. Pollution was not generally considered to be a major national concern; it was regarded rather as primarily falling within provincial responsibility. No efforts were made by the Diefenbaker government of the early 1960s to diverge from established patterns of non-involvement in controlling the rapidly growing pollution of Canadian urban centres. On the contrary, the cornerstone of his government was to develop natural resources and to open new frontiers (Parlour, 1977).

In contrast to the relative inactivity at the federal level, the provincial concerns of the mid-1960s, especially in the heavily urbanized and industrialized provinces, were to find adequate solutions to pollution problems. Their involvement was initiated by three main considerations:

(1) sanitation, purification of drinking water and extension of solid waste disposal services were initially perceived as localized

problems within provincial jurisdiction;

(2) public demands for corrective action were registered at first at the local as opposed to the national level;

(3) pollution problems were simply not regarded as sufficiently important to justify federal actions.

Although the responsibility of urban sanitation was provincial, it did not prevent the federal government from helping meet the escalating costs by providing the provinces with low interest loans and subsidies. The federal program was justified on the grounds that the construction of sewage treatment plants or infrastructures would help alleviate unemployment. It gradually developed into a major federal support program in the area of water pollution control but it has never been incorporated into the mainstream of federal environmental programs (Parlour, 1977).

By the end of 1971, Canada had undergone a major shift in attitudes towards the environment: resource development was suddenly being reviewed in the context of environmental management (Table 3). For example, at the federal level a new department—Environment Canada—was created from the amalgamation of the Departments of Fisheries and Forestry with the Environmental units from the Departments of National Health and Welfare; Regional Economic Expansion; Transport; Energy, Mines and Resources; and Indian Affairs and Northern Development. Environment Canada considerably reduced the competition among departments and agencies over environmental issues by having a spokesman within the Cabinet. Its task was then to implement workable tools dealing with the emerging environmental problems. Jurisdiction over pollution changed. The federal government was now defining it as a matter of "significant national interest" or of "urgent national concern" (provided for in section 91 of the Constitution Act, 1867 and 1982). However, the provinces did not accept the sudden change of interest of the federal government in matters that had been regarded as provincial responsibilities. Confronted with the opposition of the Premiers, the federal government finally proposed to the provinces the option of bearing almost exclusively the responsibility for the implementation of pollution control regulations within their borders.

By transcending its national vantage point, the federal government focused the perspective of its environmental legislation (Water Act, Clean Air Act) to give impetus to provincial legislative bodies to enact their own environmental legislation.

By 1973 the environmental issues were progressively displaced by the mass media and other modes of communication in the face of "bread and butter" preoccupations. The consequent decline of public interest in environmental problems in Canada was reinforced by the belief that environmental problems were being solved by the government. Furthermore, the short term initiatives of the governments for controlling pollution may have outweighed long term concerns about environmental issues. It can be added that although the national dimension of natural resources and environmental problems had been highlighted, it was on the one hand dissimulated within jurisdictional conflicts between the federal and provincial governments, and on the other hand stifled by the ability (or inability) of the environment minister (in place) to persuade the Cabinet to press ahead with these issues. During this "gradual decline of public interest" (Downs' Issue-Attention Cycle), new mechanisms to protect the environment were superseded by other issues, and therefore received a shortened and limited amount of attention. Such was the case of the Environmental Assessment and Review Process (EARP) established by federal Cabinet directives in 1973 and therefore considered as just another administrative procedure for environmental protection (Beanlands and Duinker, 1983).

Experts have severely criticized the role played by the media—including the Canadian media—in setting the direction and pace of the environmental issuesof the early 1970s.

> They say the Phoenix is dying, some say dead.
> Dead without issue is what one message said,
> But that has been suppressed, officially denied.
> I think myself the man who sent it lied.
> In any case, I'm told, he has been shot,
> As a precautionary measure, whether he did or not.

The above poem, "News of the Phoenix" by A.J.M. Smith (1962) depicts

with a touch of irony the information inferred by the media. Parlour (1977) and Sandbach (1980), in their analyses of environmental content in media, conclude along the same lines. They indicate that the coverage of environmental questions has focused on isolated cases with a preponderance of sensationalized and exaggerated information. Parlour insists that the media had failed to present the public with information in a manner designed to increase the readers' understanding of the basic issues involved and about scientific and technical as well as social and economic dimensions of environmental problems. Rarely was the role of the federal government in pollution control commented on in editorials, suggests Parlour, but the activities of local and provincial authorities were carefully scrutinized, showing the concern of the media for specific local events and controversies. Besides, Usher (1977) attacks the quality of information in that he observes that nobody cared about the information except to blind the public with it if it were favourable or suppress it if embarrassing.

The question of environmental quality in Canada as well as in the United States and Europe has been perceived by the public as an intellectualized issue which has little direct connection to the immediate life style of individuals. It is seen, in other words, as a complexity of issues which the individual is powerless to change. McLean's (1980) study recognized that environmental awareness has been the appanage of the middle class. One indication is that both the traditional conservation and the newer environmental citizen groups have been supported by upper income, highly educated professionals. Blue collar workers, for their part, have questioned their own commitment where few people receive any direct benefits from reducing polluting behaviour and where strong pollution controls may curtail employment or increase consumer prices (T. O'Riordan, 1976b; Parlour, 1977). It is understandable that urgency for environmental protection, this seemingly intellectual issue, will take a back seat to urgent issues regarding the economy. In the face of increasing environmental costs and unnoticed benefits, there will always be limits to public willingness to contribute to governmental

efforts to reduce pollution. But Milbraith (1984) positively asserts that environmentalism seems to have taken root and has become a permanent aspect of public life because of progressive social learning.

All the environmental policies implemented by the Canadian government during the 1970s were aimed to placate growing public awareness of environmental consequences of activities and to minimize the significance of natural resource problems by protecting the quality of the environment. In 1972, T.L. Burton was already questioning their effectiveness, emphasizing that they were addressing the symptoms of the problem rather than the causes. Even today, most environmental agencies can hardly influence or control environmentally damaging public behavior. A demonstrable environmental danger is often very difficult to prove except after the fact.

Overview. The development of natural resources, a priority since Confederation, has consistently received the interest of federal and provincial government. Although providing economic growth and prosperity for Canada, it has concretized and resurrected some of the ambiguity of areas of federal and provincial responsibility in terms of the Constitution.

To maintain its rate of economic expansion Canada has required a massive input of foreign capital which, today, is still significant at over 30% of the invested capital. This foreign control, noticed in Canadian natural resources—petroleum and mining patricularly (Figure 1)—has had considerable repercussions on resource development and management. Foreign corporations have not been overly concerned with the care of the Canadian environment. While the natural resource revenue anticipated by the Canadian administrations depends on the willingness of a region to develop the resources, helped in its task by investors (foreign and domestic), this process has traditionally been subject to little control. Federal and provincial bureaucracies directed their attention to developing resources for benefits when among the costs has been a deteriorating environment.

The growing problems of shortage and depletion of natural resources, major issues in recent years, have opened up a new facet in their development. In the management of the environment, Canadian governments have had to create progressive policies and new decision making procedures to placate the growing public awareness of the possible environmental consequences of the development of natural resources. How has this been achieved? How has the Canadian policy process in the field of environment evolved? How do EIAs introduced as a decisional tool within environmental policies perform? Have these EIAs been successful within Canada? These questions will now be addressed.

# III.

# THE DECISION MAKING PROCESS AND ENVIRONMENTAL IMPACT ASSESSMENT

Few governmental decisions dealing with natural resources, their development and management can be made today without environmental assessments (McLean, 1980; T. O'Riordan, 1976b). Environmental impact assessment procedures were put forward in the 1970s to generate and make available information regarding environmental consequences (physical, economic, biological, social) of proposals. Public opinion during the same period underlined the need for national policy dealing with both resource development and protection of the environment. That is to say, by itself the EIA procedure is not sufficient to ensure that adverse environmental effects are minimized. The assessment exercise has to be introduced into the decision process attached to a policy, and then instituted.

EIA procedure is meant to facilitate decision making activities by presenting a clarification of environmental consequences of situations too often filled with conflicts. Called contradictory, a "neutral arbitrator" (Waiten, 1980), or a "corrupter" (Keenan, 1984), environmental impact assessment has been welcomed by all groups from environmentalists to politicians. If used objectively it should give an objective or impartial evaluation to controversial issues and assist those not familiar with a specific area of study.

To encompass the domain of decisions, especially those in the field of the environment, the discussion in this chapter is divided into three main areas. The first section introduces the notion of structure of power and proposes an option for the visualization of Canada's power structure. The second section overviews the Canadian process of policy making which helps the decisional process in a variety of political fields. The third section examines Canadian environmental policy; it presents firstly the decisional tool, EIA, adopted by the governments

in the field of the environment; and secondly a sketch of the participation related activation postulated as inherent in an EIA procedure.

## 3.1 The Structure of Power

Resources and environmental management policies could not exist without a political framework, an arena in which various governmental institutions and non-governmental actors perform their patterns of interaction. In North American society it is recognized that there are many sources of power other than the state or the administrative body. Power may be concentrated within a unified political elite but also tends to be fragmented and fleeting (Crenson, 1971; Lowi, 1979). The intricate network may be better characterized by what B. Smith (1982) called a plurality of elites. In this single characterization, two controversial theories of power are amalgamated, elitism and pluralism.

The elitist theory is based on the assumption that certain interests have the resources, the lobbying skills and the ideological identity with those who rule to confer upon them superiority over other interests (groups) in shaping the way in which particular policies are prepared and specific decisions taken. This 'ruling group' has the ability to manipulate events in such a way that the information available to decision makers is controlled, and that certain issues (or aspects of issues) have been highlighted or obscured to delay or reject crucial decisions where particular common interests are threatened. The basic premise of elite theory is that in every human institution there is a power structure which is an integral part and the mirror image of organizations' stratification (Bachrach and Baratz, 1978). So attention must concentrate upon the source of that power structure.

The pluralist theorists reject this concept of a power structure. They believe that in an open democracy interest groups are formed around issues dictated by the changing of public moods, by events and shifts

in political understanding. Then power is diffused between such groups and the countervailing power is balanced among different power bases to maintain equilibrium. However, the nature of large scale organizations is such that there is a concentration of power in the hands of political leaders competing in an elite plurality. It is not considered by the defenders of pluralism as an elite dominance but as participation in the exercise of power. The vital conditions for the pluralist theory to be defended are: openness of governmental activity as well as its relative accessibility; facility to form new groups; and belief that public interest is served (Bachrach and Baratz, 1978; Hewitt, 1978; Lowi, 1979; B. Smith, 1982; T. O'Riordan, 1983).

While there is a duality between the two sets of theory—pluralism and elitism—and the two faces of power, another school of thought under Almond and Verba (1963) proposes that distribution of power is derived from 'political culture', which establishes the norms and rules of procedure by which a population is governed. Political culture can also be visualized as a mutually supported balance between the demand of social groups or polities and the elites. Figure 4 illustrates that concept.

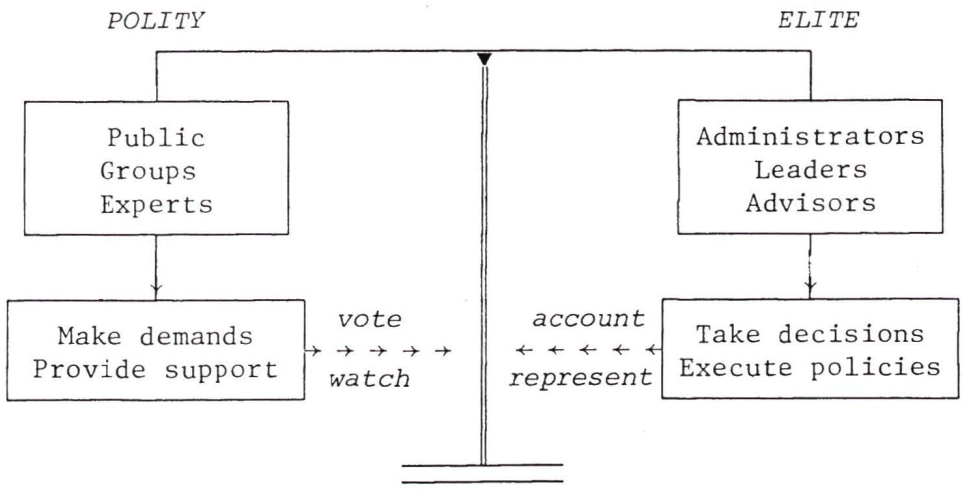



FIGURE 4: Political balance of participation (after Sewell and O'Riordan, 1976).

Political culture is not just a carefully orchestrated balance between the power sharing responsibilities of the two bodies—polity and elites, but it also influences the nature and effectiveness of participation, in that political culture offers the avenue of borrowing on both, elitism and pluralism, without justifying either dominance. A considerable amount of research has accumulated relative to the significance of wider power sharing and of pressure group activities, citizens' awareness, politization and role as member of a community linked by social, economic and political interactions. Opinions are mixed as to the merits of public or citizens' participation in management programs. Sewell (1974) reviewed the situation in these terms:

> [O]fficials of government agencies are highly skeptical about increasing the involvement of the public in policy-making, on grounds of the time taken to arrive at decisions, the general ignorance of the public on matters relating to management of the environment, and the general apathy of the public on such questions. (p. 247)

Nevertheless, the attitude of government(s) did not stop the emergence of pressure groups during the 1970s, and their desire to participate in the decision making process. The introduction of environmental impact assessment has been one of the innovative steps toward greater participation and openness of governmental information. Interest groups have provided focal points for individuals with different concerns about a specific issue, that is, they mobilize political concerns and ensure a mechanism through which various allegiances can be identified and passed along to decision makers (Gable, 1970). Their success or ineffectiveness is closely related to the use and availability of various resources (monetary, human, information) and the opportunities and power to mobilize them. T. O'Riordan (1976b) and Sandbach (1980) classified it more precisely along three lines:

- the level of organization (leadership, membership);
- the degree of expertise (liaison with human resources, information);

- the ability to communicate the information (bargaining strength, relationship with the media).

These principles are valid either for groups outside the government or for the bureaucracy. The presence of numerous interest or pressure groups with divergent views ensures that all concerns are diffused among the whole spectrum of interest groups and that no one viewpoint dominates. Therefore, that division of the role of the state and the role of interests in the participatory strategy is perceived and performed distinctly in different political cultures (Peters, 1982). Examining the participatory strategy of actors in a political culture will avoid the conflict of opting for elitism or pluralism, or both.

There are in North America two different political cultures exhibited by two different democratic systems. The United States and Canada are differentiated by the origins of their political process. The former is based on the republican form of government having a president as chief of state. The latter borrowed from the British parliamentary system assembled "by the Authority of the Queen," and by the Governor-General "in the Name of the Queen." In these two participatory democracies, citizens (the public) delegate their right to power via the elective process to politicians in whom they are fully confident; in return the citizens ask for better accountability as opposed to wide ministerial discretion from their representatives.

The political structure of the ten Canadian provinces mirrors the parliamentary system. Each has created portfolios and departments appropriate to its concerns and needs but the administrative structure reflects the same constitutionally based political culture which has been maintained for more than a century. They have all installed various forms of local and regional governments to suit the agglomeration of population in their territories. Political parties have evolved in response to their philosophical desires . Within the Canadian political culture, only the province of Quebec differs

noticeably, being in accord with its unique socio-cultural paradigm.*

## 3.2 The Policy Making Process

The concept of political culture and its norms and rules imposed upon individuals and groups inside and outside a government represents a simple, useful structure to understand the system of participation which prevails in the process of policy formation. Before discussing the process as practiced in Canada, it is appropriate to define the policy making process. Schoettle (1972, p. 171) chooses to view it "as the process of transformation which turns political inputs into political outputs." It is a selective method of action or a pattern of goal oriented choice of action that guides and determines present and future decisions and helps to identify the range of options in a specific field (*Merriman-Webster Dictionary*). Thus, there are policies dealing with such fields as resources, environment, health, social welfare, or revenue. They are ordinarily concentrated in four major categories: the economy; education and culture; social; government and administration; and implemented to respond to demands coming from the public, to offer different alternatives and to seek solutions to conflicts (Borgeat et Ass., 1982).

The policy process can be understood as a pattern of interaction involving various actors of governmental and non-governmental institutions which produces the instruments of policy. Policy is influenced by complicated relationships arising from the values, aspirations, motivations and beliefs of key actors who perform in the operational milieu structured by a political culture. T. O'Riordan (1976b) visualized the process as the interrelationship of three major variables changing in complexion from day to day, place to place, and issue to issue. Figure 5 presents the related variables modified by the political culture.

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*Milbraith (1984) suggests that every organized society has a dominant social paradigm (values, beliefs, etc.) through which individuals and groups interpret their world. Quebec has proved on many occasions to have imposed its personal vision (see Chapter 5).

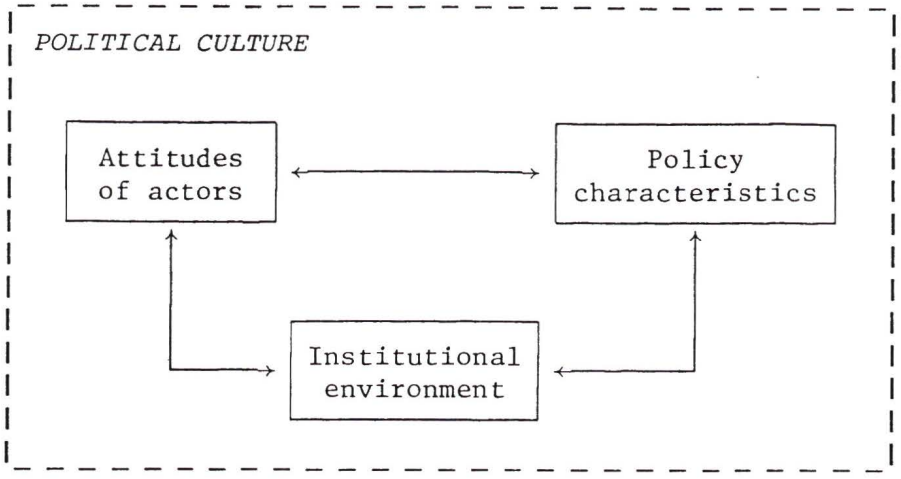


FIGURE 5: Variables in the policy making process (after Eckstein, 1978 and T. O'Riordan, 1976b).

In the Canadian parliamentary system, policy pressures are centred on the government ministries and Cabinet. With minor variations, the federal and provincial governments have similar decision making structures and follow much the same procedures in responding to such pressures. Where the regions differ is in the order of importance given to policy priorities: what is perceived as of prime importance in Newfoundland might be relatively insignificant in Saskatchewan and vice versa.

### 3.2.1 Theoretical Models

Policy proposals are typically seen to pass through several stages. These are associated with five main types of activity:

(1) identification of the problem;

(2) specification of goals;

(3) search for alternatives and their evaluation;

(4) selection of an action; and

(5) post-decision appraisal.

Routine or programmed decisions are made in a prescribed manner, following predictable patterns of behaviour within established rules. They are decisions carried out in a single sequence process (McGowan, 1984;

T. O'Riordan, 1983). Figure 6 illustrates the essential activities of the single sequence decision making model applied to policy.

A decision can also be characterized as non-routine or strategic or ill-structured when only limited information or no information is available with regard to the problem, when the decision maker has more than one objective which may be conflicting, when more than one participant in the decision process has the power to influence the choice among alternatives, or when the problem has ramifications with other problem situations. The distinction between routine and non-routine decisions derives from the complexity of the problem at hand, the information available to assist the decision maker, and the attitudes and behavior of the actors or participants in the decision making process. Figure 7 reproduces the skeleton of the major components of a decision as an issue. It can be seen that the information—possibly a proposal for an action, a series of options, or a controversial decision—is subject to influence from three variables. They are the available resources of information (documentation, research, studies in similar cases), the time limit to perform a task, and the place or environment in which the task is performed as well as the reputation of the area under investigation. For the purpose of this research, the author presented the actors as coming from both inside and outside the government bureaucracy; there are, however, frequent situations where the public service exclusively, an actor or agency interferes with the goal of another, creating a complication that develops into conflicts. Then a decision can only be reached after reiterating the process until consensus is reached. The cycling through the decision making activities transforms a single sequence decision into a multiple sequence model to use T. O'Riordan's terminology.

### 3.2.2 The Decision Makers' Approaches

Decision making, whether of a routine or non-routine pattern, can be categorized into three general conceptual approaches: the rational or traditional approach, the incremental approach, and the mixed scanning

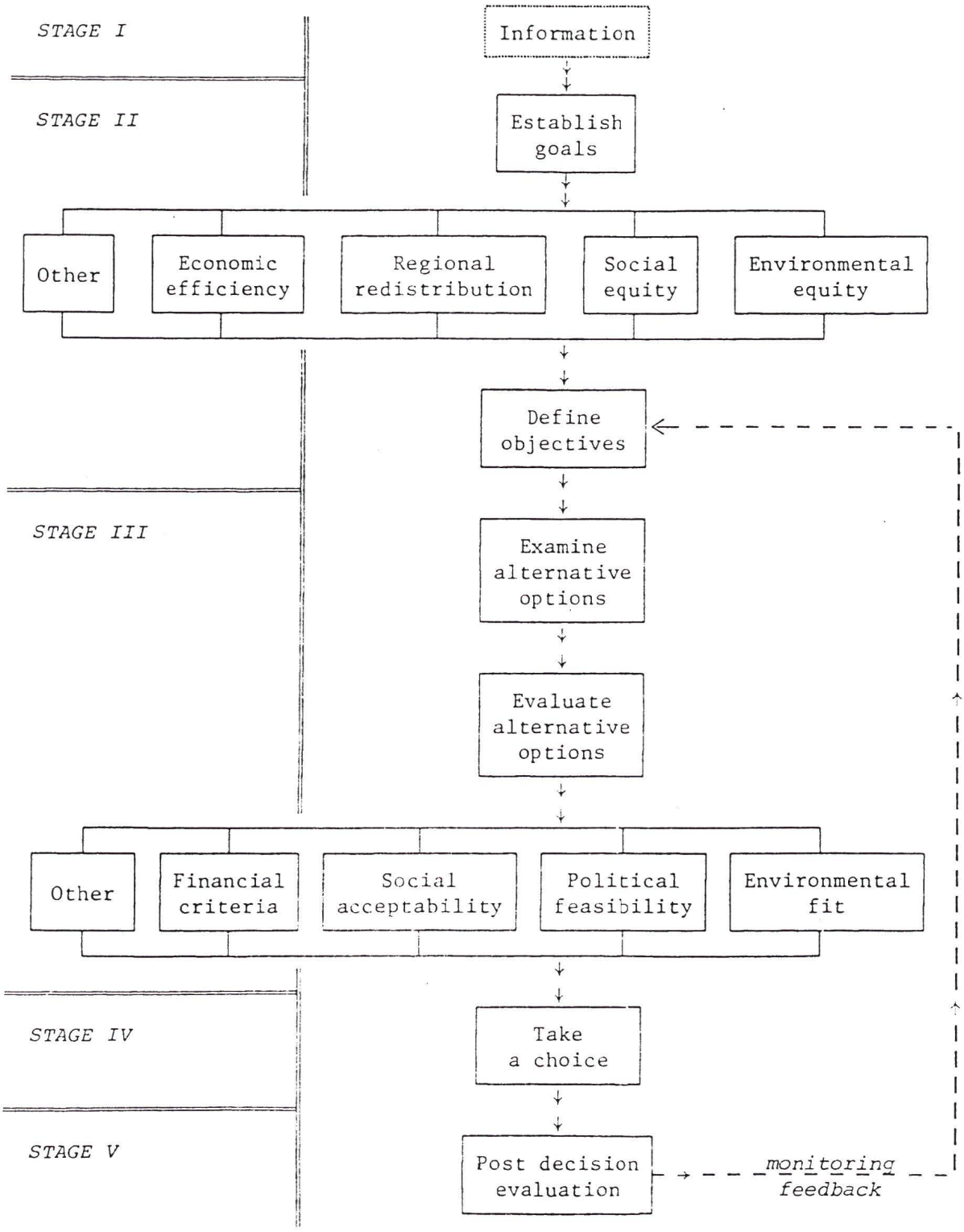


FIGURE 6: Single sequence decision making model. Essential activities (public sector decision making). (Adapted from T. O'Riordan, 1983.)

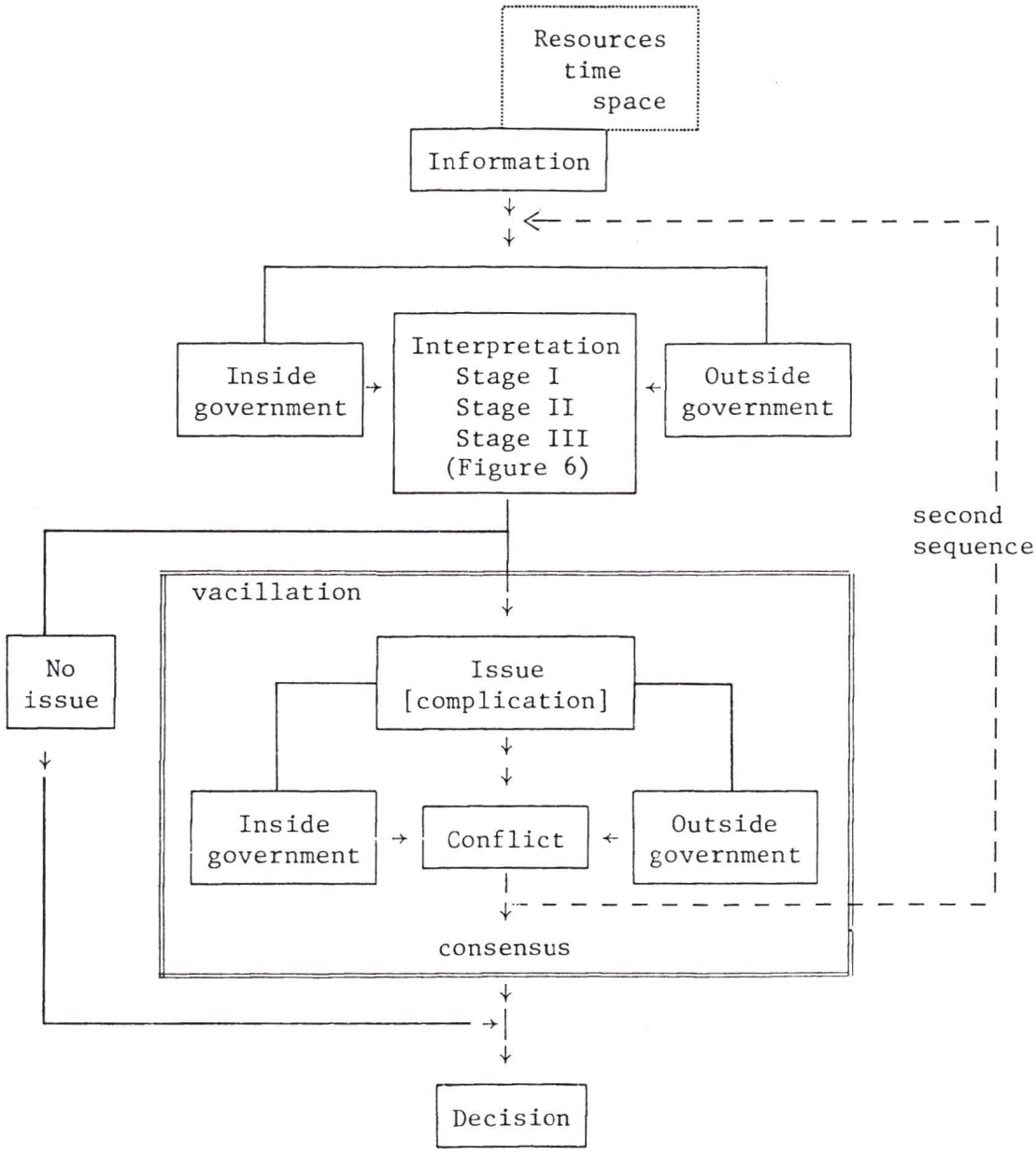


FIGURE 7: Non-routine decision making framework (as theorized by the author).

approach. The first concept can also be characterized as being prescriptive, the second as descriptive, and the third often as both prescriptive and descriptive (Mitchell, 1979). The traditional approach, as Aucoin (1979) states, is a theoretical formulation for the explanation of public policy focusing on decisions made by individuals in an aggregated form. These participants—politicians, bureaucrats, members of interest groups, the electorate—make choices in accordance with their interests and incentives. The traditional approach borrowed from economic models conceptualizes the decision maker as a "rational being" who, when facing a given problem, clarifies his goals, values or objectives and ranks them in his mind. He then lists all important ways for achieving his goals and investigates all the consequences, comparing them with pre-established goals. The obvious choice goes to the alternatives with consequences most closely matching his goals (Lindblom, 1968). To do so, the rational or traditional approach requires a continuous supply of complete, accurate and timely information on needs, resources and priorities (Dror, 1968). Simon (1957) summarized this approach as the "economic man" who "maximizes utility" selecting the best alternative from among all those available to him and to his self-interest.

Simon also proposed a substitute "administrative man," who recognizes limitations that a zealot economic man would not. That introduces a second conceptualization, the incremental approach which focuses essentially on the logical and behavioral tendencies of the decision makers (Aucoin, 1979). The administrative man knows that his skills are limited and thereby in narrowing the range of alternatives is capable of considering or generating. He knows that he is guided or constrained by his value system in choosing between alternatives. So, based on the incremental approach, the decision maker is viewed as reviewing only a rather restricted number of alternatives (a recognition of his own limitations) being more concerned with discovering how and with what structures a decision is made and operates. He 'muddles through' a limited number of closely related alternatives, and then he chooses an alternative that is

'good enough' without attempting to evaluate all possible consequences (White et al., 1980). The incremental approach, referrred to as "muddling through" in Braybrooke and Lindblom (1963), shows that there is no one decision and/or right solution but a never-ending series of attacks on the issues at hand through series of analyses and evaluations. A decision reached through incrementalism reflects the interest of the most powerful in the arena of social relations and power positions.

Both rationalism and incrementalism have been shown to be deficient. Etzioni (1967) argues for the development of a third approach or "mixed scanning" in which he selects features from the earlier two. The attractiveness of the mixed scanning approach is that each element tends to counterbalance the shortcomings of the other. It gives a third strategy which seems more practical. But as underscored by White et al. (1980), the approach gives little guidance to determine what actually constitutes an incremental or a rational problem, consequently the dividing line or zone is largely subjective.

Over the last decade, despite the shortcomings of the conceptualized decision making approaches, a series of reforms have been introduced to make government decisions more rational. At the same time, the incrementalist concept seems to have led to the acceptance of a crisis management mentality within which decisions are made only when a crisis exists. That is often the case with resource development: on the one hand an action might impair the environment and on the other hand too many participants look for recognition and support. Such decisions are then shaped in a dichotomous context having for a time the apparent property of rationality then suddenly muddling through a series of turmoils. The same arguments may be applied to routine and non-routine decisions since the derived from these approaches: a routine decision seems logically to relate to the traditional approach and the non-routine to the incremental. While Etzioni proposes a mixed set of mechanisms, T. O'Riordan (1976b, 1977, 1983) opts for what he calls a multiple sequence decision making model in response to the increasing number of participants interacting all along the decision making continuum and to

the constant influence of their perception of new interests, circumstances or information. The multiple sequence model borrows from incrementalism on account of the multiplicity of relations, interactions or complications along the decision process and from the rational because it operates within a sequence or succession of essential decisional activities. It is within a multiple sequence decision making model that environmental decision making is examined.

## 3.3 Environmental Policy and Decision Making

### 3.3.1 Assessment Techniques

The implementation of environmental policies designed to limit the environmental damage of unbridled development of natural resources has not been an easy task. As emphasized earlier in Chapter II, Canada has faced jurisdictional battles as to which level of government should be responsible for environmental control and policy. Furthermore, this field of public policy has lacked expertise, specialists, and quite often the necessary data. It is logical to assume, knowing these facts, that decisions shaped through environmental policy present a certain aura of incrementalism. To help proceed with environmental decisions, both levels of Canadian government have adopted the procedures of environmental impact assessment. By introducing a rational tool, the EIA, they forced environmental policy making into a form consistent with multiple sequence decision making.

Stages have been perceived in the application of assessment procedure. They are illustrated in the following.

A. Benefit-Cost Analysis: the antecedent. Prior to the 1970s, resource development projects had been assessed primarily in terms of economic benefits and costs. Such analysis can be traced back to the passage of the United States' Rivers and Harbors Act of 1902, which specified that the costs of water projects must be less than the benefits received. The Flood Control Act (1936) perpetuated this requirement and established benefit-cost analysis as the official method of determining whether water resource projects are justified after they have been

evaluated according to fixed guidelines (Meier, 1984). Originally applicable to the assessment of dams and water resource projects, benefit-cost analysis has been used in the United States, Canada, Europe and other countries as a general method to compare alternatives and to organize and simplify available information (Freeman, 1979). To be acceptable, the benefits of a project must exceed its costs (Hines, 1973; Van Gigch, 1978).

Heavily influenced by economic theory (more specifically neo-classical theory), benefit-cost analysis has tried to duplicate for the public sector the kind of decision making in operation in private markets (Kelso, 1984). Thus the main goal in allocating resources in the public sector has been to increase economic efficiency and the amount of resources in the economy, and at the same time to increase the social well-being of the society as a whole. But unfortunately, in the decision making arena of private markets, there is little concern with the issue of equity. Private markets respond to the demands of the consumers rather than to their needs or desires (Burton, 1972; Kelso, 1984). Eventually the borrowed 'market' connotation could not at the same time contribute to economic development and encourage the conservation of natural resources, stimulate all kinds of private economic activities and maximize the social welfare, promote unrestrained economic growth and protect the environment. The main goal of the development of natural renewable and non-renewable resources has become questioned in the face of the decline of environmental well-being.

The magnitude of environmental degradation has been, in large part, attributable to the failure of the world economy to impose the full environmental costs upon resource uses (Rogel, 1981). In "Le Sauvage" (Commoner, 1978, cited in Rogel, 1981, p. 100), Commoner argues that "le capitalisme fonctionne selon l'ordre de priorité suivant: d'abord le profit, ensuite le choix des moyens techniques,

enfin les retombées sur l'écosystème."* By the end of the 1960s, the growth controversy focused attention on the underlying economic nature of the environmental problem. Although the actual damage to the environment is primarily physical, the main reason that it persists is economic. Protection of the environment requires not only consideration of the economic benefits of the exploitation of natural resources and the resultant generation of profits, but also the negative outputs of waste and pollution which may outrun the absorptive capacity of the environment.

Whereas benefit-cost analysis has succeeded in representing the difference between or the ratio of benefits and costs, effectiveness and cost, inflows and outflows within a one-sided economic criterion, it has failed to give sufficient weight to the non-monetary environmental benefits and costs (Coleman, 1977; Sandbach, 1980). Used to simplify problems in a too often subjective context, benefit-cost analysis does not include the wider framework of considerations within which it performs, such as the level of government undertaking a project, the scale of investments, the geographical location, the social setting of the developing territory, or the political realities of the time (Brooks, 1976; White et al., 1984). Benefit-cost analysis evaluates inputs and outputs over a short term period but it does not consider the externalities and intangibles in terms of health hazards, visual amenity, and so forth, related to resource development projects over the long run (Pearce, 1976; Meier, 1984; Schwind, 1976). A complementary technique then becomes necessary to identify potential and/or actual environmental consequences of a natural resource development.

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*English translation by the author: Capitalist society works according to the following priorities: first the benefit, then the choice of technical methods, and finally the impacts on the ecosystem.

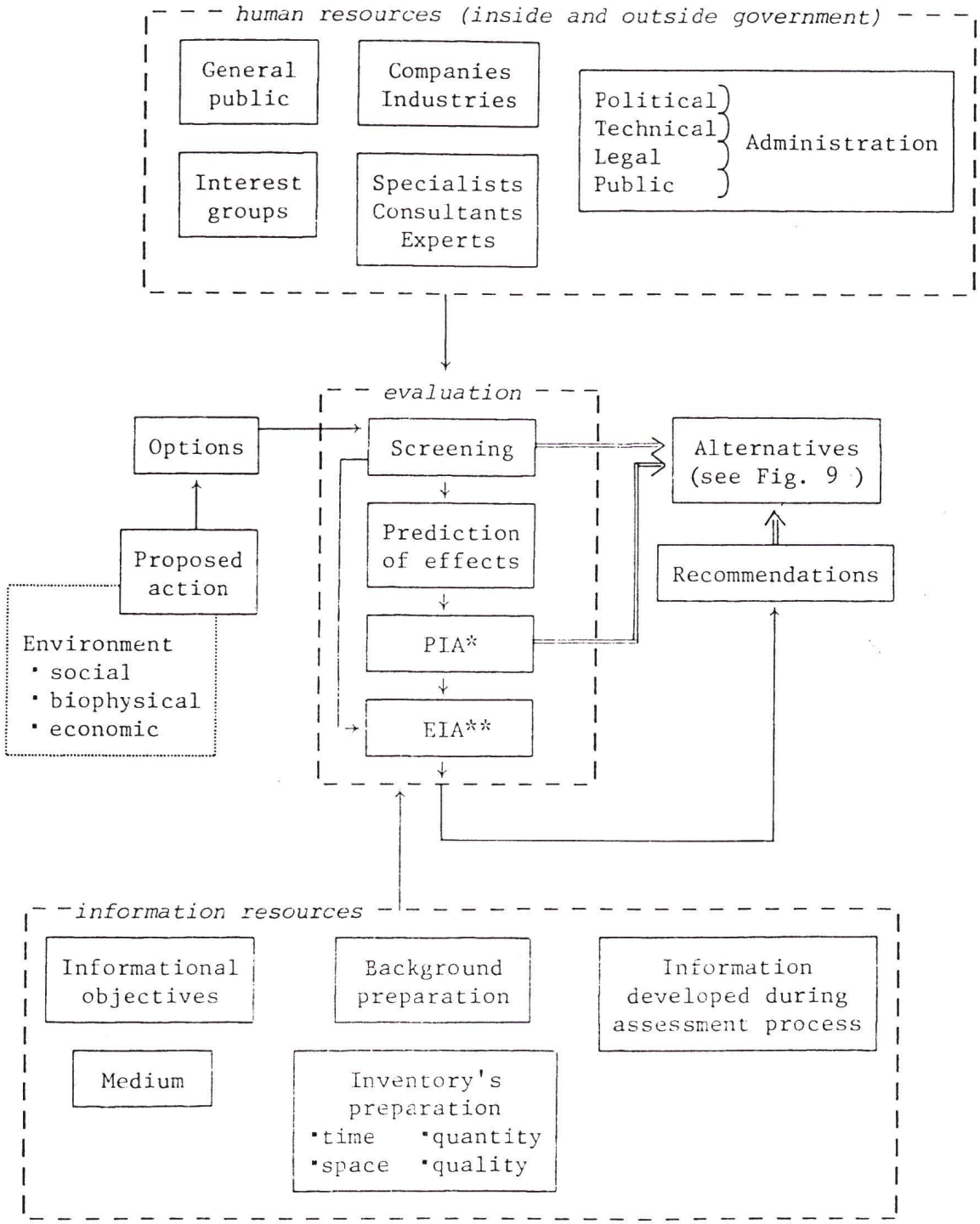
B. Environmental Impact Assessment. By the beginning of the 1970s, the need to solve the confrontations over resource exploitation between industries, governments, conservationists, farmers, native Indians, and the general public obliged politicians to introduce a new decision making and planning technique within which environmental considerations could be, as T. O'Riordan (1976a) portrays it, collated in a systematic manner and attached to the benefit-cost analysis balance sheets. For the first time, the consequences of proposed development by any private or public agency were to be explicitly considered when in January 1970, environmental impact assessment (EIA) was established by the United States' National Environmental Policy Act (NEPA). Canada borrowed from the United States and in 1973 it introduced, by Cabinet decision, the Environmental Assessment and Review Process (EARP) to determine in advance the potential environmental impact of all federal development projects, programs and activities especially north of 60° latitude where Ottawa is undisputed land and resource owner (Rees, 1980, 1981).

Environmental impact assessment is defined under the NEPA as the systematic description, prediction, evaluation, and integrated presentation of the environmental effects of a proposed action at a stage where serious damage may be avoided or minimized (NEPA, 1970). Many variations on the definition's theme have followed this policy based concern and have clarified the new preoccupation of the 1970s. Rodgers

(1976) views EIA in terms of fact-finding study and early warning inspection; Owen (1977) considers it as an analytical approach to the future, pointing to a 'go' or 'no go' decision; Munn (1979) talks about the EIA as an activity of identification, prediction, interpretation and communication of information about the impacts of actions on the bio-physical and human environments; Rosenberg (1981) defines it in general terms as an objective and/or subjective cataloguing, and more specifically as the process of doing predictive studies; Beanlands and Duinker (1983) refer to EIA as a set of activities designed to contribute pertinent environmental information to decision making. A synthesis of all the foregoing definitions indicates that environmental impact assessment is a thorough environmental analysis and evaluation seeking the probable damages of an action on the environment and a means to the end of the better use of natural resources through improved planning (Lee, 1983). Its task is to provide the necessary information helping the public authority to assume the rules for a decision and then to determine whether or not to approve an action. The assessment of development projects has evolved with EIAs from the uni-objective benefit-cost analysis to a multi-attribute decision making process (van Gigch, 1978). The short term view of economists originally used by planners can be mitigated by the long term concerns of environmentalists.

The detailed way in which the environmental assessment procedure operates within the planning and decision making process depends on the approach taken in particular jurisdictions (see Chapter IV). Generally environmental impact assessment of projects provides the following information (Figure 8):

(1) a full description and analysis of the proposal in question;
(2) a systematic inventory of the environment—natural, human, as well as all interests affected by the proposed activity;
(3) a prediction of the effects of the proposal on the environment;
(4) an evaluation of its impacts;
(5) a description and evaluation of possible mitigating measures; and
(6) a presentation of the results.




Key: ═ toward decision making model
* PIA: preliminary environmental impact assessment
** EIA: Formal environmental impact assessment

FIGURE 8 : Environmental impact assessment process (based on the Canadian process and theorized by the author).

Early EIA practices have been subject to much criticism. Many writers (Bankes and Thompson, 1980, 1981; Beanlands and Duinker, 1983; Lang, 1979; Latouche, 1979; Lee, 1983; Mosley, 1975; T. O'Riordan, 1976a, 1976b, 1981, 1983; O'Riordan and Sewell, 1976, 1981; Parlour, 1977; Rees, 1980; Rogel, 1981; Rosenberg, 1981; Yorque, 1976) are unanimous in denouncing the timing of projects and the lead time available to perform the assessment, the lack of knowledge and understanding of specialists in the use of data, the funding shortage, the difficult access to information, and the insufficient public participation. Nevertheless, the introduction of the EIA procedure into the decision making process marks a significant departure in public policy. Despite all the shortcomings attributed to the EIA process, citizens have been progressively concerned about matters affecting the quality of their lives and their environment. Development projects have been gradually opened to public scrutiny. The consequence of these two situations has been to centre the debates more on whether and how social environment should be assessed.

For a long period, the approach being applied to impact assessment of the natural environment appeared to be directly transferable to the social environment. Lang and Armour (1981) suggest that the only difference is the subject. Social considerations are coming to be regarded as unavoidable in environmental impact assessment and as potentially the critical factors in determining whether a project should proceed or not. In other words, social impact assessment has become a matter of practical necessity for those responsible for impact assessment procedures.

Social impact assessment (SIA), sometimes called socio-economic or community impact assessment, seems to be simply a counterpart of EIA. Lang and Armour (1981) postulate that EIA may have created an outlet for social concerns. It meets Carley's (1980) interpretation which considered SIA an attempt to expand the study of natural or biophysical environmental impacts to include social and socio-economic impacts associated with a new program, policy or project. Social impact

assessment was supposed to be a component of the U.S. environmental assessment process, but EIA itself was not designed to include social issues, despite some of the wording of the NEPA (1970). Section 107 of the NEPA (1970) suggests that EIA should "utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences." But public concerns of the day focused primarily on the effects of human activities on the natural environment and some of the rebound effects on people were glossed over. In 1978, the NEPA guidelines were revised to define 'human environment' more comprehensively and to recognize the relationship of people with the natural and physical environment. Socio-economic effects do not by themselves oblige the preparation of an impact assessment statement under the NEPA; they only become relevant when they are interrelated with physical environmental effects (CEQ, 1978). Lang (1979) comments that if each assessment were pursued alone, it is likely to be at the expense of the other.

The American practice has been, then, to coalesce or piggyback social impact assessment onto environmental impact assessment, and to adopt procedural solutions such as public participation. In the Canadian assessment procedure (counterpart of the U.S. NEPA), public participation is less of a natural component than in the United States. Canadians lack class action recourse in their judiciary system, and furthermore the Access to Information Act that provides citizens with a right to information is literally in its infancy (proclamation in April 1983). In the North American participatory mode of decision making, active public participation will always be essential to the assessment and decision making process, especially when it is performed *before* the making of commitments to a project (Torgerson, 1979). The impacts of high technology projects have affected and will continue to affect different people in different ways at different times. There have been and will be some people losing a great deal, others gaining, and yet others most probably falling somewhere in between (Shields, 1975). SIA has promised to address the unanticipated, negative, external effects and to

maximize social benefits associated with the development of resource projects (Hardy, 1983). To do so it is recommended that the data gathering be more than an overview of census data, a collection of narrow benefit-cost calculations, or weak conjectures about the significance of selected social trends changing with time and public preferences. The growing concern over social impacts has signalled the second stage in environmental decision making (Lang and Armour, 1981). Social impact assessment has made the environmental assessment complete.

A third stage, monitoring, is on the rise in the 1980s as a continuation of the assessment techniques into the dynamism of decision making. Monitoring represents the point of merging of resource development into environmental management providing a means of incorporating mitigation into the whole construction and management procedure (Bankes and Thompson, 1980-81). Within monitoring programs, undesirable economic, social and environmental impacts are not seen as something external to a project; their management becomes rather an integral part of the planning process. Some exceptions to the application of monitoring have been recognized:

(1) Where the impact is so great or of such a nature that a resource or a culture is imperilled. (Berger considered that if the Mackenzie Valley pipeline were built at the time of his inquiry, some of the consequences could not have been mitigated. The native land claim would have been one.)

(2) Where the impacts are so incremental that they encroach imperceptibly but inevitably. (The long range cumulative effects of the introduction of toxic substances for example.)

(3) Where the impact is of statistically remote occurrence or uncertain. (There is uncertainty about nuclear power plant spills.)

To deal with these exceptions which can never be resolved in advance, two of the multiple variations of monitoring assessment approaches have been proposed: the first is Adaptive Assessment and Management and the second Postponement vs. Attenuation. In both these procedures, information is generated as proceeding with a project and feedbacks trigger

corrective responses. Contrary to the first two stages of assessment practice, the monitoring assessment procedures focus on the post-approval and neglected aspect of the decision making process (Bankes and Thompson, 1980-81; Beanlands and Duinker, 1983). The advantage of assessment by monitoring and mitigative actions are to manage continuously arising problems and to lead to increased knowledge and ability of predicting the impacts of similar projects in the future. With that orientation, environmental impact assessment is slowly becoming more of a learning curve decisional process (learning by doing).

### 3.3.2 EIA in Relation to Environmental Policy

The scenario of public decision making may be postulated to develop as follows:

- policy making structure exists to manage specific system;
- decision making process responds to problem area through action or proposed action;
- disagreement, dissatisfaction, opposition (noise) concerning the action might emerge from the population;
- decision makers may ignore such pressure and proceed with a decision as 'routine', or may attempt to solve the issue as 'non-routine';
- public reaction (noise crescendo or diminuendo) is proportional to the degree of responsiveness of the decision makers.

In the context of this thesis, the public decision making focused on the environmental policy and the application of the EIA process. The scenario seems logical; it is highly likely that every Canadian policy follows this general pattern. Are the policies driven with the same motivation within the agenda of a country, a province, or a region? When the government is dealing with environmental quality, it is asked over and over again, "At what cost?" setting economic preoccupations ahead of the environment. Following the sequences of the Issue-Attention Cycle (Downs, 1972) or Agendization (Lundqvist, 1974), the environmental policy, a priority for a short period, is then relegated

to surfacing mainly in response to crises. Nonetheless, environmental decisions are all developed along a general multi-sequence model (see Figure 9). As the order of priority is settled, responding to the goals and objectives of the government of the time, an action is proposed which might cause detrimental effects on the environment. Several alternatives are examined then evaluated by different sets of actors who prepare their recommendations. The decision maker remains the only judge as to whether to follow the recommendations or not, guided by common sense.

The situation is not always so simple. The evaluation activities may engender conflicting demands of a fragmented public. It produces a noise syndrome to which the decision maker should listen. The crescendo is especially loud if the decision maker does not satisfy all parties in taking a decision. A decision may also be contested by certain participants joining at later stages of the deliberations. Both situations—dissatisfaction and disagreement—hamper the acceptance of a decision and force the re-examination of alternatives or the proposal of new ones until a consensus is obtained. To thwart long circulatory proceedings, the EIA has been introduced into the decision making process. When an action gives rise to significant environmental side effects and requires the approval of public authority, it is submitted to a systematic environmental evaluation. The results are then considered by the public authority in deciding whether or not to approve it (Lee, 1983). Theoretically, and EIA or its report, the EIA statement, is the formulation of a set of recommendations which, once inserted into a decision making procedure, should help rationalize its outputs. The EIA process is presented in Figure 8 above. As noted in Figure 9, the author has hypothetically chosen to enter the EIA into the model with the alternative(s). If the EIA has been adopted to help the public authority to make a decision, it should logically enter very early into the decision making process. Every consulted research and critic has underlined that rule.

What happens before the government contemplates proceeding with an EIA? They have just settled the order of priority for the coming

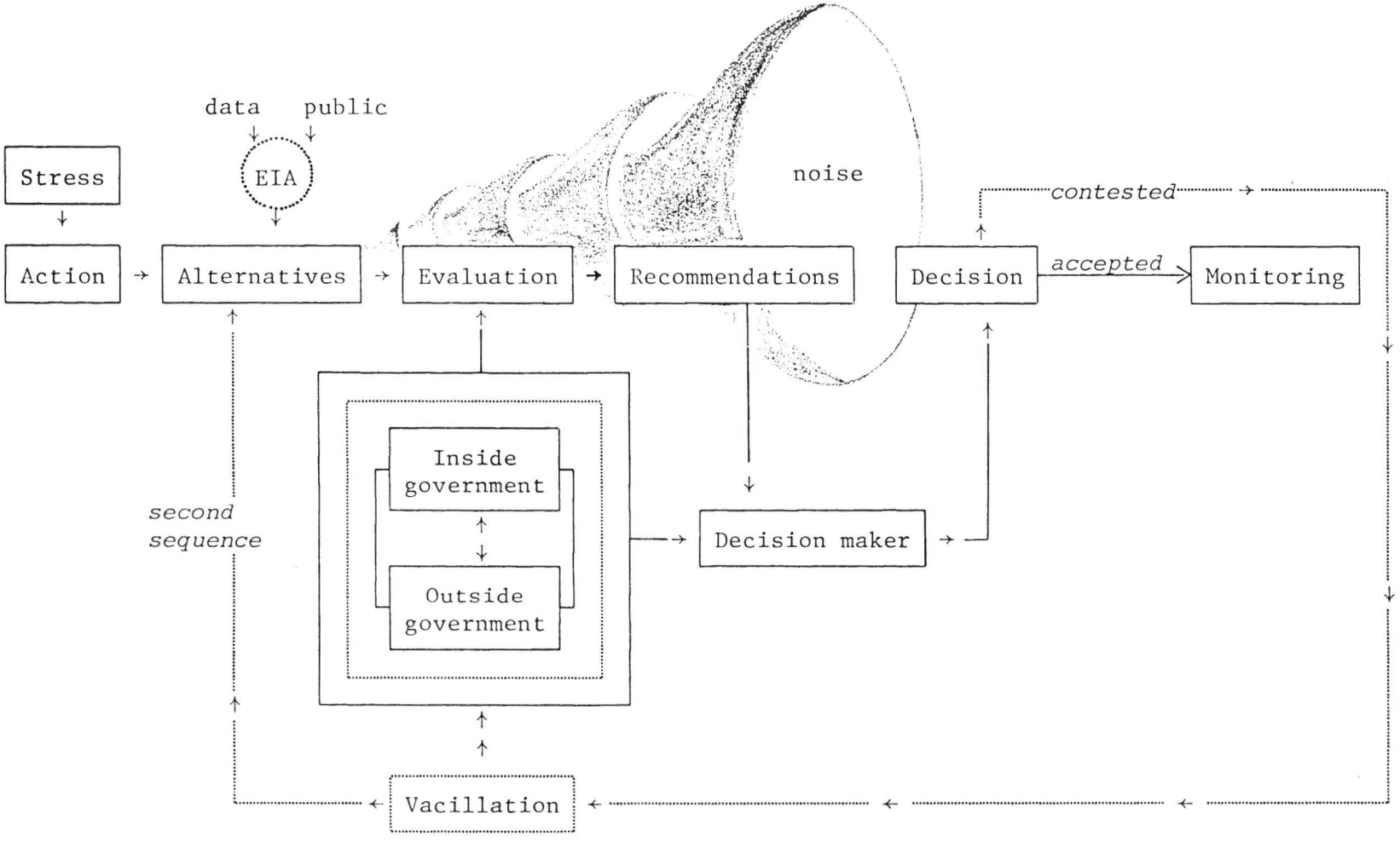



FIGURE 9 : Environmental policy: multi-sequence decision making model (adapted from W.R.D. Sewell, 1974).

term. One thing is certain, they will be promoting resource development; more specifically, any natural resource exploitation in their territory. A proposal comes through and after general investigation it appears that it might be detrimental to the environment. For its part, the environmental policy dictates that when the environment is going to be affected, the proposal (alternative or action) should be assessed. Thus an EIA has to proceed. With the proposals come different options to be examined and evaluated. Three degrees of evaluation (see Figure 8) are provided, depending on the complexity of the problem.

Firstly, the proposal and its options undergo screening. The proposal will either affect the environment or will not hold significant repercussions. If there are predicted effects but they are not fully known, a preliminary impact assessment (PIA) is required. With this second possibility it can be found that there are either no significant effects or potential effects. The discovery of potential significant effects compels movement to the third possibility, which is the preparation of a formal environmental impact assessment. It is throughout these three possibility that open and reliable communications are necessary. The information, whether background data, inventories or facts developed during the process, is made available to both pro and con factions. At the same time they are offered a possibility to expose, confront and discuss their views. Munn (1979) and Jain et al. (1981) summarize the major techniques of communication in a participatory mode presented in 1973 by Bishop.

All the dissatisfactions directly encountered by the decision maker before the introduction of the EIA into the decision making procedure are contained in the resulting recommendations. These recommendations are returned into the decision making model (Figure 9) as 'go/no go' alternatives that are examined and evaluated throughout earlier established goals and directed to the decision maker for final decision. Two choices lie before him: he can either follow the recommendations or ignore them. Whatever the decision, there is always a risk of challenge. Where participation has appeared rather controlled during the performance of the

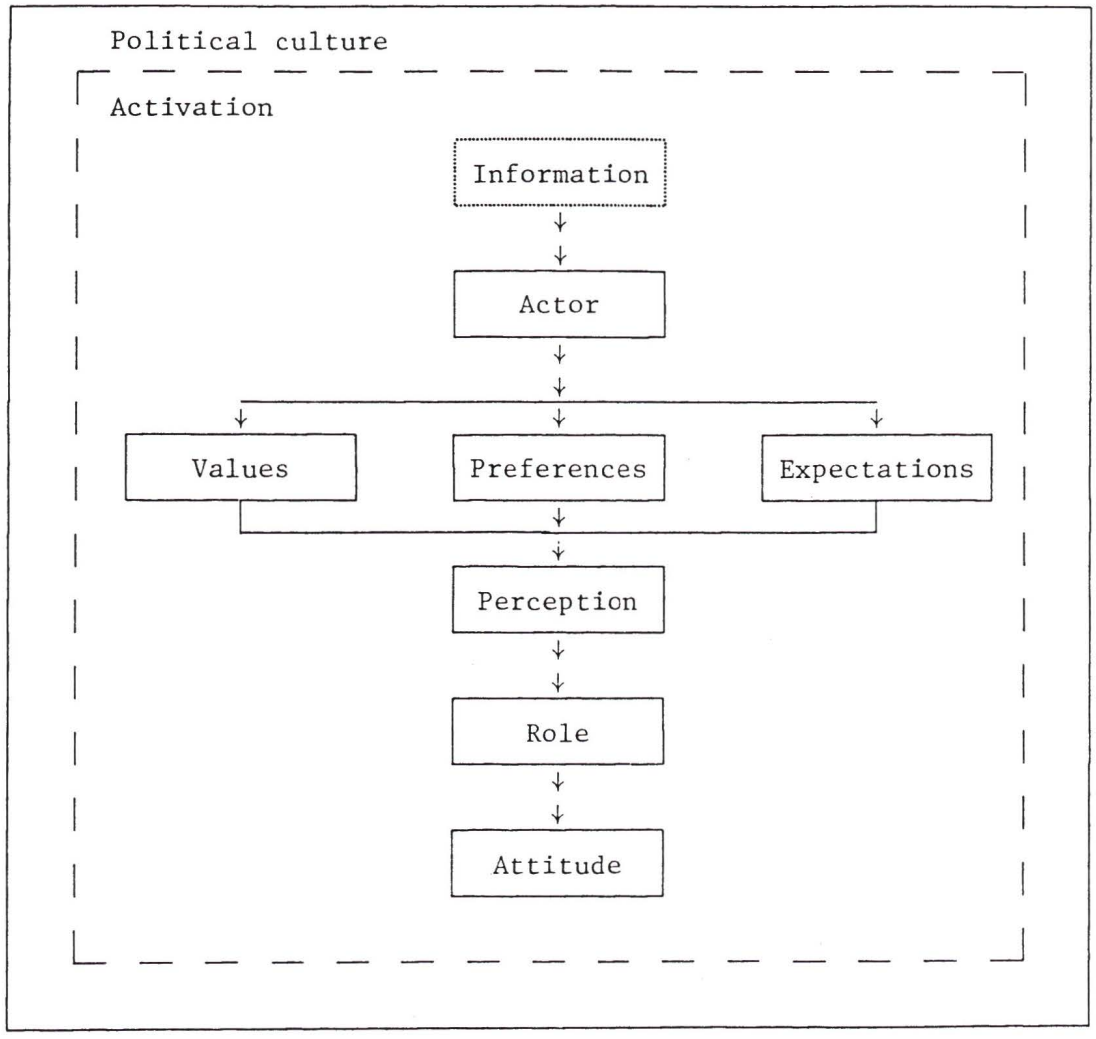



FIGURE 10: Activation into political culture (after T. O'Riordan, 1971).

assessment process, it is launched into a complicated and interminable political game once a decision has been made. To encompass the intricacies occurring during the decision making exercise, participation related activation is sketched in the following section.

### 3.3.3 Environmental Impact Assessment and Participation

At different occasions during the process of EIA, actors are offered an opportunity to participate in a political arena where a

network of activation is performed. Activation is not the same as conflict resolution: the interpretation and distortion of information by the actors come from their perceptions (as individuals or members of groups) of the presented action, problem or proposal which is filtered by their expectations, values and preferences. In the context of environmental impact assessment, it is hypothesized that it is the actors' perceived roles rather than their response to a decision that shape the numerous attitudes to activation (Figure 10, above). The present research does not discuss and evaluate the various methods adopted to encourage participation (public hearings, task forces, gaming exercises, to name but a few). It aims to describe, examine and understand how actors participate and how they ought to perform in a comparable situation within the Canadian context of environmental decision making.

#### 3.3.3.1 The actors: their roles as participants in the Canadian system

While the administrative framework has remained stable during the 1970s and early 1980s, the configuration of political forces on natural resources and environmental issues has undergone important changes. Woodrow (1980) observes that there has been a long-standing interest in natural resources development in Canada although the pollution issue and the energy crisis have added new dimensions. Political parties and organized groups all have stated their basic position and have clarified their views and interests, but the economic uncertainty of the present decade and its pessimistic prospect may modulate public opinions on natural resources and environmental issues for years to come. It is in this context that the environmental impact assessment process has advanced in Canadian environmental decision making as a tool qualified by Waiten (1981) of "neutral arbitrator" where actors can express their preferences.

For the purpose of the research, seven dominant actors have been retained as participants in environmental policy and decision making.

There is first of all the government. Each of the political parties at the federal and provincial levels of Canadian government has come to adopt one variation or another of the notion that economic growth and environmental quality must be balanced with due regard for the various societal interests. But, being at the top of the hierarchy of power, dictated by the parliamentary system, the government by coercion has the capacity (whatever ideology it represents) to bring to bear the full force of its political authority (Aucoin, 1979; Lowi, 1970). Hence the major roles and responsibilities of the government are manifold: it can act as regulator, law maker, evaluator and decision maker. It could also assume additional roles like project leader, interpreter of community concerns, and so on. But it must be kept in mind that it is the government that finally sanctions the effort behind the EIA.

A second actor is the promoter, proponent or the initiator of a proposal coming principally from the ranks of business or industry. This actor has a well-established tradition of relying upon both the federal and provincial governments for encouragement, assistance and protection in entrepreneurial functions. Also, members of that sector are the many societal interests like government agencies, corporations having at least a tacit stake in sustaining the pattern of growth and development. Waiten (1981) specified that the proponent has three different roles in relation to the EIA process: as an imitator of project proposals he begins the process; as a researcher it is on him that the onus lies to conduct the EIA; and as an implementor he not only constructs and operates the project but also monitors it.

As third actor there are those activists who form the environmental movement which emerged during the 1970s in response primarily to pollution issues and the energy crisis. Its component groups are becoming increasingly visible at both levels of government. They have been able to gain, over the years, increasing support of other organized groups also affected by the environmental issues (see the biennial publication from the Canadian Nature Federation, *Canadian Conservation Directory*). Woodrow (1980) portrays the adherents of environmental groups as highly

motivated individuals with a good flair for public relations and a solid scientific grounding. While remaining primarily a grassroot phenomenon, he maintains that they have exercised, from time to time, great influence at different levels of government. Their major role as researchers is to actively collect information and to continuously offer feedback on activities (Waiten, 1981).

The technologist, also called the expert, is a fourth actor. He has the expertise in social and natural sciences and his concern includes both resources and the environment; in other words how to utilize and manage them. This expert represents a growing number of academics, consultants, and public sector officials. He is viewed as a 'hired gun' for proponents and interest groups in their efforts to place pressure on decision makers and the resource person, the intermediary who conducts research based on the client's definition and perception of the impact, the nature of the project and the intensity of concerns held by the potential impactees.

A fifth actor is the general public. The public is considered the ultimate arbiter of what happens with regard to resource and environmental issues (Lang and Armour, 1981). Although invited in principle, to participate in the decisional process, it is mainly through sub-groups such as environmental groups that the general public plays a crucial role in setting the agenda and establishing the limits within which the government and other actors must operate.

The list would not be complete without introducing the last two actors: the media and the courts. The media are the indispensable channel of communication which are very important in our society. Often credited with being the champion of the underdog, this new 'Robin Hood' is associated with the battle to correct an injustice, often seizing an opportunity to play the devil's advocate. Keenan (1984) underlined that reporters are confronted with an impossible task by virtue of the fact that they are non-experts in just about everything they cover, and are at the mercy of their sources. Time is against them too, forcing superficial treatment of what may be a complex subject. All along the

assessment process the media are asked to play their role of informant but they often choose only facts that create sensational news or biasing the subject presented.

The final actor is the judiciary, charged with the safeguarding of constitutional rights and ensuring that legislative rules are obeyed. Where enactments—constitutional or legislative—are non-existent, the courts can do nothing. The effectiveness of the environmental impact assessment process is closely related to this important technicality.

### 3.3.3.2 Participation: activation of actors

The matter of participation in resource development and environmental issues has been thoroughly scrutinized from a number of perspectives including strategy, political effectiveness, and problems of implementation (see: Gable, 1970; Patchen, 1970; Vickers, 1970; T. O'Riordan, 1971, 1976b; Swanson, 1971; Sewell, 1971, 1974; Draper, 1975; Batty, 1976; Bonoma, 1976; Grima, 1977; Solandt, 1977; Brown, 1978; Eckstein, 1978; Pilat, 1980; Davis, 1981; Long, 1982; L.G. Smith, 1982; Berger, 1983; Clark et al., 1984).

Too often the participatory exercise has focused on the need for both communication techniques and adequate coordination in order to alleviate serious conflicts or a rupture between the various actors. What is less reported is how the actors participate before any rupture, or how they activate within a procedure like the EIA in which the ultimate output is not a decision *per se* but a gathering of information to shape important recommendations that should eventually be a part of a decision. Before their intervention and involvement in the EIA process, all seven of the actors identified above are already in a role or a position which is molded by their perception of the political system. Although the attitudes are as varied as the participating individuals, there is congregation towards the cause of actors who espouse similar values and preferences and expect identical results. (A summary of different roles and actors/groups can be found in section 3.3.3.1 above.)

When discussing 'participation' in the following pages, the author does not refer specifically to the participatory innovation or a public participation exercise introduced by the policy maker to ensure the presence of the public. Participation is taken in a more general fashion in which the public as participant has the same resources as any others, enabling them to exploit with equal chance the participatory opportunities. That ideal situation counterbalances the handicap of having political privileges and articulate people presenting view that frequently differ from the general public interest (Solandt, 1977). So, participation, interpreted as *activation of actors/groups*, has no affinities with these participatory programs, for which Sewell and O'Riordan (1976) could not optimistically wish a successful destiny. It is simply a hypothesized portrait of some activation experienced by actors when they connect and communicate with each other in a decision making technique as environmental impact assessment. It is thus a simple approach to deduce the most logical position for EIA in the general decision making process.

Hypothesized representation of activation before a decision is taken. It is hypothesized that four main characteristics shape the activation system:

(1) The role of the actors/groups grants them power over and interest in each other.

(2) The attributes of their roles as pairs compose associate connectivity.

(3) Communication between the actors/groups is proportional to the perceived importance given to exchanges.

(4) Activation is the combination of both connectivity and communication.

Nomenclature. The actors/groups are experiencing two different situations—a situation of power and a situation of interest—which have been influence by their perceived roles and consequent attitudes (see Figure 10). Power situations can be divided into three different systems as suggested by Bonoma (1976). There is unilateral power seen as a

one-way relation wherein the weaker party accommodates the stronger; bilateral power or mutuality noted for the high interdependency between two actors in a sort of engagement; and mixed power or bargaining considered more as a partnership agreement where both parties take turns suggesting preference for consideration by the others.

To help understand the configuration of the unilateral authoritative system, a solution is to subdivide it into direct and indirect control, and direct and indirect influence; so the power of one actor is regarded more as a control or influence over another actor. This power situation is illustrated by Table 4. It should be noted that any relationship in Table 4 as well as in the twelve following tables are *hypothesized* relationships. Three possibilities of power situation can be experienced by a pair of actors when referring to Table 4: an actor may not have any control or influence over another, like the public over the court; or one actor comes under the unilateral power of another, as exemplified by the government holding direct control over the public; or the pair of actors performs in two systems of power, as seen with the government and the company.

The second situation faced by a pair of actors is the situation of interest (Table 5). This notion comes from Batty (1976) who proposes that there is not only the power which is significant between two actors, there is also the way they relate, or more precisely the intensity of interest they show. Four possibilities modelled after diverse literature on participation attempt to identify the main configurations. They are:

(1) coalition defined as a union or alliance between two parties;
(2) concentration that gathers actors into a common core;
(3) stipulation where they reach an agreement; and
(4) defection or desertion.

The forty-two pairs of actors have been placed independently into both power and interest situations. The next step is to attach by association, or to join the two situations together. The connectivity resulting from this linkage is presented in Table 6. So when coupled, the actors meet with their power and interest in a vis-a-vis confronta-

TABLE 4: Designated Actors in Theoretical Power Situations

| Actors | | Power System: Bilateral | Mixed | Unilateral | Actors | | Power System: Bilateral | Mixed | Unilateral |
|---|---|---|---|---|---|---|---|---|---|
| GOV | PUB | | | ● | PUB | GOV | ▲ | | ■ |
| GOV | EXP | | | ● | EXP | GOV | ▲ | | ○ |
| GOV | CO | | ▲ | ■ | CO | GOV | | ▲ | ■ |
| GOV | GRO | | | ● | GRO | GOV | | ▲ | ■ |
| GOV | MED | | | ● | MED | GOV | | | ○ |
| GOV | COU | | | □ | COU | GOV | | | ● |
| PUB | EXP | | | | EXP | PUB | | | ○ |
| PUB | CO | | | ■ | CO | PUB | | | ● |
| PUB | GRO | ▲ | | □ | GRO | PUB | ▲ | | ○ |
| PUB | MED | | | □ | MED | PUB | | | ■ |
| PUB | COU | | | | COU | PUB | | | ● |
| EXP | CO | ▲ | | ○ | CO | EXP | | | ● |
| EXP | GRO | ▲ | | ○ | GRO | EXP | | ▲ | ● |
| EXP | MED | | | ○ | MED | EXP | | | ■ |
| EXP | COU | | | | COU | EXP | | | ● |
| CO | GRO | | ▲ | ● | GRO | CO | | ▲ | ■ |
| CO | MED | | | ● | MED | CO | | | □ |
| CO | COU | | | | COU | CO | | | ● |
| GRO | MED | | | ○ | MED | GRO | | | ■ |
| GRO | COU | | | | COU | GRO | | | ● |
| MED | COU | | | | COU | MED | | | ● |

Key:
GOV = government
PUB = public
EXP = experts
GRO = interest groups
MED = media
COU = courts
CO = companies

direct: ● control; ○ influence
indirect: ■ control; □ influence
▲ programmatic power

TABLE 5: Designated Actors in Theoretical Interest Situations

| Actors \ Interest | | Coalition | Concentration | Stipulation | Defection |
|---|---|---|---|---|---|
| GOV | PUB | | * | | |
| GOV | EXP | * | * | | |
| GOV | CO | * | * | * | |
| GOV | GRO | | * | * | |
| GOV | MED | * | | | |
| GOV | COU | * | * | | |
| PUB | EXP | * | | | |
| PUB | CO | * | | * | * |
| PUB | GRO | * | * | | |
| PUB | MED | * | | | * |
| PUB | COU | * | | | * |
| EXP | CO | | * | | |
| EXP | GRO | * | | * | * |
| EXP | MED | * | | | |
| EXP | COU | * | | | |
| CO | GRO | | * | * | |
| CO | MED | * | | | |
| CO | COU | * | | | |
| GRO | MED | * | | | * |
| GRO | COU | * | | | * |
| MED | COU | * | | | |
| PUB | GOV | * | | | * |
| EXP | GOV | | * | | |
| CO | GOV | * | | * | |
| GRO | GOV | * | | * | * |
| MED | GOV | * | | | * |
| COU | GOV | | * | * | |
| EXP | PUB | | | | |
| CO | PUB | | * | | |
| GRO | PUB | * | * | | |
| MED | PUB | * | | | |
| COU | PUB | | | | |
| CO | EXP | * | * | | |
| GRO | EXP | * | | * | |
| MED | EXP | | * | | * |
| COU | EXP | | | | |
| GRO | CO | * | | * | * |
| MED | CO | * | | | * |
| COU | CO | | | | |
| MED | GRO | * | * | | * |
| COU | GRO | | | | |
| COU | MED | | | | |

Key: GOV = government
PUB = public
EXP = experts
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CO = companies

TABLE 6: Designated Actors Experiencing Connectivity

| Actors | | Power (Table 4) | | | | | | Interest (Table 5) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | UNILATERAL POWER | | | | | | | | | |
| | | Direct Control | Direct Influence | Indirect Control | Indirect Influence | Mixed | Bilateral | Coalition | Concentration | Stipulation | Defection |
| GOV | PUB | * | | | | | | | * | | |
| GOV | EXP | * | | | | | | * | * | | |
| GOV | CO | | | * | | * | | * | * | * | |
| GOV | GRO | * | | | | | | | * | * | |
| GOV | MED | * | | | | | | * | | | |
| GOV | COU | | | | * | | | * | * | | |
| PUB | EXP | | | | | | | * | | | |
| PUB | CO | | | * | | | | * | | * | * |
| PUB | GRO | | | | * | | | * | * | | * |
| PUB | MED | | | | * | | | * | | | * |
| PUB | COU | | | | | | | * | | | * |
| EXP | CO | | * | | | | * | | * | | |
| EXP | GRO | | * | | | | * | * | | * | * |
| EXP | MED | | * | | | | | * | | | |
| EXP | COU | | | | | | | * | | | |
| CO | GRO | * | | | | * | | | * | * | |
| CO | MED | * | | | | | | * | | | |
| CO | COU | | | | | | | * | | | |
| GRO | MED | | * | | | | | * | | | * |
| GRO | COU | | | | | | | * | | | * |
| MED | COU | | | | | | | * | | | |
| PUB | GOV | | | * | | | * | * | | | * |
| EXP | GOV | | * | | | | * | | * | | |
| CO | GOV | | | * | | * | | * | | * | |
| GRO | GOV | | | * | | * | | * | | * | * |
| MED | GOV | | * | | | | | * | | | * |
| COU | GOV | * | | | | | | | * | * | |
| EXP | PUB | | * | | | | | | | | |
| CO | PUB | * | | | | | | | * | | |
| GRO | PUB | | * | | | | * | * | * | | |
| MED | PUB | | | * | | | | * | | | |
| COU | PUB | * | | | | | | | | | |
| CO | EXP | * | | | | | | * | * | | |
| GRO | EXP | * | | | | * | | * | | * | |
| MED | EXP | | | * | | | | | * | | * |
| COU | EXP | * | | | | | | | | | |
| GRO | CO | | | * | | * | | * | | * | * |
| MED | CO | | | | * | | | * | | | * |
| COU | CO | * | | | | | | | | | |
| MED | GRO | | | * | | | | * | * | | * |
| COU | GRO | * | | | | | | | | | |
| COU | MED | * | | | | | | | | | |

Key: GOV = government PUB = public EXP = experts GRO = interest groups MED = media COU = courts CO = companies

tion which has a negative appeal, the author has opted for a more positive union of the pairs of actors: their association is represented by connectivity.

Allocation of values. The hypothesized arrangement, in fact, is based on two matrices: one locates the connectivity and the other presents the pair of actors/groups (Table 7). Every pair of actors has been experiencing a locus of connectivity previously established by Table 6. The importance (value) of connectivity is derived from this table and is extrapolated by simply adding the number of pairs of actors performing in a specific connectivity zone: for example, zone B2 in Table 7, representing direct control (power) over coalition (interest) receives five pairs of actors as observed in Table 6; it then gives a value of 5 to zone B2 (Table 8).

Afterward, the importance given to the zones of connectivity can be transferred to every pair of actors (Table 9). What is revealed by Table 9 is the denomination of the connectivity zone for each pair of actors (Table 7) based on their experience described by Table 6, and the total importance of connectivity summed from the hypothesized values of Table 8. At the same time the involvement of actors/groups in situations of power and interest is evaluated to discover the preferences and values for either of the situations. The results are obtained by summing the frequency of appearance of a pair of actors, first in different situations of power and second in different situations of interest. Table 10 reveals the pairs of actors introduced into the two-axis connectivity matrix. It should be noted that the values given to the connectivity zones have not changed; they still correspond to the observed values given by Table 8. Their involvement in the two situations—power and interest—is dissected in Tables 11 and 12. The results compiled in Table 13 indicate that when the actors connect, four possible options coming from their interests and powers are considered:

(1) preference for one and only one situation of power and interest (■);
(2) more than one involvement but in a unique situation of power (|●);
(3) more than one involvement but in a unique situation of interest (●|);
(4) more than one involvement in either situation (●●).

TABLE 7: Working Matrices

CONNECTIVITY DENOMINATION

| Power \ Interest | Low Intensity | Coalition | Concentration | Stipulation | Defection | |
|---|---|---|---|---|---|---|
| Absence of Control/Influence | A1 | A2 | A3 | A4 | A5 | A |
| UNILATERAL: Direct Control | B1 | B2 | B3 | B4 | B5 | B |
| UNILATERAL: Direct Influence | C1 | C2 | C3 | C4 | C5 | C |
| UNILATERAL: Indirect Control | D1 | D2 | D3 | D4 | D5 | D |
| UNILATERAL: Indirect Influence | E1 | E2 | E3 | E4 | E5 | E |
| Mixed | F1 | F2 | F3 | F4 | F5 | F |
| Bilateral | G1 | G2 | G3 | G4 | G5 | G |
| | 1 | 2 | 3 | 4 | 5 | |

PAIRS OF ACTORS

| | GOV | PUB | EXP | CO | GRO | MED | COU |
|---|---|---|---|---|---|---|---|
| GOV | | * | * | * | * | * | * |
| PUB | * | | * | * | * | * | * |
| EXP | * | * | | * | * | * | * |
| CO | * | * | * | | * | * | * |
| GRO | * | * | * | * | | * | * |
| MED | * | * | * | * | * | | * |
| COU | * | * | * | * | * | * | |

Key:

GOV = government
PUB = public
EXP = experts
GRO = interest groups
MED = media
COU = courts
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Note: The data do not follow an order; their location in the matrices is purely coincidental and hypothetical.

TABLE 8: Connectivity: Hypothesized Importance (based on the observation of Table 6)

| Power Situation \ Interest Situation | Low Intensity | Coalition | Concentration | Stipulation | Defection | Total |
|---|---|---|---|---|---|---|
| Absence of Control/Influence | 0 | 6 | 0 | 0 | 2 | 8 |
| UNILATERAL: Direct Control | 5 | 5 | 7 | 4 | 0 | 21 |
| UNILATERAL: Direct Influence | 1 | 5 | 3 | 1 | 3 | 13 |
| UNILATERAL: Indirect Control | 0 | 8 | 3 | 5 | 6 | 22 |
| UNILATERAL: Indirect Influence | 0 | 4 | 2 | 0 | 2 | 8 |
| Mixed | 0 | 5 | 2 | 6 | 2 | 15 |
| Bilateral | 0 | 4 | 4 | 1 | 2 | 11 |
| Total | 6 | 37 | 21 | 17 | 17 | 98 |

TABLE 9: Connectivity of Designated Actors: Total Summation

| Actors | | Connectivity Zone | Values of Connectivity | Total | Options |
|---|---|---|---|---|---|
| GOV | PUB | B3 | 7 | 7 | ■ |
| GOV | EXP | B2 B3 | 5 7 | 12 | \|● |
| GOV | CO | D2 D3 D4 F2 F3 F4 | 8 3 5 5 2 6 | 29 | ●● |
| GOV | GRO | B3 B4 | 7 4 | 11 | \|● |
| GOV | MED | B2 | 5 | 5 | ■ |
| GOV | COU | E2 E3 | 4 2 | 6 | \|● |
| PUB | EXP | A2 | 6 | 6 | ■ |
| PUB | CO | D2 D4 D5 | 8 5 6 | 19 | \|● |
| PUB | GRO | E2 E3 G2 G3 | 4 2 4 4 | 14 | ●● |
| PUB | MED | E2 E5 | 4 2 | 6 | \|● |
| PUB | COU | A2 A5 | 6 2 | 8 | \|● |
| EXP | CO | C3 G3 | 3 4 | 7 | ●\| |
| EXP | GRO | C2 C4 C5 G2 G4 G5 | 5 1 3 4 1 2 | 16 | ●● |
| EXP | MED | C2 | 5 | 5 | ■ |
| EXP | COU | A2 | 6 | 6 | ■ |
| CO | GRO | B3 B4 F3 F4 | 7 4 2 6 | 19 | ●● |
| CO | MED | B2 | 5 | 5 | ■ |
| CO | COU | A2 | 6 | 6 | ■ |
| GRO | MED | C2 C5 | 5 3 | 8 | \|● |
| GRO | COU | A2 A5 | 6 2 | 8 | \|● |
| MED | COU | A2 | 6 | 6 | ■ |
| PUB | GOV | D2 D5 G2 G5 | 8 6 4 2 | 20 | ●● |
| EXP | GOV | C3 G3 | 3 4 | 7 | ●\| |
| CO | GOV | D2 D4 F2 F4 | 8 5 5 6 | 24 | ●● |
| GRO | GOV | D2 D4 D5 F2 F4 F5 | 8 5 6 5 6 2 | 32 | ●● |
| MED | GOV | C2 C5 | 5 3 | 8 | \|● |
| COU | GOV | B3 B4 | 7 4 | 11 | \|● |
| EXP | PUB | C1 | 1 | 1 | ■ |
| CO | PUB | B3 | 7 | 7 | ■ |
| GRO | PUB | C2 C3 G2 G3 | 5 3 4 4 | 16 | ●● |
| MED | PUB | D2 | 8 | 8 | ■ |
| COU | PUB | B1 | 5 | 5 | ■ |
| CO | EXP | B2 B3 | 5 7 | 12 | \|● |
| GRO | EXP | B2 B4 F2 F4 | 5 4 5 6 | 20 | ●● |
| MED | EXP | D3 D5 | 3 6 | 9 | \|● |
| COU | EXP | B1 | 5 | 5 | ■ |
| GRO | CO | D2 D4 D5 F2 F4 F5 | 8 5 6 5 6 2 | 32 | ●● |
| MED | CO | E2 E5 | 4 2 | 6 | \|● |
| COU | CO | B1 | 5 | 5 | ■ |
| MED | GRO | D2 D3 D5 | 8 3 6 | 17 | \|● |
| COU | GRO | B1 | 5 | 5 | ■ |
| COU | MED | B1 | 5 | 5 | ■ |

Key: GOV = government
PUB = public
EXP = experts
CO = companies
GRO = interest groups
MED = media
COU = courts

■ only one situation of power and interest
|● unique situation of power
●| unique situation of interest
●● more than one

TABLE 10: Connectivity Situation for Designated Actors

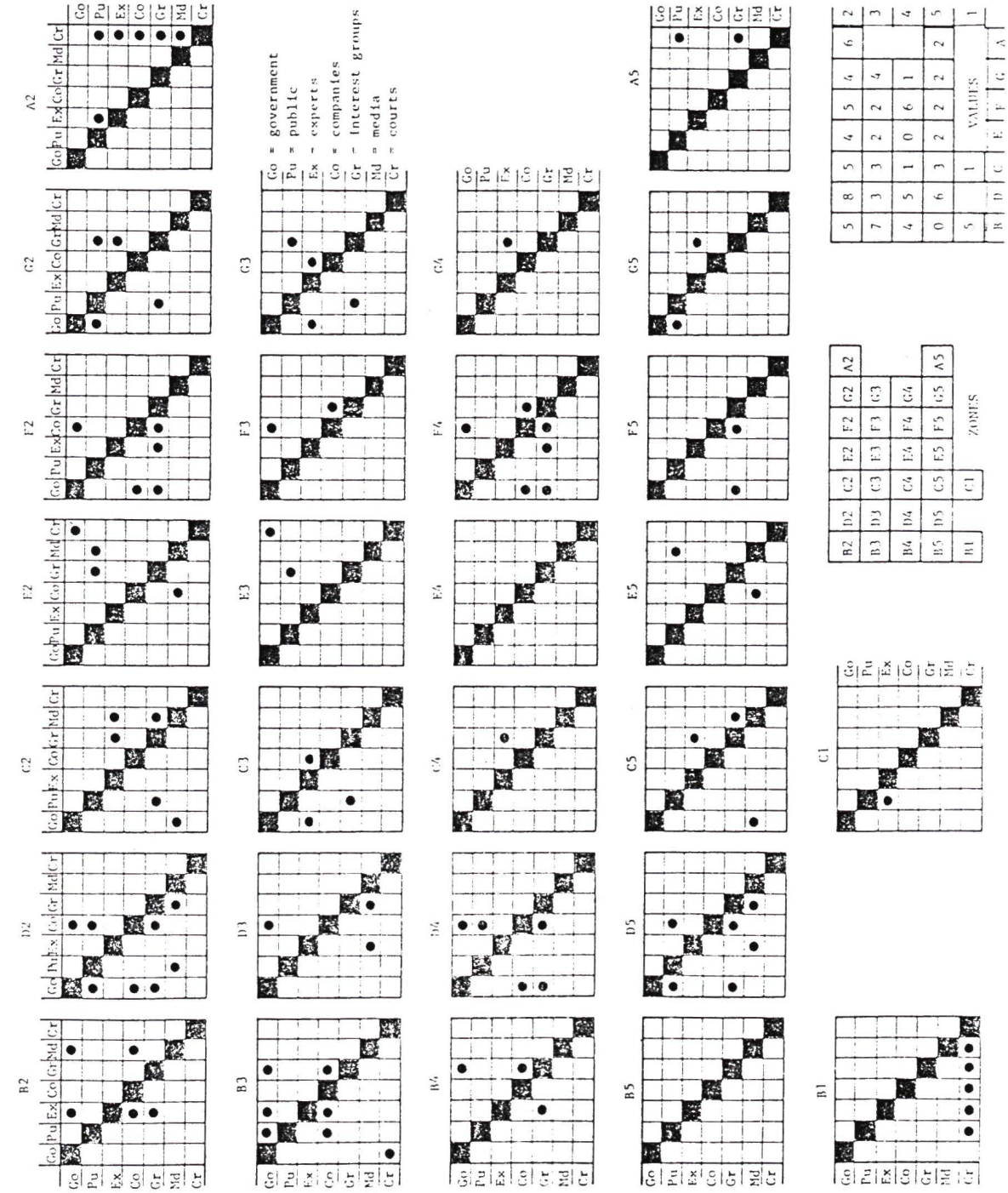


TABLE 11: Situation of Power: Involvement of Actors

| Zone | Frequency | Actors and Involvement | |
|---|---|---|---|
| UNILATERAL POWER | | | |
| *DIRECT CONTROL* | | | |
| B2 B3 | 12 | GOV/EXP CO/EXP | ■ |
| B2 | 5 | GOV/MED CO/MED | ● |
| B2 B4 | 9 | GRO/EXP | ■ |
| B3 | 7 | GOV/PUB CO/PUB | ● |
| B3 B4 | 11 | GOV/GRO CO/GRO COU/GOV | ■ |
| B1 | 5 | COU/PUB COU/EXP COU/CO COU/GRO COU/MED | ● |
| *INDIRECT CONTROL* | | | |
| D2 D3 | 11 | GOV/CO MED/GRO | ■ |
| D2 D5 | 14 | PUB/GOV PUB/CO GRO/GOV GRO/CO MED/GRO | ■ |
| D2 D4 | 13 | PUB/CO GOV/CO CO/GOV GRO/GOV GRO/CO | ■ |
| D2 | 8 | MED/PUB | ● |
| D3 D4 | 8 | GOV/CO | ■ |
| D3 D5 | 9 | MED/EXP MED/GRO | ■ |
| D4 D5 | 11 | PUB/CO GRO/GOV GRO/CO | ■ |
| *DIRECT INFLUENCE* | | | |
| C1 | 1 | EXP/PUB | ● |
| C2 C5 | 8 | MED/GOV GRO/MED EXP/GRO | ■ |
| C2 C3 | 8 | GRO/PUB | ■ |
| C2 C4 | 6 | EXP/GRO | ■ |
| C2 | 5 | EXP/MED | ● |
| C3 | 3 | EXP/GOV EXP/CO | ● |
| C4 C5 | 4 | EXP/GRO | ■ |
| *INDIRECT INFLUENCE* | | | |
| E2 E3 | 6 | GOV/COU PUB/GRO | ■ |
| E2 E5 | 6 | PUB/MED MED/CO | ■ |
| MIXED POWER | | | |
| F2 F3 | 7 | GOV/CO | ■ |
| F2 F4 | 11 | CO/GOV GRO/GOV GRO/EXP GRO/CO GOV/CO | ■ |
| F3 F4 | 8 | CO/GRO GOV/CO | ■ |
| F2 F5 | 7 | GRO/GOV GRO/CO | ■ |
| F4 F5 | 8 | GRO/GOV GRO/CO | ■ |
| BILATERAL POWER | | | |
| G2 G5 | 6 | PUB/GOV EXP/GRO | ■ |
| G2 G3 | 8 | PUB/GRO GRO/PUB | ■ |
| G2 G4 | 5 | EXP/GRO | ■ |
| G3 | 4 | EXP/GOV EXP/CO | ● |
| G4 G5 | 3 | EXP/GRO | ■ |
| ABSENCE OF CONTROL INFLUENCE | | | |
| A2 | 6 | PUB/EXP EXP/COU CO/COU MED/COU | ● |
| A2 A5 | 8 | PUB/COU GRO/COU | ■ |

Key: GOV = government GRO = interest groups
PUB = public MED = media
EXP = experts COU = courts
CO = companies

■ involvement in more than one situation of power
● involvement in only one situation of power

TABLE 12: Situation of Interest: Involvement of Actors

| Zone | Frequency | Actors and Involvement | |
|---|---|---|---|
| COALITION | | | |
| B2 | 5 | GOV/EXP GOV/MED CO/EXP CO/MED | • |
| B2 F2 | 10 | GRO/EXP | ■ |
| D2 F2 | 13 | GOV/CO CO/GOV GRO/GOV GRO/CO | ■ |
| D2 G2 | 12 | PUB/GOV | ■ |
| D2 | 8 | PUB/CO MED/PUB MED/GRO | • |
| C2 G2 | 9 | EXP/GRO GRO/PUB | ■ |
| C2 | 5 | GRO/MED MED/GOV EXP/MED | • |
| E2 | 4 | GOV/COU PUB/MED MED/CO | • |
| E2 G2 | 8 | PUB/GRO | ■ |
| A2 | 6 | PUB/EXP PUB/COU EXP/COU CO/COU GRO/COU MED/COU | • |
| CONCENTRATION | | | |
| B3 | 7 | GOV/PUB GOV/EXP GOV/GRO CO/PUB CO/EXP COU/GOV | • |
| B3 F3 | 9 | CO/GRO | ■ |
| D3 F3 | 5 | GOV/CO | ■ |
| D3 | 3 | MED/EXP MED/GRO | • |
| C3 G3 | 7 | EXP/GOV EXP/CO GRO/PUB | ■ |
| E3 | 2 | GOV/COU | • |
| E3 G3 | 6 | PUB/GRO | ■ |
| STIPULATION | | | |
| B4 | 4 | GOV/GRO COU/GOV | • |
| B4 F4 | 10 | CO/GRO GRO/EXP | ■ |
| D4 F4 | 11 | GOV/CO CO/GOV GRO/GOV GRO/CO | ■ |
| D4 | 5 | PUB/CO | • |
| C4 G4 | 2 | EXP/GRO | ■ |
| DEFECTION | | | |
| D5 G5 | 8 | PUB/GOV | ■ |
| D5 | 6 | PUB/CO MED/EXP MED/GRO | • |
| D5 F5 | 8 | GRO/GOV GRO/CO | ■ |
| C5 G5 | 5 | EXP/GRO | ■ |
| C5 | 3 | MED/GOV GRO/MED | • |
| E5 | 2 | PUB/MED MED/CO | • |
| A5 | 5 | PUB/DOU GRO/COU | • |
| LOW INTENSITY | | | |
| B1 | 5 | COU/PUB COU/EXP COU/CO COU/GRO COU/MED | • |
| D1 | 1 | EXP/PUB | • |

Key: GOV = government
PUB = public
EXP = experts
CO = companies
GRO = interest groups
MED = media
COU = courts

■ involvement in more than one situation of interest
• involvement in only one situation of interest

TABLE 13: Situation of Power and Interest: Values and Preference

| ACTORS | | INTEREST | | | | | POWER | | | | | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | UNILATERAL | | | | | | | | | |
| | | Coalition | Concentration | Stipulation | Defector | Low Intensity | Direct Control | Indirect Control | Direct Influence | Indirect Influence | Mixed | Bilateral | Absence | Interest | Power | Options |
| GOV | PUB | | 7 | | | | 7 | | | | | | | 7 | 7 | ■ |
| GOV | EXP | 5 | 7 | | | | 12 | | | | | | | 12 | 12 | I● |
| GOV | CO | 13 | 5 | 11 | | | | 32 | | | 26 | | | 29 | 58 | ●● |
| GOV | GRO | | 7 | 4 | | | 11 | | | | | | | 11 | 11 | I● |
| GOV | MED | 5 | | | | | 5 | | | | | | | 5 | 5 | ■ |
| GOV | COU | 4 | 2 | | | | | | | 6 | | | | 6 | 6 | I● |
| PUB | EXP | 6 | | | | | | | | | | | 6 | 6 | 6 | ■ |
| PUB | CO | 8 | | 5 | 6 | | | 38 | | | | | | 19 | 38 | I● |
| PUB | GRO | 8 | 6 | | | | | | | 6 | | 8 | | 14 | 14 | ●● |
| PUB | MED | 4 | | | 2 | | | | | 6 | | | | 6 | 6 | I● |
| PUB | COU | 6 | | | 2 | | | | | | | | 8 | 8 | 8 | I● |
| EXP | CO | | 7 | | | | | | 3 | | | 4 | | 7 | 7 | ●I |
| EXP | GRO | 9 | | 2 | 5 | | | | 18 | | | 14 | | 16 | 32 | ●● |
| EXP | MED | 5 | | | | | | | 5 | | | | | 5 | 5 | ■ |
| EXP | COU | 6 | | | | | | | | | | | 6 | 6 | 6 | ■ |
| CO | GRO | | 9 | 10 | | | 11 | | | | 8 | | | 19 | 19 | ●● |
| CO | MED | 5 | | | | | 5 | | | | | | | 5 | 5 | ■ |
| CO | COU | 6 | | | | | | | | | | | 6 | 6 | 6 | ■ |
| GRO | MED | 5 | | | 3 | | | | 8 | | | | | 8 | 8 | I● |
| GRO | COU | 6 | | | 2 | | | | | | | | 8 | 8 | 8 | I● |
| MED | COU | 6 | | | | | | | | | | | 6 | 6 | 6 | ■ |
| PUB | GOV | 12 | | | 8 | | | 14 | | | | 6 | | 20 | 20 | ●● |
| EXP | GOV | | 7 | | | | | | 3 | | | 4 | | 7 | 7 | ●I |
| CO | GOV | 13 | | 11 | | | | 13 | | | 11 | | | 24 | 24 | ●● |
| GRO | GOV | 13 | | 11 | 8 | | | 38 | | | 26 | | | 32 | 64 | ●● |
| MED | GOV | 5 | | | 3 | | | | 8 | | | | | 8 | 8 | I● |
| COU | GOV | | 7 | 4 | | | 11 | | | | | | | 11 | 11 | I● |
| EXP | PUB | | | | | 1 | | 1 | | | | | | 1 | 1 | ■ |
| CO | PUB | | 7 | | | | 7 | | | | | | | 7 | 7 | ■ |
| GRO | PUB | 9 | 7 | | | | | | 8 | | | 8 | | 16 | 16 | ●● |
| MED | PUB | 8 | | | | | | 8 | | | | | | 8 | 8 | ■ |
| COU | PUB | | | | | 5 | 5 | | | | | | | 5 | 5 | ■ |
| CO | EXP | 5 | 7 | | | | 12 | | | | | | | 12 | 12 | I● |
| GRO | EXP | 10 | | 10 | | | 9 | | | | 11 | | | 20 | 20 | ●● |
| MED | EXP | | 3 | | 6 | | | 9 | | | | | | 9 | 9 | I● |
| COU | EXP | | | | | 5 | 5 | | | | | | | 5 | 5 | ■ |
| GRO | CO | 13 | | 11 | 8 | | | 38 | | | 26 | | | 32 | 64 | ●● |
| MED | CO | 4 | | | 2 | | | | | 6 | | | | 6 | 6 | I● |
| COU | CO | | | | | 5 | 5 | | | | | | | 5 | 5 | ■ |
| MED | GRO | 8 | 3 | | 6 | | | 34 | | | | | | 17 | 34 | I● |
| COU | GRO | | | | | 5 | 5 | | | | | | | 5 | 5 | ■ |
| COU | MED | | | | | 5 | 5 | | | | | | | 5 | 5 | ■ |

Key: GOV = government
PUB = public
EXP = experts
CO = companies
GRO = interest groups
MED = media
COU = courts

■ only one situation of power and interest
I● unique situation of power
●I unique situation of interest
●● more than one

These options delineate *the nature of connectivity* among pairs of actors.

Communication between actors and particularly its importance also have their starting point in the two working matrices illustrated by Table 7 above. That is to say, they are the same pairs of actors connecting in the same similar fashion as shown in the left half of Tables 9 and 15. It is, then, in these zones of connectivity that appropriate (hypothetical) values of communication are assigned. At first, a value of communication or of exchange is given to every situation of power and every situation of interest when taken individually. The value is based on the assumption that each situation of power or interest can intrinsically bear communication of a hypothetical weight. Then the arbitrary value given for example to direct control (1), a unilateral power situation compared to indirect influence (4) also a unilateral power situation, reflects simply that an actor would have less chance to give or receive any communication in the former power option that in the latter (Table 14). The second step is to affix the values of Table 14 to the connected actors. This shows the importance of communication in the zones of connectivity and consequently to each pair of actors who perform there (Table 15).

Once the importance of communication has been established and the connectivity characterized and weighted for the 42 pairs of actors, the last exercise is to sum the values of connectivity with those of communication. The results of the summation give the activation attached to each pair of actors. The values of activation are ranked by order and grouped around similar characteristics of connectivity and communication from which six scenarios emerge (Table 16).

Scenarios of activation: description. The author defined 'activation' earlier in the text as that which a pair of actors experiences when the two connect and communicate together (section 3.3.3.2 introduction). How else can activation be described? Taken by themselves, connectivity and communication are inert; if summed and united, they are rendered alive. So activation may be considered as an umbrella under which pairs

TABLE 14: Communication: Summation of Its Importance in the Zone of Connectivity

| Power Situation \ Interest Situation | Low Intensity | Coalition | Concentration | Stipulation | Defection | Theoretical Value of Communication in Power Situation |
|---|---|---|---|---|---|---|
| Absence of Control/Influence | 0.5 | 5 | 7 | 4 | 1 | 0 |
| UNILATERAL: Direct Control | 1.5 | 6 | 8 | 8 | 2 | 1 |
| UNILATERAL: Direct Influence | 3.5 | 8 | 10 | 7 | 4 | 3 |
| UNILATERAL: Indirect Control | 2.5 | 7 | 9 | 6 | 3 | 2 |
| UNILATERAL: Indirect Influence | 4.5 | 9 | 11 | 8 | 5 | 4 |
| Mixed | 7.5 | 12 | 14 | 11 | 8 | 7 |
| Bilateral | 9.5 | 14 | 16 | 13 | 10 | 9 |
| Theoretical Value of Communication in Interest Situation | 0.5 | 5 | 7 | 4 | 1 | |

TABLE 15: Importance of Communication by Pairs of Actors

| Actors | | Connectivity Zone | Importance of Exchange | Total |
|---|---|---|---|---|
| GOV | PUB | B3 | 8 | 8 |
| GOV | EXP | B2 B3 | 6 8 | 14 |
| GOV | CO | D2 D3 D4 F2 F3 F4 | 7 9 6 12 14 11 | 59 |
| GOV | GRO | B3 B4 | 8 5 | 13 |
| GOV | MED | B2 | 6 | 6 |
| GOV | COU | E2 E3 | 9 11 | 20 |
| PUB | EXP | A2 | 5 | 5 |
| PUB | CO | D2 D4 D5 | 7 6 3 | 16 |
| PUB | GRO | E2 E3 G2 G3 | 9 11 14 16 | 50 |
| PUB | MED | E2 E5 | 9 5 | 14 |
| PUB | COU | A2 A5 | 5 1 | 6 |
| EXP | CO | C3 G3 | 10 16 | 26 |
| EXP | GRO | C2 C4 C5 G2 G4 G5 | 8 7 4 14 13 10 | 56 |
| EXP | MED | C2 | 8 | 8 |
| EXP | COU | A2 | 5 | 5 |
| CO | GRO | B3 B4 F3 F4 | 8 5 14 11 | 38 |
| CO | MED | B2 | 6 | 6 |
| CO | COU | A2 | 5 | 5 |
| GRO | MED | C2 C5 | 8 4 | 12 |
| GRO | COU | A2 A5 | 5 1 | 6 |
| MED | COU | A2 | 5 | 5 |
| PUB | GOV | D2 D5 G2 G5 | 7 3 14 10 | 34 |
| EXP | GOV | C3 G3 | 10 16 | 26 |
| CO | GOV | D2 D4 F2 F4 | 7 6 12 11 | 36 |
| GRO | GOV | D2 D4 D5 F2 F4 F5 | 7 6 3 12 11 8 | 47 |
| MED | GOV | C2 C5 | 8 4 | 12 |
| COU | GOV | B3 B4 | 8 5 | 13 |
| EXP | PUB | C1 | 3.5 | 3.5 |
| CO | PUB | B3 | 8 | 8 |
| GRO | PUB | C2 C3 G2 G3 | 8 10 14 16 | 48 |
| MED | PUB | D2 | 7 | 7 |
| COU | PUB | B1 | 1.5 | 1.5 |
| CO | EXP | B2 B3 | 6 8 | 14 |
| GRO | EXP | B2 B4 F2 F4 | 6 5 12 11 | 34 |
| MED | EXP | D3 D5 | 9 3 | 12 |
| COU | EXP | B1 | 1.5 | 1.5 |
| GRO | CO | D2 D4 D5 F2 F4 F5 | 7 6 3 12 11 8 | 47 |
| MED | CO | E2 D5 | 9 5 | 14 |
| COU | CO | B1 | 1.5 | 1.5 |
| MED | GRO | D2 D3 D5 | 7 9 3 | 19 |
| COU | GRO | B1 | 1.5 | 1.5 |
| COU | MED | B1 | 1.5 | 1.5 |

Key: GOV = government
PUB = public
EXP = experts
CO = companies
GRO = interest groups
MED = media
COU = courts

TABLE 16: Value and Importance of Hypothesized Scenarios of Activation

| | Activation | Connectivity (Table 9) | Communication (Table 15) | Importance (Table 13) | | |
|---|---|---|---|---|---|---|
| | | | | Interest | Power | |
| SCENARIO I | | | | | | |
| GOV CO | 117 | 58 | 59 | 29 | 58+ | ●●+ |
| GOV CO | 88 | 29 | 59 | 29 | 29 | ●● |
| GRO GOV | 111 | 64 | 47 | 32 | 64+ | ●●+ |
| GRO GOV | 79 | 32 | 47 | 32 | 32 | ●● |
| GRO CO | 111 | 64 | 47 | 32 | 32+ | ●●+ |
| GRO CO | 79 | 32 | 47 | 32 | 32 | ●● |
| EXP GRO | 88 | 32 | 56 | 16 | 32+ | ●●+ |
| EXP GRO | 72 | 16 | 56 | 16 | 16 | ●● |
| Average | 93 | 41 | 52 | 27 | 41 | |
| SCENARIO II | | | | | | |
| GRO PUB | 64 | 16 | 48 | 16 | 16 | ●● |
| PUB GRO | 64 | 14 | 50 | 14 | 14 | ●● |
| CO GOV | 60 | 24 | 34 | 24 | 24 | ●● |
| CO GRO | 57 | 19 | 38 | 19 | 19 | ●● |
| PUB GOV | 54 | 20 | 34 | 20 | 20 | ●● |
| GRO EXP | 54 | 20 | 34 | 20 | 20 | ●● |
| Average | 59 | 19 | 40 | 19 | 19 | |
| SCENARIO III | | | | | | |
| PUB CO | 54 | 38 | 16 | 19 | 38 | \| ● |
| PUB CO | 35 | 19 | 16 | 19 | 19 | \| ● |
| MED GRO | 53 | 34 | 19 | 17 | 34 | \| ● |
| MED GRO | 36 | 17 | 19 | 17 | 17 | \| ● |
| Average | 44 | 27 | 17 | 18 | 36 | |
| SCENARIO IV | | | | | | |
| EXP GOV | 33 | 7 | 26 | 7 | 7 | ●\| |
| EXP CO | 33 | 7 | 26 | 7 | 7 | ●\| |
| Average | 33 | 7 | 26 | 7 | 7 | |
| SCENARIO V | | | | | | |
| CO EXP | 26 | 12 | 14 | 12 | 12 | \| ● |
| GOV EXP | 26 | 12 | 14 | 12 | 12 | \| ● |
| GOV COU | 26 | 6 | 20 | 6 | 6 | \| ● |
| GOV GRO | 24 | 11 | 13 | 11 | 11 | \| ● |
| COU GOV | 24 | 11 | 13 | 11 | 11 | \| ● |
| MED EXP | 21 | 9 | 12 | 9 | 9 | \| ● |

- continues -

Table 16 continues

| | Activation | Connectivity (Table 9) | Communication (Table 15) | Importance (Table 13) Interest | Power | |
|---|---|---|---|---|---|---|
| GRO MED | 20 | 8 | 12 | 8 | 8 | \|● |
| MED GOV | 20 | 8 | 12 | 8 | 8 | \|● |
| MED CO | 20 | 6 | 14 | 6 | 6 | \|● |
| PUB MED | 20 | 6 | 14 | 6 | 6 | \|● |
| GRO COU | 14 | 8 | 6 | 8 | 8 | \|● |
| PUB COU | 14 | 8 | 6 | 8 | 8 | \|● |
| Average | 21 | 9 | 12 | 9 | 9 | |
| SCENARIO VI | | | | | | |
| MED PUB | 15 | 8 | 7 | 8 | 8 | ■ |
| CO PUB | 15 | 7 | 8 | 7 | 7 | ■ |
| GOV PUB | 15 | 7 | 8 | 7 | 7 | ■ |
| EXP MED | 13 | 5 | 8 | 5 | 5 | ■ |
| MED COU | 11 | 6 | 5 | 6 | 6 | ■ |
| CO COU | 11 | 6 | 5 | 6 | 6 | ■ |
| EXP COU | 11 | 6 | 5 | 6 | 6 | ■ |
| PUB EXP | 11 | 6 | 5 | 6 | 6 | ■ |
| CO MED | 11 | 5 | 6 | 5 | 5 | ■ |
| GOV MED | 11 | 5 | 6 | 5 | 5 | ■ |
| COU PUB | 6.5 | 5 | 1.5 | 5 | 5 | ■ |
| COU EXP | 6.5 | 5 | 1.5 | 5 | 5 | ■ |
| COU CO | 6.5 | 5 | 1.5 | 5 | 5 | ■ |
| COU GRO | 6.5 | 5 | 1.5 | 5 | 5 | ■ |
| COU MED | 6.5 | 5 | 1.5 | 5 | 5 | ■ |
| EXP PUB | 4.5 | 1 | 3.5 | 1 | 1 | ■ |
| Average | 10 | 5 | 5 | 5 | 5 | |

Key: GOV = government
PUB = public
EXP = experts
CO = companies
GRO = interest groups
MED = media
COU = courts

Re: Tables 9 through 15

●●+ more than one situation of power and interest, but power dominance

●● more than one situation of power

|● unique situation of power

●| unique situation of interest

■ only one situation of power and interest

of actors when connected and communicating in unison perform some activity. Activation can also be compared to a dialogue in which the two components—connectivity and communication—forge their trends and importance. It can be the way pairs of actors deal in participation.

Activation presents six different scenarios derived from the most frequent value based on similar characteristics of the connected pairs of actors, as detailed in Table 16 (see also Figure 11). In Figure 11 the configuration of the three major themes can be quickly drawn. Activation starts very high in the first two scenarios and drops gradually to its lowest importance in the last one; communication dominates connectivity all along except in the third scenario, its course is alternatively peaking and dropping to its lowest value in the last scenario; and connectivity is the direct opposite of communication, having alternatively high and low values in the first four scenarios and becoming somewhat of a low constant importance in the last scenarios. In the sixth scenario communication and connectivity converge. Along with the major components there are the two situations of power and of interest showing equal importance in four out of the six scenarios. The situation of power in scenarios I and III dominates the situation of interest and regulates the connectivity. What do the pairs of actors experience in these scenarios?

Actors in the first scenario hold,as a pair,a fair amount of power. They certainly exhibit a high interest to work together but it is the variety and importance of their power that orients their connectivity. The communication is well-established and their desire for activation, consequently participation in dialogue is very important; this can be explained by their high power, giving them confidence and invulnerability.

In the second scenario, the activation has dropped considerably as well as the importance given to the connectivity. Here the pairs of actors do not have any preferences for the nature of connectivity; what is primordial for them is their great confidence and desire to communicate and participate.

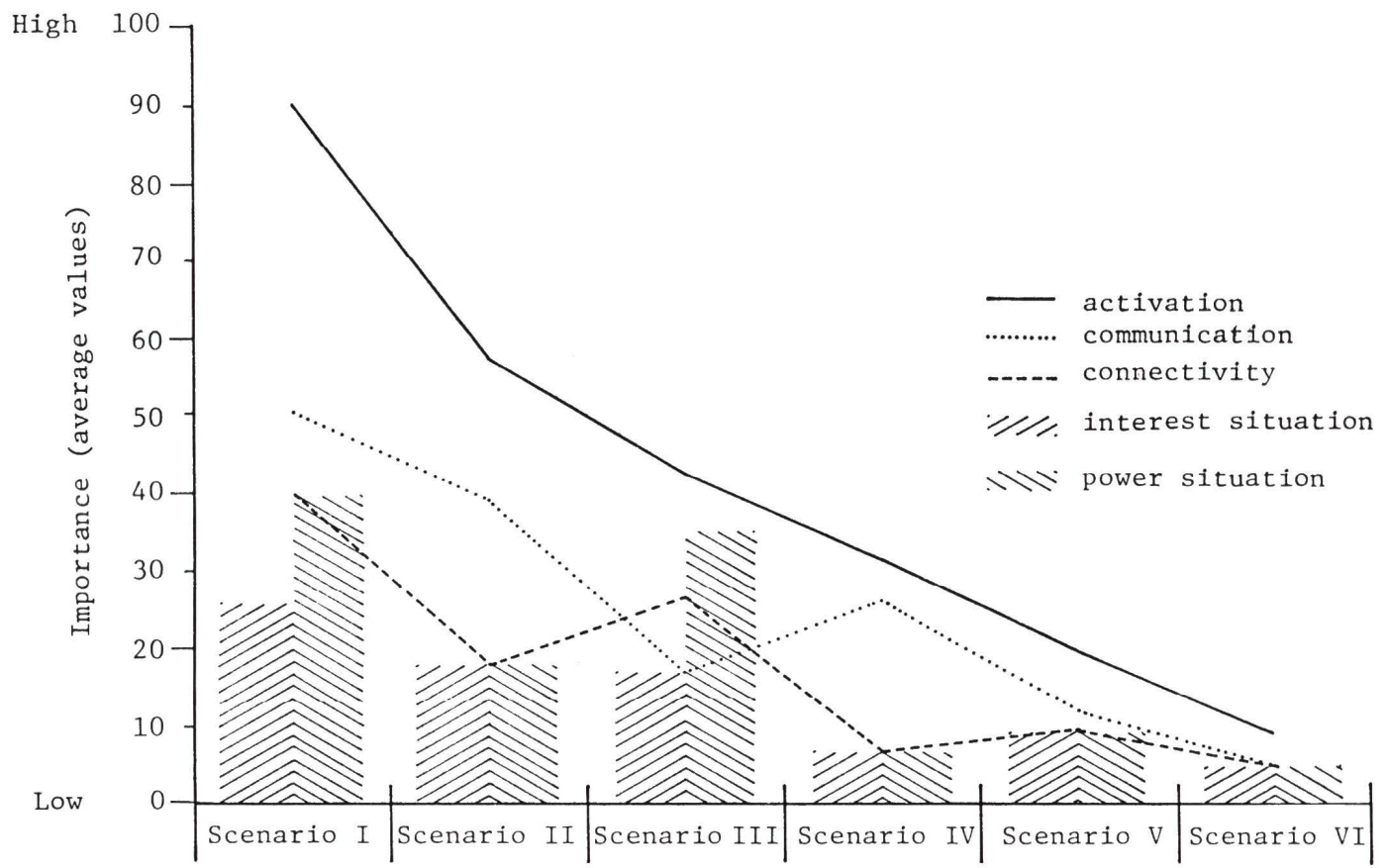



FIGURE 11: Scenarios of activation.

The third scenario seems to be similar to the first one, with high importance attributed to situations of power. When in the first scenario the pairs of actors could indifferently connect in various situations of power, in the third scenario they opt for a preferential situation of power that accommodates different situations of interest. Communication between the pair reflects this consciousness of power being overshadowed by connectivity. Activation is relatively high but it looks as if the desire to participate was driven more by a concern of power consciousness.

In the fourth scenario everything has changed; the pairs of actors relate on one situation of interest only (re Table 16). Communication is very high, almost as important as activation, and it seems to control the desire for activation. As with scenario II, scenario IV offers ideal situations of activation and subsequent participation.

The fifth scenario presents the opposite situation of the precedent scenario; the pairs of actors have their preference of connectivity based on one situation of power. Here communication is not imposing on connectivity; as a matter of fact their importance is almost the same. It creates low activation and some disinterestedness in activating together and consequently participating.

In the last scenario, scenario VI, the pairs of actors want one and only one possibility of connectivity; in fact this is the only way they connect, theoretically speaking (Table 16). Communication and connectivity have equal importance and activation is at its minimum. There the actors do not seem to show any desire and energy to activate, everything keeps a low profile, every pair of actors maintains its position. When activated the participants can show strong resentment that may cause a rupture and eventually may generate a conflict.

The scenarios have been returned in the last step to the matrix of actors to illustrate the 42 pairs of actors in their respective theoretical activation (Table 17).

TABLE 17: Designated Pairs of Actors in Scenarios of Activation (when A/B)

| A \ B | Government | Public | Experts | Companies | Interest Groups | Media | Courts |
|---|---|---|---|---|---|---|---|
| Government | | VI | V | I | V | VI | V |
| Public | II | | VI | III | II | V | V |
| Experts | IV | VI | | IV | I | VI | VI |
| Companies | II | VI | V | | II | VI | VI |
| Interest Groups | I | II | II | I | | V | V |
| Media | V | VI | V | V | III | | VI |
| Courts | V | VI | VI | VI | VI | VI | |

Note: Numerals indicate scenario of activation (re Table 16).

When activated, these pairs of actors may generate conflictual participation.

3.3.3.3 Discussion

Throughout the environmental assessment procedure numerous actors expect to connect, communicate and perform a positive exercise of assessment and to formulate wise recommendations. Whoever they are, they want to be consulted, provided with detailed information and permitted equal participation and intervention reflecting their roles. In the multi-sequence decision making model shown in Figure 9, this involvement has been compared to a noise fluctuating and activating the participants.

Environment is and always has been a controversial subject; any project, action or proposal that is performed in the environment has already a connotation—it creates impacts. Before any environmental impact assessment proceeds, views are presented that orient the whole issue towards confrontation: conflict between the proponents and the impactees, conflict among impactees, conflict between groups having the suspicion that their opinions have been forgotten or ignored. In fact, the EIA looks as if it were performed to calm the agitated mind. The conflicting participants keep their positions; a consensus is difficult to obtain; the parties are not satisfied; the rupture is still present; the whole exercise is long and sometimes fruitless. Thus the EIA is more an exercise of conflict resolution than a scientifically objective assessment aimed at formulating recommendations. The point underscored here is that the EIA has been conducted as a conflict resolution exercise between two or more actors because the information is presented at the beginning in a conflicting mode. It then gears the mind in a defensive way, where the whole participation is coloured to that of negativism.

Looking at conflict situations may seem more appealing because of its sensationalism, but there are other alternatives. It is not necessarily the best way to analyze facts by looking at them when they are considered as a problem. There is the preventive avenue, that surely does not produce the same effect. It surfaces as a mundane operation in comparison to the confrontational approach. The idea of activation as presented in the section above is an attempt to circumscribe participation

in a simpler format.

By looking at the matrix (Table 17), ideally a decision maker has a good perspective of the actors' activation related to participation, with whom they may best work, who to introduce to insure vitalization of activation. Dissatisfaction will certainly be felt, however, by not being introduced in an atmosphere of conflict, hence in a pre-conflict state, it is considered as a *normal part of the activation.*

To be effective, the ideal model of activation, an essential part of the EIA, cannot be introduced after a decision has been made. The location of the EIA in the decision making process is of prime importance. It should be implemented into the process as early as possible before the decision maker has developed a proprietary interest in an idea and begins to resent criticisms or suggestions for change (Solandt, 1977).

From an attempt to understand where EIA should be ideally placed in the decision making framework, the thesis will now turn to a review of the relative success of the EIA process with particular attention centring on the position of the EIA in Canadian environmental decision making.

# IV.

# ENVIRONMENTAL IMPACT ASSESSMENT IN CANADA

Environmental impact assessment is a systematic evaluation and analysis of a proposed project in relation to the environment. It examines the existing conditions of an environment and evaluates the probable changes of the proposed development activities. It is meant to provide environmental guidance for developmental decisions. Considered as a decision making tool, it has to be undertaken as early in the process as possible. When introduced at an early stage, as discussed in Chapter III (see Figure 9), the EIA is carried out within an appropriate framework of policy priority and encourages closer integration of environmental planning with other forms of planning (economic, social) (Davis, 1981; Lee, 1983). The EIA process also aims to decentralize the making of a decision. To do so, accessible information, participation exercises and/or public reaction are encouraged at the earliest possible stage.

It is not in the context of this thesis to discuss in great detail the different methods of assessment. For this degree of detail the reader should consult Duffy (1975), Coleman (1977), Mitchell (1979), Munn (1979), and Fowler (1981), to name a few. The present chapter concentrates principally on the EIA process as it has been practiced in Canada. There will be firstly a description of the different Canadian approaches—at the federal and provincial levels—reviewing the intention of the EIA in each jurisdiction, the authority, the assessing steps, and the administrative procedures. Secondly, the relative success of the Canadian EIAs will be evaluated through a discussion of the authority of the different processes, their location in the decision making procedure, their informational scheme and the characteristics of their activation. The major themes of the Canadian EIA in principle and in practice are included in the tables and maps presented in Appendix A-3 (pp. 202 to 212). Finally, the various Canadian needs regarding the environmental assessment process will be introduced.

## 4.1 The EIA in Principle

The main part of the information necessary to understand and compare the EIA practices in Canada comes from three sources: (1) the most recent summary of the EIA published by the Federal Environmental Assessment Review Office (FEARO) in 1983; (2) the consultation of all pertinent statutes and regulations to this date (January 1985) for each province; and (3) letters sent to appropriate provincial departments and key persons (letter in Appendix B) to obtain a list of projects that had been revised under their specific statutes or policies and to secure any incremental amendment or modification of their practices. (Only one province did not reply.) All the relevant statutes and regulations, and the resource persons consulted for this section are listed in Appendix A-1 and A-2.

### 4.1.1 The Federal Approach (Appendix A-3)

All federal projects, programs and activities undertaken or sponsored by federal departments or agencies, those for which federal funds are solicited and those involving federal property, are liable to the Environmental Assessment and Review Process (EARP) established in 1973. This Cabinet decision was adjusted in 1977 and the responsibility of the Minister of the Environment reaffirmed in 1979. The aims of the EARP are to ensure that the environmental consequences will be assessed as early as possible before final decisions are made and to incorporate the results of these assessments into planning, decision making and implementation. For over ten years the EARP has operated without any legislative base. It was only recently (1984) that the federal government issued the EARP Guidelines Order, giving more authority to the environmental impact assessment process.

The procedure stipulates that when an initiator determines that a proposed undertaking may have significant impacts, it must be referred to the FEARO for a formal review. The FEARO, set up as an independent

agency separate from Environment Canada, administers the EIA process. Normally the formal EIA review is carried out by an Environmental Assessment Panel, an independent body established for each undertaking. Its tasks are to develop proposal-specific guidelines for the preparation of an EIA statement to be performed by the proponent; to ask special technical expertise to review the statement; to meet with the public; and to submit the recommendations to the FEARO. The Minister of the Environment and the Minister of the initiating department have the final say regarding project approval.

Theoretically, all federal projects are subjected to environmental scrutiny, but the process is somewhat discretionary in operation. This is one of the main differences with the American EIA procedure. The first phase of EARP or screening is based on self-assessment by the initiators (Figure 8). It is only if an initiator determines that the environmental impact is potentially significant that the proposal is referred to the FEARO; if a proposed undertaking is thought to have no significant impacts, the proposal may proceed. There is also a medial situation where the initiator finds that the effects of the undertaking are not fully known; a preliminary or initial environmental evaluation is then necessary. The preliminary assessment, still under the responsibility of the initiator, will eventually determine whether a formal review has to be conducted.

With respect to public participation and reaction, the initiator is expected to provide information on the proposal to the public and to obtain public comments at the earliest possible stage in project planning. During the formal review, the Panel also makes the EIA statement available to the public; it holds meetings in the area affected by the project for individuals and groups wishing to present their viewpoints, and arranges for special technical witnesses to participate. Although the recommendations prepared by the Panel are based on the EIA statement submitted by the initiator, its review by federal, provincial and non-governmental agencies, by the public response, and any additional advice, the decision to proceed or not with the undertaking and to follow the

recommendations is partially clouded by discretionary ministerial power. The federal government has not yet developed provisions for the post approval and monitoring program.

### 4.1.2 The Provincial Approaches
(Appendices A-1, A-2 and A-3)

*A. Newfoundland and Labrador*

Environmental impact assessment in Newfoundland was first established by a Cabinet directive in 1976; since then the province has implemented the Environmental Assessment Act in 1980 and Regulations in 1984. The purposes of the enactment are to facilitate the wise management of the province's natural resources, and to protect the environment and quality of life of the people. Prior to the commencement of any designated undertaking carried out, proposed, managed or controlled, either by a public or private body or by an individual, the Minister of the Environment informs the proponent whether or not a formal EIA is required. Contrary to the federal process, in Newfoundland and Labrador it is the Department of the Environment, principally its Environmental Assessment Division, in consultation with other resource management agencies, which decides whether the proponent should prepare a preliminary assessment (Environmental Preview Report) or an environmental impact assessment statement. The Minister, assisted by an Assessment Committee consisting of members from governmental agencies, provides the guidelines for the preparation of the preview report or the environmental assessment statement. So a proposal would proceed in this manner: a proponent registers an undertaking; the Minister consulting the advice and recommendations of the Environmental Assessment Division, informs the proponent either to proceed with the undertaking, to present an environmental preview report, or to prepare an environmental impact statement. When the statement has been determined to be satisfactory after revision, the Minister delivers copies to the Cabinet with his recommendations, if no hearing is demanded.

In the meantime, the proponent must develop a public information program not only to inform the affected public, but also to record any public concern and include it in the EIA statement (EIAS) in preparation. Upon receipt of the EIAS, the Minister makes it available to the public for review and comment. When there is strong public interest, the Minister may recommend to the Cabinet that an Environmental Assessment Board selected from outside the public service be appointed for recording public reaction to the EIAS. The hearing's proceedings, public recommendations and any recommendations from the Board are delivered to the Cabinet by the Minister with his own recommendations as to whether to permit the undertaking to proceed, with or without conditions, or not to proceed.

Although more authoritative than the federal review process, there is also a good deal of discretionary power in the Newfoundland/Labrador EIA procedure. For example, it is at the discretion of the Minister whether to invite written comments from the public at "any time" during the environmental assessment. Nevertheless, the Environmental Assessment Act (1980) binds the responsibilities of every one of the participants in the procedure.

*B. Prince Edward Island*

EIAs in Prince Edward Island are conducted under the terms of the 1973 Minute-in-Council. The authority of the Minister of Community and Cultural Affairs to direct provincial departments and agencies to screen each important undertaking for potentially significant adverse environmental impacts was established under the Planning Act (1974) and the Environmental Protection Act (1975). The scope of PEI environmental impacts gravitates around alteration or variation of the environment related to pollution.

It is the responsibility of the citizen who is dissatisfied with a decision made by a provincial or municipal authority (except in major towns) to appeal to the Land Use Commission established under the Planning Act. None of the members of the Land Use Commission or any other

commission is a civil servant. However, when the undertaking is an energy project, it is a Public Utilities Commission under the provisions of the Electric Power and Telephone Act which is appointed. These Commissions prepare project-specific guidelines for the proponent, hold public meetings, examine the evidence, issue their findings and send copies of the application and the EIA statement to the Cabinet for approval.

The procedure of EIA in Prince Edward Island may appear almost completely "in-house" since a majority of projects involve federal funds necessitating both the federal EARP and the PEI Assessment. Furthermore, the EIA does not have its proper statute; in Prince Edward Island the EIA is more a requirement bound by permit legislation.

*C. Nova Scotia*

The Nova Scotia EIAs are conducted under the Environmental Protection Act (1973) for the purpose of providing preservation and protection of the environment, before a decision can be made. As is the case in Prince Edward Island, the environment has to be preserved or protected not against significant adverse impacts per se, but against "detrimental variation or alteration" caused by pollution and contaminants. Therefore it can be assumed that "impact" has the same connotation. Additionally, major undertakings which could have significant adverse environmental impacts come to the attention of the Department of Environment through, in the majority of cases, permit requirements and authorization for federal DRIE (Department of Regional Industrial Expansion) grants.

The project is screened by the Department of the Environment which determines whether or not an EIA is required. When it is required, the Environmental Assessment Division of the Department of the Environment prepares the guidelines and information requirements (with the assistance of the federal agencies if necessary) for the proponent. Once submitted, the EIA is reviewed by the Department of the Environment and other interested provincial and federal agencies. The Department of the

Environment finally recommends to the Minister that the project be approved, with or without conditions, or be refused.

In Nova Scotia many opportunities for participation are offered to the public during the whole process. They may be public meetings held by the Department of the Environment prior to drafting guidelines or preparing recomendations; public meetings arranged by the proponent to describe the project and where possible to address public concerns in the EIA statement; independent public hearings held by the Environmental Control Council appointed from outside the public service; and/or provincial-federal Environmental Assessment Review Panel hearings similar to those of the federal EARP. Any reports and recommendations from any of these bodies are directed to the Minister of the Environment for a decision.

*D. New Brunswick*

All major projects that are sponsored or financed by a New Brunswick agency, department or Crown corporation are subjected to the EIA procedure introduced first in 1975 as a Cabinet directive and secondly in 1983 as an amendment of the Clean Environment Act (1973). The purpose is to ensure that government decision makers are aware of the environmental risks and trade-offs, as well as public response to the same, prior to making a decision on whether or not to proceed with a project.

The Environmental Services Branch of the Department of the Environment screens projects to determine which ones will be assessed. Once an EIA statement has been prepared following the project-specific guidelines (prepared for or developed by the proponent), it is submitted for review by the Department of the Environment and other affected departments and regulatory agencies. It is only then that the public is asked to intervene. A public meeting may be held by the Department of the Environment if it is deemed necessary to obtain public comment on the impact of the project.

A record of the meeting's proceedings (if any) is appended to the EIA statement and made available to the Cabinet as an input to the decision making process.

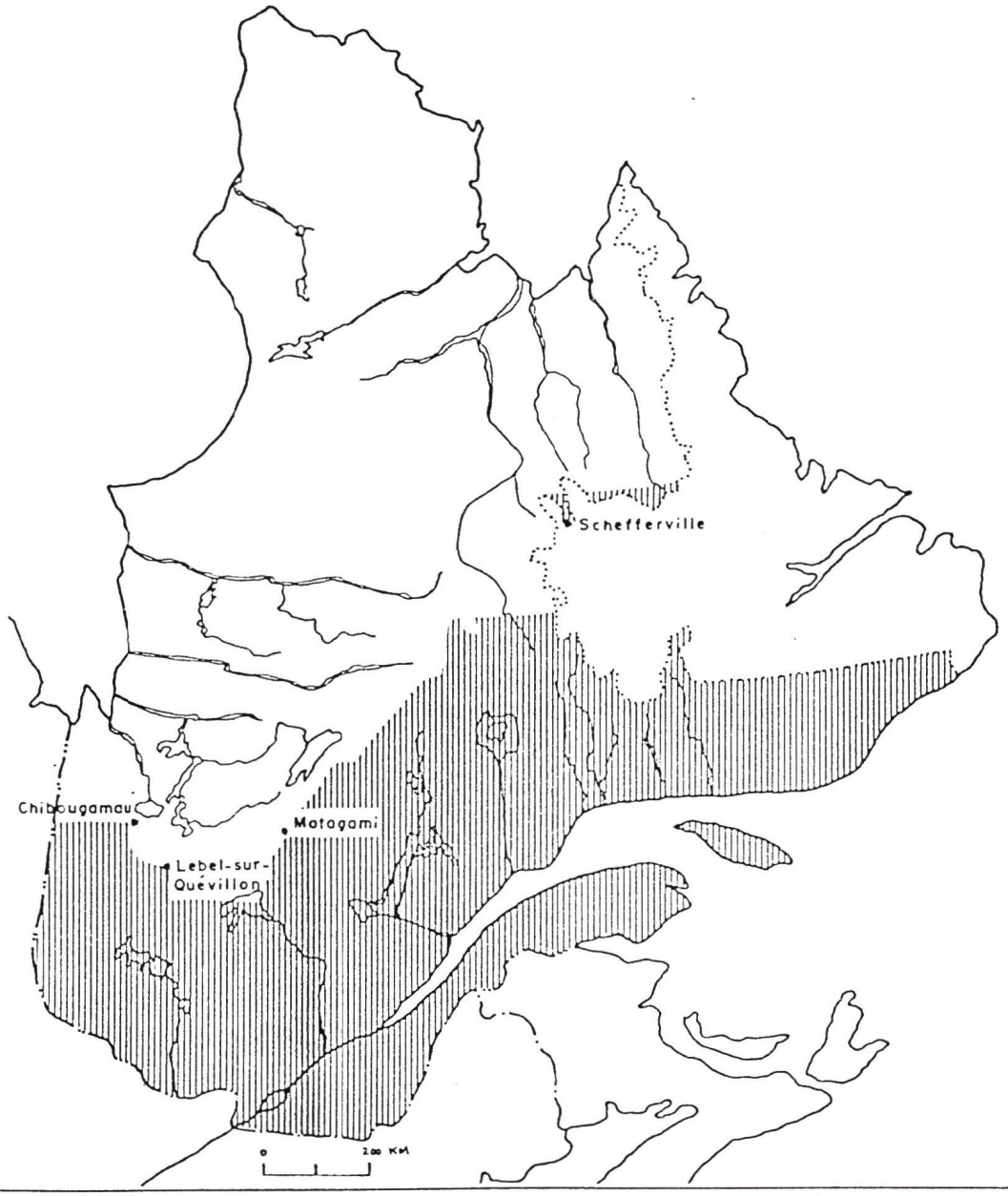
*E. Quebec*

In Quebec, environmental assessments are carried out according to five different systems, depending on whether a project is in southern Quebec or in territory that is the subject of agreements with native people. In the latter case, a different system applies, depending on whether a project is in Cree, Inuit or Naskapi territory (see Map 2, p. 144). It is the EIA process applied in southern Quebec that is discussed here. Details of the Quebec EIA practices are presented in Chapter V.

The southern Quebec EIA procedure applies to any undertaking subject to an environmental certificate of authorization in that part of the province that lies south of a boundary passing through the vicinity of Chibougamau,Lebel-sur-Quévillon, Matagami, thence to the east, south of the boundary making the height of land between the St. Lawrence River and James Bay basins. A small territory, south of 55° N latitude, in the vicinity of Schefferville is also included in the southern territory (Map 1).

Conducted as an administrative procedure when first introduced under the Loi sur la Qualité de l'Environnement (Environment Quality Act) in 1972, it has been amended in 1978 to remodel the administrative procedure for the preparation and review of the EIA statement and to create the Bureau d'audiences publiques sur l'environnement (BAPE), responsible for public participation. The objective of the EIA process is to integrate the environmental preoccupation in conception, planning and/or realization of projects or activities, and in decision related to projects and activities before the issuance of a certificate of authorization.

The Minister of the Environment administers the procedure helped in his charge by the Service d'analyse des études d'impact (SAEI) or the Technical Service of the Ministry of the Environment. The Minister issues to the proponent formal directives indicating the nature and scope of the EIA,that has been drafted by the SAEI in conjunction with the proponent, and in consultation with official interveners. The proponent




MAP 1: Southern Quebec territory subject to EIA general process under the Loi sur la qualité de l'environnement (Environment Quality Act).

submits the completed EIA statement to the Minister with the rest of the application file for the environmental certificate of authorization. The SAEI reviews the statement to determine whether or not it conforms to the directives. As soon as the EIA statement has been officially transmitted to the Minister of the Environment, the BAPE starts to inform and to assist the public by making available and understandable the file of the application. Within the time allowed by the Minister, any group, person or municipality affected by the project may apply to him and request public hearing. The Minister must direct the BAPE to hold a public hearing unless he considers the application frivolous. The BAPE reports to the Minister on the public consultation of the file or submits a report which synthesizes the opinions and findings of the public hearing on the project. The Minister of the Environment if he considers the file to be complete and adequate, submits it to the government for a decision to issue with or without conditions, or refuses the proponent's application.

Once the authorization has been given, the proponent must carry out a monitoring program while the Ministry of the Environment assures the environmental surveillance.

*F. Ontario*

The Ontario Environmental Assessment Act (1975) and the relevant EIA Regulations (1976) provide for "the protection, conservation and wise management in Ontario of the environment." Unless exempted by the Minister of the Environment, all undertakings of provincial ministries, agencies or public bodies, and all municipalities require an environmental assessment. Conversely, only those undertakings from the private sector, specifically or generically designated by regulations, are subject to the Act (Appendix A-3).

If an undertaking applies to the Environmental Assessment Act, the proponent must prepare an environmental assessment (EA) in consultation with the Ministry of the Environment and other provincial agencies and in conformity with the guidelines. The Environmental Assessment

Branch within the Environmental Planning Division of the Ministry of the Environment prepares a coordinated review of the filed EA. Once the EA and its coordinated review have been released to the public by the Minister of the Environment, two major decisions are required by the Act. The first one, the decision to accept the EA, is taken when the Minister does not consider a hearing advisable or he has not received a submission requiring one. Once accepted, the Minister has to decide next on the approval of the undertaking. In the case of request for hearing or of the Minister's own volition, the EA may be sent to the Environmental Assessment Board, a permanent body consisting of members chosen from outside the public service, for a hearing and a decision regarding the acceptability and approval of the EA. The Cabinet, after receipt of the Board's decision, may vary or rescind the Board's decision or cause a rehearing by the Board on its own initiative or in response to submissions or requests of the proponent or any member of the public.

Ontario's procedure has given the Minister discretionary powers that are very broad as is the case in the province of Quebec. For instance, the Minister may exempt projects from assessment and disallow public hearings. Additionally, in Ontario it is the Minister who makes the final decision on project approval while the Environmental Assessment Board having the same power can see its decision denied by the Cabinet.

*G. Manitoba*

The Manitoba policy related to environmental assessment has the same weakness already noticed for Prince Edward Island and Nova Scotia: the Environmental Review Process seems to address only specific alteration or pollution of the environment, that of "contamination of air, water and soil." The prescriptions to ensure that environmental assessments are carried out for any proposed provincial projects before they proceed were established under the Environmental Assessment Review Process and Planning Act (1975) and under the 1978 and 1980 amendments of the Clean Environment Act (1972). As for the federal EARP, the

proponents in Manitoba self-screen their projects to determine whether or not the proposed project qualified for the Manitoba EARP. Then the proponent should submit a description of the proposed project to the Environmental Assessment and Review Agency (EARA) which prepares, with the Assessment and Review Support Service, a preliminary or initial environmental evaluation. After the analysis of the preliminary assessment, the EARA either decides that an EIA is not required, or recommends the need for an EIA to the Minister of the Environment and Workplace Safety and Health, the administrator of the Manitoba EARP.

Should the Minister decide that an EIA is required, the EARA provides the proponent with project-specific guidelines. The EARA reviews the submitted EIA and transmits its recommendations to the Cabinet for decision through the Minister of the Environment and Workplace Safety and Health. The inspection by the public and public participation opportunities are identical to those found in Ontario. Any person may make a submission to the Minister regarding the proposal, and the Minister may initiate public hearings through EARA if he deems it necessary at any point in the process. The proponent has also the opportunity to introduce citizen involvement in the initial stages of the environmental assessment.

Since certain projects may be allowed to proceed subject to mitigating measures recommended by EARA, the Assessment and Review Support Services is responsible for monitoring the project during and after construction and reporting its findings back to the Manitoba Environmental Assessment and Review Agency.

*H. Saskatchewan*

In Saskatchewan, any development project of any public or private body, or of any individual is restrained by the provisions of the Environmental Assessment Act (1980), unless exempted from the application of the Act by the Cabinet for reason of emergency.

Once a proposal subject to the Environmental Assessment Act has been filed with the Environmental Co-ordination and Assessment Branch of Saskatchewan Environment, the latter screens the proposal to determine

whether or not an EIA is required and the nature and scope of the EIA if considered necessary. The Minister must publicly announce the decision that an EIA is required. After conforming to project-specific guidelines and general guidelines for the preparation of an EIA statement, and after undertaking a public participation program and reporting the results in the statement, the proponent submits it to the Environmental Co-ordination and Assessment Branch for review.

When the EIA statement is considered acceptable and transmits to the Minister of the Environment, it is made available to the public for inspection and comments. At any time prior to making his decision whether or not to approve the development, the Minister may establish a Board of Inquiry to hold public hearings or he may require local information meetings to be conducted. When the Minister is satisfied that the proponent has met with all the requirements of the Act and (if any hearing) that the report containing the Board's recommendations and the hearing's proceedings have been submitted, he will give ministerial approval to proceed, with or without conditions, or refuse to approve the development.

While the EIA process in Saskatchewan concedes to the Minister of the Environment some of the discretionary power noted in other provinces, it is the only province which may introduce court order prescription in its Environmental Assessment Act, and which considers granting funds up to $10,000 without Cabinet approval to persons preparing and presenting briefs related to an environmental impact assessment.

*I. Alberta*

If the Minister of Alberta Environment considers, under authority granted to him by the Land Surface Conservation and Reclamation Act (1973), that it is in the public interest to order a proponent to prepare and submit to him a report containing an assessment of the environment, he (the Minister) may order it. Further, the public, elected local or provincial representatives, the Department of the Environment or other governmental department and/or agencies may recommend to the Minister of

the Environment regarding the need to request an EIA for a certain project.

The purpose of the EIA process is to facilitate the early identification and resolution of potentially significant environmental effects of proposed resource development projects by either a person, company, provincial agency, or Crown corporation.

When an EIA is required, the project is examined by a 'scoping' process undertaken jointly between the proponent and Alberta Environment to determine the appropriate level of detail that the EIA should contain. Ongoing consultation is maintained with the necessary provincial agencies during the preparation of the EIA report or statement and extensive use of local citizens' input is encouraged to develop a community based impact assessment.

Upon receipt of the EIA statement, the Environmental Assessment Division of Alberta Environment initiates an interdepartmental review of the statement to determine its suitability for detailed examination as part of the decision process by the Cabinet. Two lengthy reviews are performed: a review of the draft assessment by all concerned departments and agencies, and a review of the final assessment by the previously involved parties. Once the EIA has been reviewed, it is referred to the appropriate body depending on the type of project and the proponent is advised to proceed to the permitting stage.

If the order to prepare an EIA given previously by the Minister of the Environment concerns, for example, an energy project, the EIA is filed, in this case, with the Energy Resources Conservation Board, as part of the permit application. Any deficiencies in the application are communicated to the proponent by the Energy Conservation Board for conformity with its standards and policies. It is also the Energy Resources Conservation Board that conducts public hearings if deemed necessary. Following the hearing (if any) the Board prepares a decision report accompanied by an approval from the Minister of the Environment, and recommendations to Cabinet, which if it wishes issues an Order-in-Council approving the project.

The Alberta EIA process, despite the fact that it is carried out very early (may be the earliest of all the Canadian provinces), has some shortcomings. Although the proponents are urged to include the public in the process through meetings, as the assessment progresses, the public is not kept informed as well as it should be. The contact between the proponent and the public seems to stop at the review stage, in which public views are not addressed. Although the Minister of the Environment orders an EIA for a proposal that is likely to result in surface disturbance, only preliminary plans or preliminary details of the proposal are presented, assessed and reviewed. It is only after the completion of the EIA and its presentation for permit application that detailed plans are required.

*J. British Columbia*

As indicated by the FEARO (1983), there are approximately 45 separate statutes that refer to some aspect of environmental impact in British Columbia. The main statutes are the Environment and Land Use Act (1971, amended 1977) and the Environment Management Act (1981).

The Environment and Land Use Act empowers the Cabinet, upon the advice of ELUC (Environment and Land Use Committee), a Cabinet committee chaired by the Minister of the Environment, to make Orders-in-Council and regulations to deal with any matter involving the environment and land use. Orders-in-Council requiring mandatory EIAs have been issued under this Act in two areas: the Fraser River Estuary and the Cowichan Estuary in 1977. Although regulations have not appeared under the Environment and Land Use Act (exception of Cowichan Valley Regulation, 1977), ELUC has developed guidelines set forth to coordinate the planning of proposed projects with staged, streamlined assessment of the environment. Guidelines have been prepared for linear, coal, metal mining and major site-specific developments.

The Environment Management Act (1981) provides the only direct statutory reference to environmental impact assessment as a requirement for activities which may have adverse environmental impacts. In fact,

the Environment Management Act is no more than an insurance policy. J. O'Riordan (1981) has noted that British Columbia did not need statutory authority to make environmental assessment of major projects mandatory; instead, a number of project assessment guidelines were prepared and implemented under the ELUC. The application of guidelines emphasizes project-specific analysis and management of resource impacts. Nonetheless, the Environment Management Act gives the authority to the Minister of the Environment to require a person to supply an EIA in accordance with the regulations when activities could have serious or irreversible effects on the environment, or when activities impinge unexpected or emergency impacts upon the environment.

The other Acts providing provisions under which EIAs are requested by the Minister(s) responsible and involving permitting authority are, for example, the Utilities Commission Act (1981) for energy project certificates administered by the minister of Energy, Mines and Petroleum Resources, and the Waste Management Act (1982) for permits and approval referred by the Minister of the Environment.

A formal EIA is required as mentioned earlier for two Orders-in-Council under the Environment and Land Use Act and "where the Minister of the Environment [authorized by the Environment Management Act] considers that a person proposed to do anything that would have a detrimental environmental impact" (see Appendix A-3). The procedure associated with environmental assessment currently and frequently practiced, is referral, and it involves conducting a preliminary environmental assessment which may or may not necessitate further study before giving the signal to proceed. The preliminary environmental assessment is denoted as a Stage I and its further studies and information, if required, are denoted as a Stage II. Actually the procedure in British Columbia may resemble the Alberta EIA process.

The Ministry of the Environment, or the proponent, conducts the preliminary environmental assessment during the very early stages of a proposed activity. After being submitted the environmental assessment is reviewed by a Guidelines Steering Committee and involved agencies.

Following the review, the proponent will be informed whether or not further study is required; in other words, whether or not Stage I is satisfactory and whether Stage II is necessary. Throughout Stages I and II there may be liaison between the proponent, the consultant (if any), the Guidelines Steering Committee, and the involved agencies. It leads to an agreement on the terms of reference for the assessment of the preferred alternative addressed in Stage II. The Steering Committee may recommend to ELUC either a decision-in-principle with or without conditions, or a public hearing prior to making a decision-in-principle.

If the decision-in-principle is favourable, the proponent may proceed to the permitting application regulated by other Acts and final approvals.

When a formal EIA is required, it is an Environmental Assessment Committee chaired by the Minister of the Environment, and established for each proposal that coordinates the assessment. It prepares the terms of reference for the assessment with the proponent, and recommends to the Minister or the Deputy Minister for a decision.

Public participation is confined by discretionary mechanisms. The Steering Committee may hold public meetings to educate the public on a major development; various involved agencies may hold public meetings when reviewing the assessment; the ELUC may hold public hearings when suggested by a Steering Committee; prior to granting permits, regulatory agencies may also hold public hearings.

## 4.2 The EIA in Practice: An Assessment

It is clear that considerable progress has occurred since 1970 when no government had any specific provision to conduct environmental assessments (Figure 12). Of all the provinces, Ontario was the first to ratify an Environmental Assessment Act. Two other provinces—Newfoundland/Labrador and Saskatchewan—opted for a specific environmental assessment enactment after a few years of experience without legislation. The other provinces have EIA processes and requirements comprised in other statutes which are sometimes initiated by Cabinet

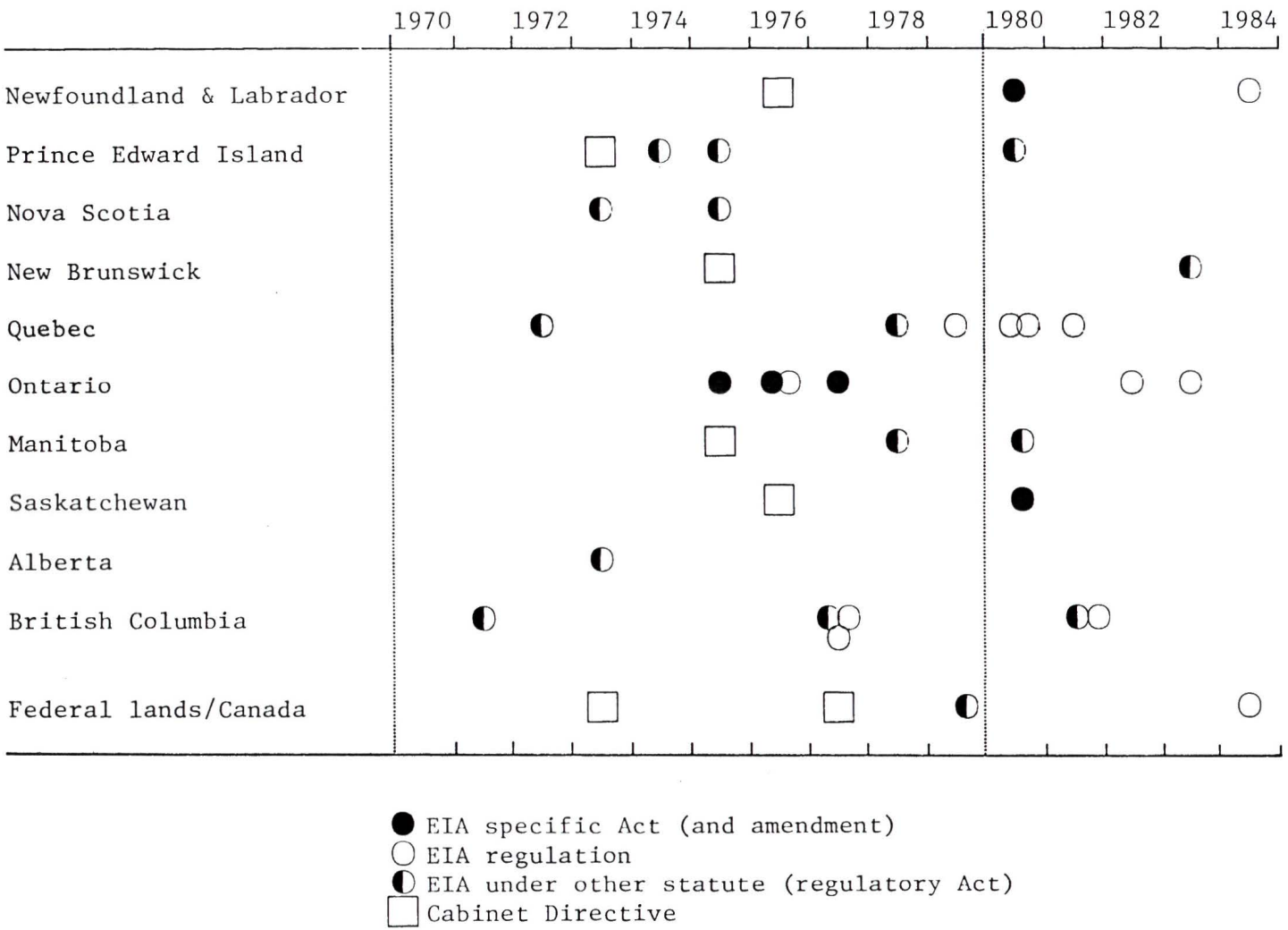



FIGURE 12 Time-frame of EIA practices in Canada and the provinces (based on two first items of Table A-3.1), compiled by the author.

directives. Only four provinces have adopted EIA regulations assuring full authority to their practice. The federal government, for its part, recently adopted a regulatory basis for the EARP; the newness of this situation does not permit identification of any drastic change in the federal practice.

Numerous assessments have been completed by provincial and federal governments and by joint federal-provincial actions. Concurrently, numerous comments (Davis, 1981; Lang, 1979; Lucas, 1981; Munn, 1979; OECD, 1979; Rosenberg, 1981, to name a few) have been addressed to the record of the EIA practiced in Canada. Their analysis has permitted verification of some observations. One comment concerns the lack of uniformity of the Canadian EIA processes. It is seen not only in the basis—legislative, administrative, regulatory, or other—adopted by the federal and provincial governments (see Figure 12), but also in the credibility in carrying out EIAs (see Table A-3.1). In Quebec, Ontario and British Columbia, there are projects which are subject to EIA regulations and specific classes of projects which are automatically subject to the procedure. In Saskatchewan and Newfoundland (before 1984) their lists of projects are subject to the Environmental Assessment Act. Prince Edward Island and Alberta give discretionary power to the Minister responsible to determine a need for assessing a proposal. At the federal level (before 1984) and in Manitoba, an initiator determines if an undertaking may have significant impacts. Although in Nova Scotia there are specific classes of projects submitted automatically to the EIA procedure, it is, in other cases, the responsibility of a proponent to contact the Department of Environment as it is practiced in New Brunswick.

The EIA process has a good deal of authority in half of the provinces especially when regulations strengthen the requirements anticipated in the enactment (Nfld., Que., Ont., Sask., B.C.); in the other half (N.S., N.B., P.E.I., Man., Alta.) and at the federal level, the proponent has complete autonomy to judge whether a project may have significant effects on the environment, helped in certain cases by the discretionary power of

the Minister responsible who can exclude a project from the procedure. Furthermore, they are these same governments (except for Alberta) that direct the EIA process only to internal undertakings; the private sector and many agencies are only invited to participate in the procedure.

A second comment refers to the integration of the EIA process into the licensing and permitting requirements. It has the characteristics of a permit application process in Nova Scotia, also called 'certificate of authorization' in Quebec; however, the environmental permit or certificate is not the only means, and does not exempt an applicant from respecting requirements for permits contained in other Acts; on the contrary, special attempts to coordinate these requirements are desirable. The environmental assessment is a necessary requirement before proceeding with licensing or other legislative prescriptions. It has to be established that there are no potentially significant impacts before conducting the projects to any licensing steps. This is practiced in Newfoundland/Labrador, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia. There is a third procedure, referral procedure, which is effective also in two of the preceding provinces—Alberta and British Columbia—, at the federal level and in Prince Edward Island. Depending on their type, projects can be referred either to another Act under which they will be assessed as in Prince Edward Island, Alberta and British Columbia, or by another Act as in British Columbia, or to various federal departments and/or agencies for performing a formal review.

On the one hand the two first systems—permit or certificate of authorization and requirement(s) for licensing—guarantee that the environment is assessed early in the planning of the priority for a project; on the other hand, the referral procedure studies more, in an afterthought manner, the feasibility aspects of undertakings in the environment. Keenan (1984) underlines that there are tremendous differences between these procedures; the former suggests the acceptability of a decision by the investigators while the latter seeks an assurance to go ahead. This comment from Keenan introduces the question of the

specific location of the EIA in the decision making procedure (Table A-3.2). This statement also orients towards the thought that the EIA is instituted only after a decision has been set challenging the theoretical location of EIA as presented in Figure 9 above. The various consulted critics also argue in that vein. So the EIA tends to be conducted in response to specific proposals and projects. Being restricted to the evaluation of individual development projects, EIAs are investigated at a relatively late stage in the decision making and planning process. The consequences are that options at the individual project stage are limited and a thorough assessment of all alternatives is not undertaken. EIAs have the reputation of being rather a reactive device, or used as justifications even bandaids, rather than as a planning mechanism. Due to the fact that most EIAs have been initiated on relatively large scale development projects, it is often overlooked that there has been substantial lead-time committed before public information is revealed. Conversely, the economic, social, and biophysical impacts of these projects are often shortsighted in comparison to their substantial long term presence in the environment. This can be verified by the lack of legislative long term monitoring requirements shown by the provinces and the federal government.

There are other shortcomings that can be addressed in the EIA practice. EIAs have been characterized as time and money consuming, or being very costly involving preparation of a quantity of systematic and comprehensive studies as well as many disciplines. However, Lucas (1981) and Lee (1983) have found that an EIA can be cost effective in that it substantially shortens the period in obtaining authorization. On the other hand, although the total cost of an EIA has been established to be, on average, about 1% of the total capital cost of the project, it also takes into account the indirect costs on timing of implementation and on overcoming previously unidentified environmental problems. Critics agree unanimously that, unless there is coordination among studies, the correct use of the EIA may be impaired. It is critical in Canada, knowing that in some instances federal and provincial

interests may overlap. Indeed, the EIA reinforces the openness of decision making and challenges the specialists for meaningful information; on the other hand, there have been concerns about proprietary information, particularly a lack of impartiality and careful 'management' of information.

It has been recognized that a simultaneous objective of the environmental assessment procedure is to inform the public on development projects. To do so, every Canadian province (except Prince Edward Island) and the federal government have provided requirements in the scope of their EIA policies or legislation to release information and organize participation (Table A-3.1). Whether information programs are developed during the preparation of the EIA statement or when the EIA statement has been submitted for reviewing, there have been failures concerning the deadlines to submit or to present the documents and adequate warnings to change schedules and agendas. If a hearing be demanded, there is no legal prescription to make its findings influential or utilized by the decision makers (Davis, 1981). Mazmanian and Nienaber (1979) viewed hearings as short term strategies for coalescing divergent factions around projects or proposals. They are closer to reality especially when there has been little evidence of strong political support for expert opinions and recommendations of EIAs; hearings held by a board, a committee, a council, a panel, or other (Rees , 1981). The recommendations of the EIA (as often is the case with environment in general) are certainly not an influential priority in the face of strong economic imperatives.

Despite the appearance of participation, through meetings and hearings all along the EIA process, there has been a perceived dissatisfaction as to the true effectiveness of public participation. It is at this point that the findings of Chapter III regarding *activation* and its role within the procedure enter into the arena. After reviewing Canadian EIA procedures and considering the major participants, the task has been to define and to associate the major intervening parties of the Canadian EIAs to the set of actors already established in section 3.3.3.1.

This is done by reading systematically the relevant statutes (see Appendix A-1) and the Summary (1983) of the Canadian EIA prepared by FEARO. The findings are presented in Table 18. Theoretically it is assumed that the procedure is open to private as well as public development projects. There are exceptions in Prince Edward Island, Nova Scotia, New Brunswick, Manitoba and at the federal level where the proponent happens to come from the public sector; in these jurisdictions the proponent and the government are the same actor. Government is not only an initiator of project (as mentioned) but also the administrator of these procedures whether it be the Cabinet, the Minister or Ministry or Department responsible for the EIA, a specific governmental committee or agency. They all coalesce as one: 'government'. Expert is defined as the independent body appointed to hold public hearings or to assist the public. In three provinces—Prince Edward Island, New Brunswick and Manitoba—however, it is the same government body that administers the EIA and holds public hearings. Public refers to the public *per se* involved in the EIA procedure. No direct references to interest groups, the media or courts have been found in the texts of statutes, regulations and procedures consulted in regard to this exercise.

The study of these procedures shows that from the seven actors established in the concept of activation (see Table 7), only four are involved in environmental impact assessment procedures, that is, are mentioned in the texts of relevant statutes and procedures. The next step is to pair all four participants or actors in all possible combinations through all possible activities, steps and requirements of every Canadian EIA. Once completed the activation of these pairs of actors is proved by using the determinants of Table 17 and applied to those actors involved in EIA (Table 19). In every Canadian EIA procedure, each time an actor is named as performing an activity with another, it is recorded (as for example the Minister to the proponent to perform an EIA study. Here the Minister representing the government connects and communicates information to the proponent or company). The hypothesized activation in the case of the pair of actors Government/Companies is described by

TABLE 18: Participants in the Canadian EIAs

| | CO | GOV | EXP | PUB | | CO | GOV | EXP | PUB |
|---|---|---|---|---|---|---|---|---|---|
| Nfld. & Labrador | * | * | * | * | Ontario | * | * | * | * |
| Prince Edward Is. | | * | | * | Manitoba | | * | | * |
| Nova Scotia | | * | * | * | Saskatchewan | * | * | * | * |
| New Brunswick | | * | | * | Alberta | * | * | * | * |
| Quebec | * | * | * | * | British Columbia | * | * | * | * |
| | | | | | CANADA | | * | * | * |

KEY: GOV = Government
PUB = Public
EXP = Experts
CO = Companies

TABLE 19: Scenarios of Activation Resulting from Provincial and Federal EIA Process (EIA shortened version of Table 17 showing all the pairs of actors in scenarios of activation [A/B])

| A \ B | Companies | Government | Experts | Public |
|---|---|---|---|---|
| Companies | | II | V | VI |
| Government | I | | V | VI |
| Experts | IV | IV | | VI |
| Public | III | II | VI | |

Note: Numerals indicate scenario of activation.

When activated, these pairs of actors may generate conflictual participation.

scenario I (Table 19). At the same time there is another record, that of the frequency of activation between a pair of actors. It is computed simply by adding the number of times they work or are together (Table 20). Looking at the definition of the six different scenarios of activation in section 3.3.3.2, as well as their configuration in Figure 11 above, it may be possible to group them into three types, being high, low, and power activation (see Table 21).

Scenarios II and IV have been considered high activation type. At first the actors do not seem to hold a preference for connectivity but in fact scenario IV suggests their preference for connectivity by interest. Communication is a significant determinant in high activation. It has been referred hypothetically (in Chapter III) to an ideal activation/participation situation regarding the major importance given to communication when in that particular situation of interest connectivity.

Scenarios I and III, unlike scenarios II and IV, show a specific trend of power connectivity which consequently influences the resulting activation. These two scenarios, due to the high importance given to power connectivity compared to interest connectivity (see Table 17 and Figure 11 above), can be described as power-activation type. In scenario I cumulative power gives the actors confidence and invulnerability (as hypothesized in the previous chapter); in scenario III power is established among actors in a dominating scope. This differentiation is also felt at the level of communication between the two actors, dropping to the benefit of connectivity in scenario III.

Scenarios V and VI are theoretically considered low activation. The particularity of scenario V is that the actors prefer to be connected in only one situation of power although undergoing indifferently numerous situations of interest. The importance of the two situations is however equal. In scenario VI it is different: the actors do accept one and only one connectivity in which the power situation has the same low importance (value) as the interest situation (Table 17, Figure 11 above). In both scenarios, the actors do not show great desire and energy to activate. While they show disinterest in scenario V there might possibly be

TABLE 20: Scenarios of Activation: Compilation of Federal and Provincial EIA Processes*

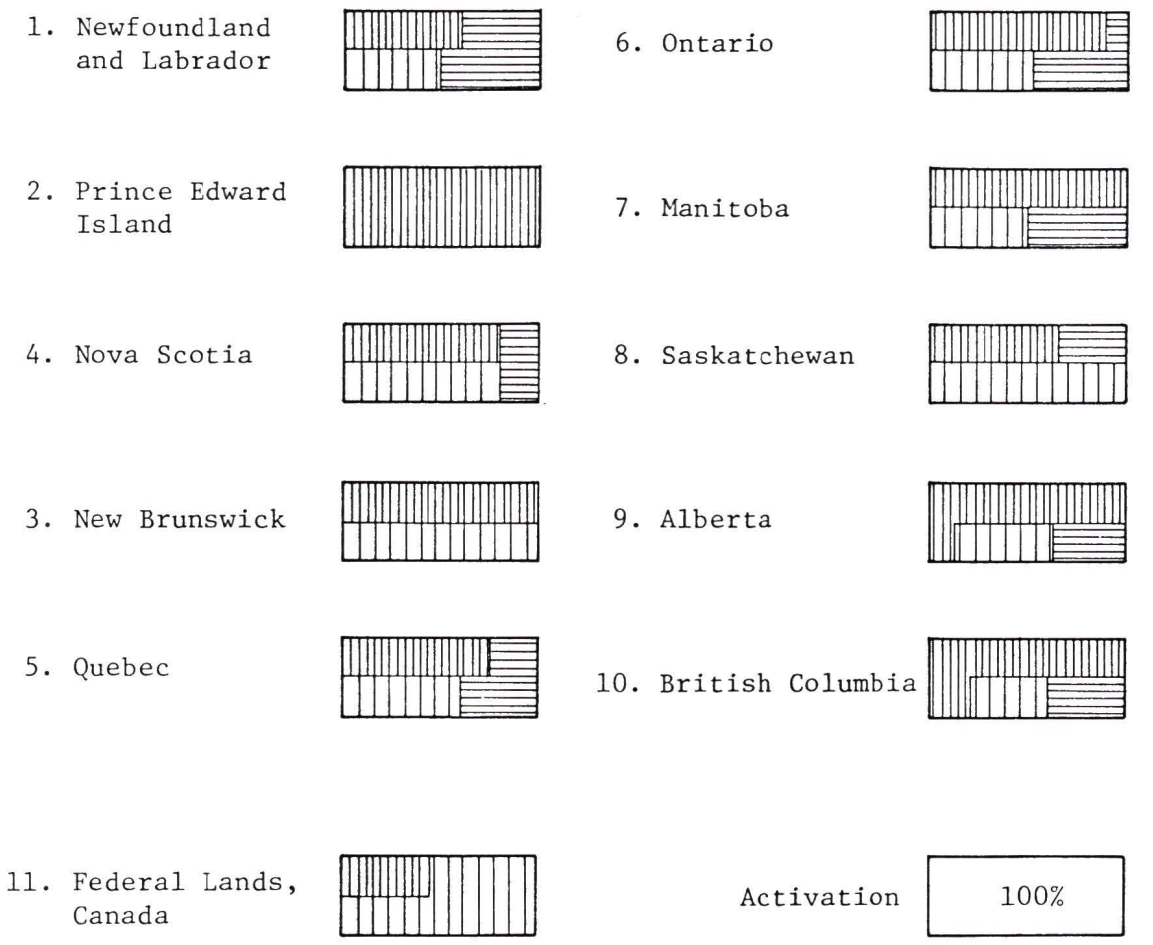
| Scenarios of Activation | Newfoundland and Labrador | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia | Federal Lands |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Scenario I | 6 | - | - | - | 4 | 4 | - | 1 | 1 | 1 | - |
| Scenario II | 4 | 1 | 1 | 1 | 4 | 3 | 2 | 3 | 4 | 2 | - |
| Scenario III | 1 | - | 1 | - | - | - | 1 | 1 | 1 | - | - |
| Scenario IV | 1 | - | 1 | - | 1 | 3 | - | 1 | 2 | 1 | 2 |
| Scenario V | 1 | - | 1 | - | 1 | 1 | - | 1 | 1 | 1 | 2 |
| Scenario VI | 3 | - | 1 | 1 | 3 | 2 | 1 | 5 | 2 | - | 5 |
| TOTAL | 16 | 1 | 5 | 2 | 13 | 13 | 4 | 12 | 11 | 5 | 9 |

*Based on summation of recorded activation of actors within theoretical EIA procedures.

TABLE 21: Levels of Activation: Summation*

| | Newfoundland and Labrador | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia | Federal Lands |
|---|---|---|---|---|---|---|---|---|---|---|---|
| High activation (Scenarios II & IV) | 5 | 1 | 2 | 1 | 5 | 6 | 2 | 4 | 6 | 3 | 2 |
| Power activation (Scenarios I & III) | 7 | - | 1 | - | 4 | 4 | 1 | 2 | 2 | 1 | - |
| Low activation (Scenarios V & VI) | 4 | - | 2 | 1 | 4 | 3 | 1 | 6 | 3 | 1 | 7 |

*Summation of the recorded activation of Table 20.




| Levels of Activation (%)* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| High activation | 31 | 100 | 40 | 50 | 38 | 46 | 50 | 33 | 55 | 60 | 22 |
| Power activation | 44 | — | 20 | — | 31 | 31 | 25 | 17 | 18 | 20 | — |
| Low activation | 25 | — | 40 | 50 | 31 | 23 | 25 | 50 | 27 | 20 | 78 |

*Percentages based on summation in Table 21.

FIGURE 13: EIA in activation in the provinces and at the federal level.

friction, even a rupture in scenario VI due to the simple fact that the actors are not used to dealing directly among themselves, or they do not want or see the necessity to do so. When the actors connect, it is hypothesized that it may be in a non-confidence environment. Figure 13 illustrates the three types of activation applied to the Canadian EIA processes. Three observations can be drawn from the introduction of activation into the EIA processes:

(1) High activation of the EIA in a province does not give a good indication of its openness. Where activation is highest (50% and over), the EIA is directed primarily to public projects; it does offer discretionary power to the body or Minister responsible; it does not seem easily accessible to citizens or groups, and it does not provide an authoritative enough requirement for diffusion of information as well as participation of the public.

(2) Low activation of the EIA criticizes the efficiency of the participatory exercise. The more a jurisdiction opens its EIA process to the public, the less desire to communicate and to connect, in other words to activate, is perceived. The federal process exemplifies the statement.

(3) Power activation of the EIA counterbalances the two extremes—high and low activations. It is found in a province where EIA includes prescriptions offering participant and actor enough strength to demand the application of the assessment procedure or to apply it.

## 4.3 EIA Process: Its Needs

Environmental impact assessment in Canada is today at a transition stage. Initiated in the early 1970s by Canadian public authorities, stimulated by increasing public awareness of environmental consequences of activities, it has with the 1980s reached conspicuous status in the whole country. In contributing pertinent environmental information to decision making, its set of recommendations should help rationalize decisions.

In principle, all the Canadian procedures follow the main theoretical steps of Figure 8 and suggest the performance of EIA as early as

possible in the multi-sequence decison making model of Figure 9, especially before a decision. In practice the EIA has experienced many shortcomings that were reviewed in section 4.2. On the whole, the application of EIAs to environmental decision making in Canada (1971-1984; see Figure 12) brought to light the lack of consensus on a Canada-wide process and profound division of power in a system which results in 'passing the buck' between jurisdictions. This raises the necessity for a homogeneous approach to a common problem within the environment, be it regional or site-specific.

There is a need for a consistent screening process on a nation-wide basis to reduce strong discretionary power of proponents or ministries responsible in certain provinces and at the federal level. The EIA process needs an independent controlling agent (watchdog) not only at the reviewing stage of the statement but as early as the screening mechanism.

Measures have to be sanctioned for distancing EIA from benefit-cost analysis, and for ensuring that environmental recommendations brought forward are likely to influence the pending decision.

There should be prescriptions for examining all projects in aggregate, eliminating the less rigid distinction between new proposals subject to EIA in order to discourage a discretionary project-by-project examination.

A single, uniform data base at the regional through to the national level has to be encouraged for compiling assessment information and experiences of past and future projects. This data base may complement already established divisions as for example biogeoclimatic zones, nordicity regions, and so forth.

There are the problems of ownership of the resource data and the questions raised regarding unprocessed gathered data that are not fully analyzed or published. There is a need to permit not only easier access to this information but also that holders of such data be publicly accountable for the released researches.

There must be adequate time allowed for the completion of the critical steps within the EIA process that lead to the formulation of EIA recommendations. Just as proper assessments are critical in formulating the recommendations, their early placement into the decision making procedure is imperative (see Figure 9 ). The location of EIA profoundly influences the credibility of the whole environmental decisional process and by the same token the activation of participants into it. It is hypothesized in section 3.3.3.2 that activation is successful only when a decision has not been taken; after a decision, participants face instead conflict resolution situations. A desirable balance of levels of activation within the decision making procedure has to be clarified on the basis of the theoretical observations of Figure 13 to aim the Canadian EIAs towards more of an activation exercise.

The question of the location of the assessment exercise as early as possible into the making of a decision has challenged the stamina of the EIA process itself. Munn (1979) has insinuated that the EIA should be a continuing activity not only prior to a decision but also afterwards. There should be, he contends, review and updating of EIA documents periodically after taking a decision, post-auditing of actions or at least environmental monitoring and analysis of data. The continuation of the assessment process through monitoring or post-decision assessment has suggested new systems of EIA process called: Generic and Specific EIA (O'Riordan and Sewell, 1981), Adaptive Environmental Assessment and Management (Bankes and Thompson, 1981; see section 3.3.1), or High and Low Tier EIA System (Lee, 1983). These variations on the same theme emphasize the need for more dynamic assessment processes.

The province of Quebec has not been saved from criticism, especially regarding the Baie James saga; most of the preceding shortcomings can be applied to its practice of EIA. Although Quebec adopted authoritative requirements to assure the compliance of the public and private sectors to the EIA procedures, it was not until the rise to power of the Parti Québécois that the province has shown a marked interest in the quality of its environment. In fact, the organization of environmental protection

in Quebec has been influenced by its political evolution. This will now be examined in the next chapter.

# V.

## QUEBEC PARADIGM: CULTURE AND ENVIRONMENT

In the Canadian nation, only Quebec is consistently dissonant, say Postgate and McRoberts (1976):

- in the 1940s, Quebec compromised the war effort by resisting conscription;
- in the 1950s, Quebec presented the anomaly of a repressive and autocratic regime that seemed to belong to another age;
- in the 1960s, Quebec had an aggressive government asking Ottawa to surrender a number of jurisdictions to the province. There were noisy and active groups demanding that Quebec leave confederation altogether;
- in the 1970s, the trauma of terrorism was brought to Quebec. Since then she has encouraged a political party, well-organized and committed to fundamental restructuring of the federal system.

This dissonance has been carried out within the Canadian political system, a reality which Quebec has been unable to escape. The province of Quebec has always been recognized as being different from the rest of Canada by being the only French state in North America and by trying to bypass the constant menace of being crushed by the anglophone civilization, Canadian as well as American (Laflamme, 1978). This linguistic fact was upheld in section 133 of the Constitution Act, 1867 and reinforced in section 22 of the new Constitution to confirm, using Langford's (1982) word, the "isolation" of the province of Quebec. The isolation is better described by Rocher (1979, p. 505):

> Il parlait un français vieillôt que le Nord-américain aimait entendre mais qu'il n'avait nul besoin d'apprendre puisqu'on dis que c'était un patois que ne comprenait pas le Français

> de France, eux qui parlaient le vrai français, celui qu'on respectait et qu'on apprenait parfois.*

English Canadians also have their defensive reflex but this time it is only in the face of the United States. They have their desire and need to be recognized, to define their identity and to trace their future. They do it in their own way, having vis-à-vis the Americans a linguistic problem rather different than the Quebec nation.

The linguistic dimension becomes a symbolic identifier from which all political, cultural and socio-economic problems, questions or differentiations have issued (Laflamme, 1978).** Over centuries, French Canadians have survived in their solitude of socially and culturally different nation within a nation, isolated in their rural territory.

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*They spoke an oldish French that the North Americans like to listen to but did not need to learn since it was said that it was a dialect not understood by the French of France, who spoke the real French, the one respected and sometimes learnt. (Translation by the author.)

**As "québécoise," I cannot deny this isolation of French speaker in an English-speaking environment. Although the apprenticeship of a second language will eventually permit a dialogue, there will always be resurgence of the six vital roots of the Québécois suggested in Laflamme (1978) and articulated with humor by Bouchard (1973).

The 36 sensible strings of the québécois according to their 6 vital roots (translation by the author):

A. AGRARIAN: (1) simplicity, (2) common sense, (3) love of nature, (4) loyalty, (5) deception, (6) strength.

B. MINORITY: (1) inferiority complex, (2) matriarchy, (3) penny pinching, (4) envy, (5) conservative, (6) gossip.

C. NORTH AMERICAN: (1) comfort, (2) bad taste, (3) fellowship, (4) opportunist, (5) American complex, (6) super-consumption.

D. ROMAN CATHOLIC: (1) mysticism, (2) anti-mercenary spirit, (3) panurgic inclination (ready to do anything), (4) fatalism, (5) narrow minded, (6) xenophobia.

E. LATIN: (1) exuberance, (2) love of children, (3) expressive, (4) artistic flair, (5) romantic love, (6) emotion.

F. FRENCH: (1) individualism, (2) sensualism, (3) cartesianism (I think therefore I am), (4) brag, (5) haughtiness, (6) impracticality.

For centuries they have been perceived as a rural farming population where the agrarian mythology was perpetuated and reinforced by the traditional elites, especially the clergy, to keep intact institutions and a way of life characteristic of French Canada (Balthazar, 1980; Bernier, 1976; Postgate and McRoberts, 1976). For all that time they had been pushed or inhibited by a Roman Catholic conservatism (Laflamme, 1978). But at the same time the forces of modernization, well-rooted in North America, had gradually penetrated that agrarian, religious and traditional society (Latouche, 1979). From there on, Quebec has experienced tremendous changes that have permitted the development of the Québécois state and the rise of a nationalist party, the Parti québécois.

The first part of this chapter outlines the four main elements which have confined the québécois in their isolation. They are religion, ethnic origin and language, income, and fluctuation in employment. These points serve to illustrate the unique context of the province of Quebec that has influenced both the attitude of the rest of Canada toward Quebec and its own self-perception.

A second section examines the québécois and their approach to environmental questions and discusses whether or not environmental protection has been easier or more difficult to organize in Quebec compared to the rest of Canada. In the third section, it is Quebec's environmental impact assessment (EIA) process that is detailed as well as its originality in the Canadian context. The last section of this chapter evaluates the EIA in two case studies—one of provincial and the other of federal jurisdiction—to pinpoint not only the differences between Quebec and Canada, but also to review the actual practice of the EIA.

## 5.1 "Frog" Anatomy Dissected

Over recent years Québécois developed a 'catch up' mentality (Paehlke, 1980), born of many historical humiliations at the hands of foreign countries, but also from English Canada. Their desire had been to become a nation as economically advanced as any other, especially the rest of Canada from which they cannot be dissociated. Before the Quiet Revolution, the influence of the Roman Catholic clergy was predominant in Quebec society. The young rising French middle class of the late 1950s did not believe that changes could be achieved under religious authority.

Quebec is the only province with a high proportion of Roman Catholics (Table 22). The influence of the clergy, however, has dropped considerably due mainly to the reorientation of societal values and needs, to the diminution of religious vocation, and to the control by the government of Quebec of matters formerly considered religious preserves. What can be understood from Table 22 has double connotations: there is at first the dominance of one religion, Roman Catholic, by 88% over others. This strong adherence gave Roman Catholic leaders a great deal of power. Although their ideological control had been reduced in Quebec over the past 25 years, it was certainly a challenge for the policial parties to have them as an enemy or an ally.

The Quiet Revolution focused on returning the clergy to churches, and established a new tradition in which the fear of the clergy was lessened. During the same period, Quebec showed the rest of Canada that not only was there a French fact in the country, but also it was Quebec itself which counted the highest proportion of French population. Table 23 is indicative of that particularity of Quebec; when one considers that 82.4% of the population of Quebec have French for their mother tongue or that 79.3% of its population are of French origin and that 60% of them speak French only, it reinforces the evidence of Quebec as a French bastion.

Paehlke (1980) suggested that throughout history, Quebec had shown a syndrome of self-consciousness regarding its underdevelopment. Grand'-

TABLE 22: Percentage of Population by Religion for Canada and the Provinces (1981)*

| | Roman Catholic | Anglican | Others |
|---|---|---|---|
| Newfoundland & Labrador | 36.26 | 27.23 | 36.51 |
| Prince Edward Island | 46.53 | 5.61 | 42.14 |
| Nova Scotia | 53.83 | 9.61 | 36.56 |
| New Brunswick | 36.93 | 15.61 | 47.46 |
| Quebec | 88.07 | 2.07 | 9.86 |
| Ontario | 34.94 | 13.62 | 51.44 |
| Manitoba | 26.54 | 10.64 | 62.82 |
| Saskatchewan | 29.25 | 8.12 | 62.63 |
| Alberta | 25.90 | 9.13 | 64.97 |
| British Columbia | 19.39 | 13.78 | 66.83 |
| Yukon & N.W. Territories | 34.51 | 29.08 | 36.41 |
| CANADA | 46.54 | 10.11 | 43.35 |

*Percentages computed by the author, from data in Statistics Canada, 92-212.

TABLE 23: Percentage of Population by Ethnic Origin, Mother Tongue and Official Language for Canada and the Provinces (1981)*

| Population by: | Newfoundland and Labrador | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia | Yukon and N.W. Territories | Canada |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ETHNIC ORIGIN | | | | | | | | | | | | |
| British | 91.53 | 76.20 | 71.82 | 53.00 | 7.56 | 52.03 | 36.44 | 37.04 | 42.26 | 50.47 | 29.40 | 39.74 |
| French | 2.70 | 12.05 | 8.41 | 36.05 | 79.30 | 7.56 | 7.21 | 4.74 | 4.90 | 3.36 | 4.12 | 26.45 |
| Registered Indian | 0.12 | 0.25 | 0.62 | 0.55 | 0.50 | 0.70 | 3.70 | 3.60 | 1.43 | 1.73 | 10.03 | 1.09 |
| Other (European, Asian, African, multiple origin) | 5.64 | 11.49 | 19.14 | 10.39 | 12.63 | 39.70 | 52.60 | 54.57 | 51.41 | 44.43 | 56.44 | 32.72 |
| MOTHER TONGUE | | | | | | | | | | | | |
| English | 98.72 | 93.91 | 93.59 | 65.50 | 10.96 | 77.43 | 71.71 | 77.99 | 79.48 | 81.95 | 65.31 | 61.28 |
| French | 0.46 | 4.96 | 4.25 | 33.60 | 82.42 | 5.51 | 5.12 | 2.58 | 2.72 | 1.66 | 2.63 | 25.67 |
| Other (non-official) | 0.81 | 1.13 | 2.15 | 0.90 | 6.62 | 17.05 | 23.16 | 19.42 | 17.79 | 16.38 | 32.05 | 13.04 |
| OFFICIAL LANGUAGE | | | | | | | | | | | | |
| English only | 97.62 | 91.73 | 92.25 | 60.49 | 6.69 | 86.72 | 90.33 | 94.61 | 92.38 | 92.82 | 83.91 | 66.94 |
| French only | 0.02 | 0.16 | 0.22 | 12.95 | 60.08 | 0.70 | 0.25 | 0.07 | 0.16 | 0.05 | 0.10 | 16.55 |
| Both | 2.27 | 8.06 | 7.42 | 26.48 | 32.42 | 10.83 | 7.89 | 4.56 | 6.43 | 5.68 | 6.66 | 15.28 |
| Neither | 0.07 | 0.02 | 0.09 | 0.08 | 0.80 | 1.73 | 1.51 | 0.75 | 1.01 | 1.43 | 9.31 | 1.20 |

*Percentages computed by the author from Statistics Canada, 92-910.

Maison (1977, p. 169) expressed it well in these terms:

> Tout a été à la démesure des projets pharaonnesques. Après les plus grosses cathédrales d'Amérique...les plus grosses places publiques...les plus gros stades...les plus gros barrages. Singeries du "biggest in the world"? on bien exagération latine on compensation coloniale?*

This mentality has created confusion over the past 25 years between increasing the wealth of the province at a cost of relying on outside investment, particularly in natural resource development. To develop its resources Quebec depends upon multinational investments. It has pursued this quest assiduously, serving as an area of prime resource extraction for North American capitalists (Bouchard, 1977; Rogel, 1981). There have been a few attempts since 1960 to change this pattern; at first the Lesage administration promoted nationalization of Quebec hydroelectric resources, and later the Lévesque government established a code for non-resident investors bringing capital into the Quebec economy (Lamonde, 1977b). Nevertheless, attitudes towards foreign ownership have changed dramatically throughout Canada over the past decade since the federal government (Liberal) made an effort to screen all new investments initiated from outside the country (Barrett, 1978). At the same time, however, in these years of inflation, new foreign investors, especially Americans, seem to have turned their interests to developing Third World countries (see Chapter II).

Despite numerous interventions by the province of Quebec, a good part of its resources are still controlled from outside province (i.e. forest concessions). Quebec pays today for yesterday's mistakes (Rogel, 1981) when laissez-faire was the policy which opened the province to foreign enterprises creating jobs (Bouchard, 1977). The québécois have been doubly confused in their self-consciousness of being

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*Everything has been as disproportionate as the pharaohs' projects. After the biggest cathedrals of America...the biggest public places... the biggest stadiums...the biggest dams. Were our monkey tricks the "biggest in the world"? Or was it exaggeration coming from Latin origins? Or was it colonial compensation? (Translation by the author.)

an underdeveloped nation (Paehlke, 1980); on the one hand, foreign societies—British and American—could decide the conditions and rhythm of exploitation of their resources and the economic growth of their province; on the other hand, the economic security brought by the foreign presence has placed them (francophones) in lower positions and income brackets than if they were anglophones. Table 24 shows that the Fench speaking population has lower income not only in English speaking provinces, but also in Quebec. Table 25 shows that the québécois have their income in lower brackets (under $20,000) following the pattern of the eastern provinces rather than western Canada. In 1977 Lamonde noted that the inequalities of salary had not changed over the last two decades. The statistics presented in Tables 24 and 25, although they are from 1981, still indicate inequalities among Quebec and the rest of Canada.

The question of unemployment has always been critical for the québécois, so any influx of temporary employment opportunities has been synonymous with a stable prosperity (Paehlke, 1980). Quebec had certainly been affected by the wave of inflation, like the rest of North America, but the fluctuations in unemployment rates and their irregular intervals have affected the province more than its fair share in creating an unfavourable economic climate (Fortin, 1977, 1980). However, Fortin (1980) tells us reassuringly that it is the high frequency of unemployment rather than its duration which tends to be self-perpetuating and causes pathological connotations for the québécois.

Instabilities or fluctuations of the economy are caused by three different factors. They are the seasonal movements caused by regular annual events such as climate, crop cycles, holidays, and vacation periods; the cyclical short term changes according to economic fluctuations; and the structural irregular long term components varying with conditions like government policies and development projects (Fortin, 1980; Statistics Canada, #71-001). Unless these factors are isolated for each province, a comparison of the Canadian situation according to provincial unemployment rates cannot easily be determined.

TABLE 24: Average Income for Population 15 Years and Over, by Mother Tongue, for Canada and the Provinces (1981)

| | Total | English | French | Other |
|---|---|---|---|---|
| | (Average Income in $1981) | | | |
| Newfoundland & Labrador | 9,926 | 9,875 | 12,062 | 13,653 |
| Prince Edward Island | 9,245 | 9,294 | 8,116 | 10,385 |
| Nova Scotia | 10,458 | 10,433 | 9,892 | 12,482 |
| New Brunswick | 10,077 | 10,514 | 9,145 | 11,848 |
| Quebec | 12,116 | 14,024 | 11,845 | 12,193 |
| Ontario | 13,076 | 13,151 | 12,501 | 12,948 |
| Manitoba | 11,465 | 11,774 | 10,909 | 10,771 |
| Saskatchewan | 12,005 | 12,283 | 12,358 | 10,973 |
| Alberta | 14,145 | 14,253 | 13,363 | 13,828 |
| British Columbia | 13,895 | 14,021 | 13,392 | 13,413 |
| Yukon & N.W. Territories | 13,837 | 15,261 | 17,012 | 11,176 |
| Canada | 12,666 | 13,007 | 11,813 | 12,727 |

Source: Statistics Canada, 92-928, Table 11.

TABLE 25: Percentage of Population 15 Years and Over by Income, for Canada and the Provinces (1981) (% calculated by the author)

| | Under $2,000 | $2,000-$9,999 | $10,000-$19,999 | $20,000-$29,999 | Over $30,000 |
|---|---|---|---|---|---|
| Newfoundland & Labrador | 12.3 | 46.9 | 27.0 | 10.2 | 3.6 |
| Prince Edward Island | 13.8 | 50.1 | 26.2 | 7.2 | 2.7 |
| Nova Scotia | 12.9 | 44.3 | 28.3 | 10.6 | 3.9 |
| New Brunswick | 12.4 | 46.6 | 27.5 | 10.1 | 3.4 |
| Quebec | 10.4 | 40.4 | 29.5 | 13.5 | 6.2 |
| Ontario | 12.5 | 35.3 | 29.5 | 15.2 | 7.5 |
| Manitoba | 13.3 | 40.2 | 28.9 | 12.3 | 5.3 |
| Saskatchewan | 13.4 | 35.0 | 27.0 | 17.6 | 7.0 |
| Alberta | 11.2 | 33.1 | 29.5 | 15.8 | 10.4 |
| British Columbia | 11.1 | 35.0 | 27.0 | 17.6 | 9.3 |
| Yukon & N.W. Territories | 13.9 | 32.0 | 25.5 | 17.6 | 11.0 |
| Canada | 11.7 | 37.9 | 28.9 | 14.2 | 7.3 |

Source: Statistics Canada, 92-928, Table 7.

TABLE 26: Summary of Percentage of Unemployment Rates in Canada and the Provinces (annual averages 1969 to 1982)[1]

| | 1969 | 1971 | 1973 | 1975 | 1977 | 1979 | 1981 | 1983 |
|---|---|---|---|---|---|---|---|---|
| Nfld. & Labrador | 10.3 | 11.4 | 12.8 | 18.2 | 15.9 | 15.4 | 14.1 | 19.7 |
| Prince Edward Is. | 5.3 | 7.7 | —[2] | — | 10.0 | 11.3 | 11.4 | 12.1 |
| Nova Scotia | 8.5 | 7.4 | 9.2 | 11.5 | 13.4 | 11.1 | 11.7 | 14.8 |
| New Brunswick | 5.4 | 7.6 | 6.8 | 7.9 | 10.7 | 10.2 | 10.2 | 12.7 |
| Quebec | 6.9<br>+2.2[3] | 8.2<br>+1.8 | 7.4<br>+1.8 | 8.8<br>+1.7 | 10.3<br>+2.2 | 9.6<br>+2.1 | 10.4<br>+2.8 | 13.6<br>+2.5 |
| Ontario | 3.1 | 5.2 | 4.0 | 6.0 | 7.0 | 6.5 | 6.6 | 8.6 |
| Manitoba | 2.7 | 4.9 | 3.9 | 3.7 | 5.9 | 5.4 | 6.0 | 8.6 |
| Saskatchewan | 3.1 | 3.7 | 3.6 | 2.9 | 4.5 | 4.2 | 4.6 | 7.9 |
| Alberta | 2.7 | 4.7 | 4.0 | 3.6 | 4.4 | 3.9 | 3.8 | 10.3 |
| British Columbia | 5.0 | 7.0 | 6.5 | 8.3 | 8.5 | 7.7 | 6.7 | 13.7 |
| Canada | 4.7 | 6.4 | 5.6 | 7.1 | 8.1 | 7.5 | 7.6 | 11.1 |

[1]Percentages computed by the author, based on data from Statistics Canada, 71-001.
[2]Data not available.
[3]Percentage of Quebec unemployment rate exceeding the national average.

Note: Choice for 1969 is arbitrary, although it permits us to see the two terms that the Bourassa government was in power, and one and a half terms of the Lévesque government.

Furthermore, economic indexes (stabilization, inflation, and so forth) are established by the central government which tries to adjust all regional or provincial disparities (see seasonal adjustment in Statistics Canada, #71-201).

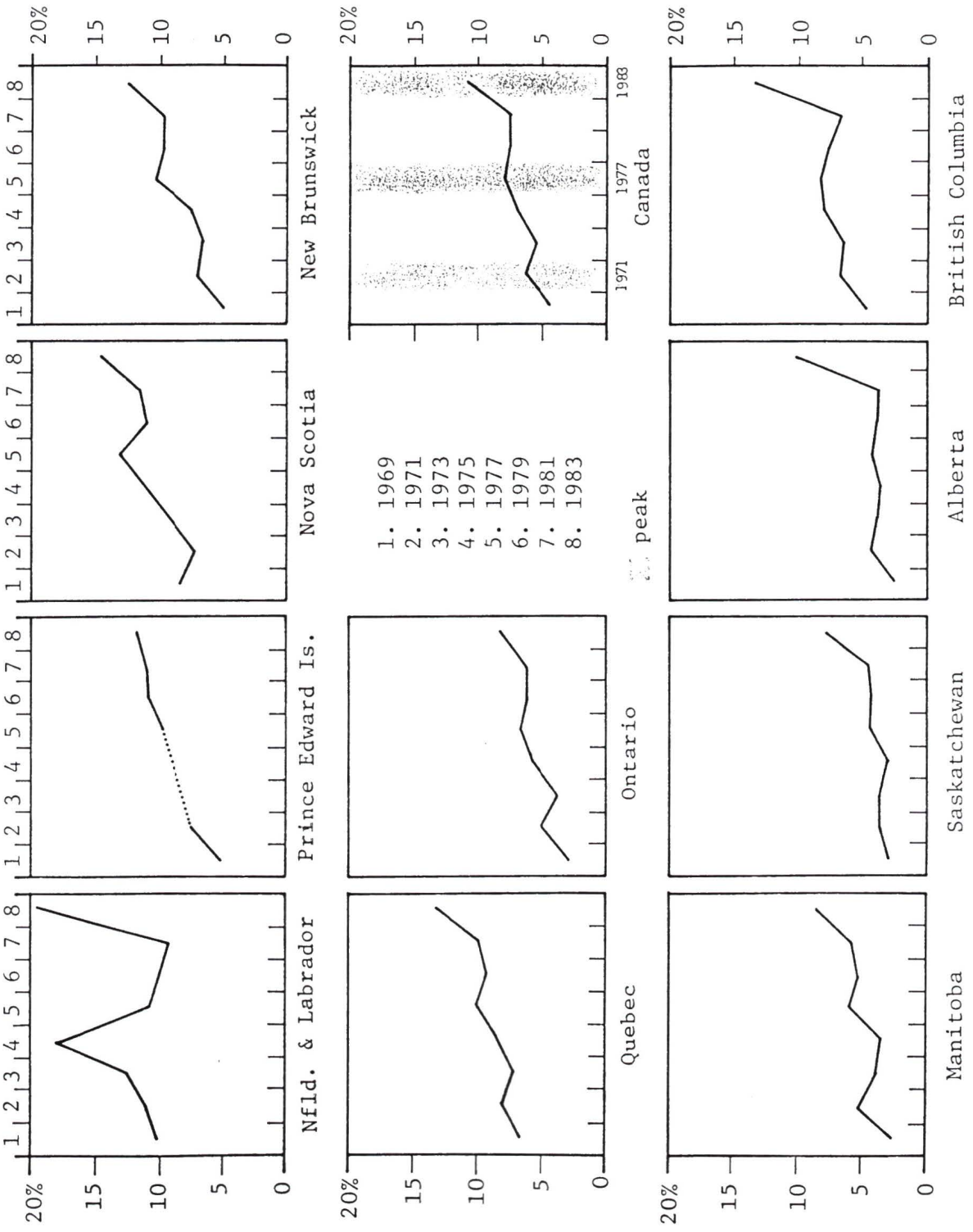
Looking at Table 26 that summarizes a few annual average unemployment rates in Canada and the provinces, it can be rapidly found which provinces or regions have had the highest or lowest unemployment rates and when these occur. Table 26 also suggests that a province does not

maintain constant high or low rates over the period in question, between 1969 and 1983. This observation raises the question as to whether or not the provinces had followed the same specific pattern during that same period. Although its unemployment rate is high, the only way to discover if Quebec has deviated from the Canadian trend is to examine the pattern presented in Figure 14. Three peaks of unemployment can be seen in that figure: the first peak in 1971, a second in 1977, and a third in 1983. Surprisingly, with its high unemployment rate, Quebec does not diverge from the general trends. It is in the eastern provinces (Newfoundland and Labrador, Prince Edward Island and Nova Scotia) that a different pattern is noticeable.

Contrary to what can be assumed, the increased participation of women in the workforce after World War II did not have a major impact on the unemployment rate of men in Quebec and in Canada. Although the unemployment rate of women has overtaken that of men, accounting for 46.1% of the Canadian unemployed (proportion given by Armstrong and Armstrong, 1981, in their study of the 1979 statistical data), it has not put many men out of work because most women continue to work in so-called female and low paid jobs, and in jobs that are part-time. Armstrong and Armstrong suggest that the dramatic rise in female labour force participation may be related to the occupational structure or to the creation of more women's jobs. They note that the war started the transformation of division of labour force by sectors; and in terms of job creation the most important women's sectors are those in which they are already concentrated (many secondary sectors such as trade, services, public administration, insurance, real estate, finance).

The rising labour force participation rates of women and their changing cultural pattern over the past two decades are not an indication of their growing competition with men, but rather a symptom of what is happening to the labour market. It must be recognized today that the working class has two sexes and that what happens to each has fundamental consequences for the other (Armstrong and Armstrong, 1981).

FIGURE 14: Unemployment rate: trends for Canada and the provinces (source: Table 26).



Over the past twenty-five years, Quebec had a political evolution that exhibited the same symptoms as other modernizing Canadian societies. However, Quebec has diverged from the rest of Canada due to the weakness of ancient monopolistic Roman Catholic values; the cultural and linguistic conflicts with English Canada; and the increase of French nationalism that created its own political party (Table 27). Employment has been the challenge of different administrations for the last two and a half decades. They endeavoured to permit French employees income parity with English employees; to introduce the use of French in the workplace; to dissuade actions of dissatisfied workers; to offer more jobs; and to promote the participation of employees in the affairs of enterprises. Employment to fulfil or employment to stabilize remain major preoccupations for the population and priorities for the government, especially in times of an unstable economy. As a result, it has overshadowed other important matters—for example the protection of the environment—and reduced them to luxurious preoccupations. In a province where employment has a high rate of fluctuation, where discussions gravitate around different ways to increase economic growth, and where nationalism dominates political life, as had been the case in Quebec, environmental awareness remains the 'third violin'. The next section discusses the attention given to the environment in Quebec since 1960.

## 5.2 Environmental Change

### 5.2.1 Before 1976

The year 1960 has not been chosen arbitrarily. It marks the election of a reforming political group that brought a growing acceptance of Quebec as a newly urban, technologically sophisticated and industrialized society (Paehlke, 1980). The year also marks the withdrawal of Ottawa from fields of activities reserved to the provinces. The 1960s represent the start of Quebec in developing its own resources. The nationalization of Hydro Quebec in 1962 had been the major achievement.

TABLE 27: Standing of the Canadian Provincial Parties

| | Independent | Labour | Liberal | New Democratic Party | Conservative | Parti Quebecois | Social Credit | Vacant | |
|---|---|---|---|---|---|---|---|---|---|
| Newfoundland & Labrador | - | - | 15 | 1 | 36 | - | - | - | Apr. 1985 |
| Prince Edward Island | - | - | 12 | - | 20 | - | - | - | Nov. 1984 |
| Nova Scotia | - | 1 | 6 | 3 | 42 | - | - | - | Nov. 1984 |
| New Brunswick | - | - | 18 | 2 | 38 | - | - | - | Nov. 1984 |
| Quebec | 7 | - | 53 | - | - | 61 | - | 1 | June 1985 |
| Ontario | - | - | 48 | 25 | 52 | - | - | - | May 1985 |
| Manitoba | 1 | - | - | 33 | 23 | - | - | - | Jan. 1984 |
| Saskatchewan | - | - | - | 8 | 56 | - | - | - | Dec. 1983 |
| Alberta | 2 | - | - | 2 | 75 | - | - | - | Feb. 1985 |
| British Columbia | 1 | - | - | 22 | - | - | 34 | - | Nov. 1984 |

Source: *Canadian Parliamentary Guide*, 1984, updated by the author.

Environmental questions did not play a significant role in the decision making process of these years; in fact, they were uncommon in the political process of a developing economy when the major preoccupations aimed at the technical and engineering feasibilities of exploiting resources and the economic viability of such exploitation. For their part urbanization, industrialization and other forces of change of modernizing society started showing their effects and creating demands upon the environment. Quebec was not exempted and the effects were felt differently in the two major urban centres of the province. In Montreal the local administration had to cope with air pollution while in Quebec the preoccupations were centred upon water.

In 1964 the provincial government created two services to help the municipalities to deal with the increasing problems of pollution, not only in the major cities but throughout the province. They were "l'Hygiène publique" (Health Services) and "la Régie des eaux" (Water Services)(Rogel, 1981). Until 1972 the protection of the environment was limited to smoke and chimneys or to approval of water supply and sewage systems. In other words, the attention of provincial and municipal authorities focussed mainly on the elimination of visible sources of pollution (see section 2.3).

The year 1972 was, on the surface, a significant benchmark for environmental concerns in the province of Quebec; it was that year that the government adopted the Loi sur la qualité de l'environnement (Environment Quality Act; L.Q. 1972, c. 49). The Environment Quality Act is a general law that refers to the amelioration of the environment and to the prevention of its deterioration. The legislative innovation was in considering the environment as an object of legislation without reference to any property rights but as a collective resource over which the state exercises a power of control and surveillance (Duplessis, Hétu et Piette, 1982). The law also created the "Services de protection de l'environnement" (SPE; Environment Protection Services) that replaced the two services created in 1964—the Health and the Water Services.

The administration of the law was given to the Minister of Municipal Affairs and the Environment in that Mr. V. Goldbloom divided his activities between two responsibilities.

The division of the SPE between urban and industrial environments, and research and planning demonstrated the intention of the Bourassa government to protect the quality of the environment; however, purposely or not, the SPE was given a part-time director who was none other than Mr. V. Goldbloom (Rogel, 1981). His main responsibility as Minister and Director of the SPE was to complete the policy of protecting the environment, helped in his task by the Environment Protection Services (SPE; L.Q. 1972, c. 49; ss. 3 to 6) and the Advisory Council (L.Q. 1972, c. 49, s. 7). However, the exercise of consultation was no more than a facade because,

(1) nothing in the Environment Quality Act either obliged the Minister to ask the advice of the Council or forced the SPE to intervene when necessary;

(2) nothing in the 1972 law favoured the participation of the public or groups, neither recognized their existence nor encouraged it. At the very most it was tolerated; and

(3) no articles of the Act promoted the holding of public hearings or inquiries before the acceptance of an application for authorizing an activity. Any action by groups was a posteriori intervention and a decision was without appeal for individual or association. Recourse was reserved only to polluting companies (Duplessis, Hétu et Piette, 1982; Rogel, 1981).

### 5.2.2 Baie James Development Project

In 1970 the Bourassa government came to power with a strong majority. It desired a page in history. Its philosophy was presented to the population with the belief that no government can easily survive without realizing projects—the bigger the better—or radically reforming the province (Jay-Rayon, 1973; Paehlke, 1980).

The Bourassa government had to create 100,000 jobs. To do so, the Quebec economy had to continue to improve. The option of the administration of the early 1970s was to pursue the political priority of the previous decades, that of exploiting the resources of the province, particularly its hydroelectricity. Unfortunately, this practice was keeping environmental questions as low-key preoccupations. The "Projet de la Baie James" had been launched with economic viability in mind.

When the development of the Baie James territory was announced in April 1971, only economic and technical studies were compiled and completed. Preliminary ecological and social assessments had been done by a joint federal-provincial committee, but its establishment was not initiated before mid-1971. The joint task force concluded that environmental studies had to be undertaken earlier in the project, and that the lack of knowledge on such projects suggested the urgent use of the territory as a large scale laboratory (Paehlke, 1980; Preface of Couture, SEBJ, 1978). Jay-Rayon (1973) suggested that the government was waiting until the completion of its two societies—Société de développement (SDBJ) et la Société d' énergie de la Baie James (SEBJ)—to publish descriptions and assessments of the territory (description of territory prepared by both societies in 1974). At the time of the announcement, Quebec had just passed through the trauma of the FLQ, but the government did not recover well from the October Crisis (Paehlke, 1980). It has therefore been argued that the Bourassa government decided to take public opinion and the people by surprise. The announcement of the development project aimed to recapture provincial initiative, and to appear as a decisive, upbeat and dynamic government capable of creating the 100,000 promised jobs. The project was displayed not only as a response to the increasing demand for energy or as a possible opening of the northern territory for total exploitation of resources and tourism (Jay-Rayon, 1973), but also as the actualization of Quebec's economic strength in the eyes of foreign investors (Bourassa, 1973).

The weak opposition in the National Assembly was unable or unwilling to challenge the Baie James Project and its initiator, Hydro Quebec. There were no mechanisms for public review of decisions made by the government and only rare reviews of those decisions made by publicly owned corporations (Paehlke, 1980). Although section 91(24) of the Constitution Act (1867) gave full jurisdiction to the central government over Indians and their reserved land, or likewise the United States-Canada Migratory Birds Convention (1946) control over the protection of migratory birds, the federal administration did not intervene. The reasons were that it could not afford another provocation with Quebec after the imposition of the War Measures Act and it could not lose the confidence of the québécois in Canadian federalism in the face of rising provincial nationalism. Thus political realities prevailed over constitutionalities (Paehlke, 1980).

For the Native Indians too the development of their territory was a surprise. They received notice of "La Grande" development project through the newspapers. This situation emphasized the vacuous practice of the administrative bodies regarding information and the absence of communication and consultation of possibly affected populations in the decisional process. It created throughout the province a climate of anxiety, fear, suspicion and gossip (Jay-Rayon, 1973). The Natives did not remain indifferent in the face of the "fait accompli"; on the contrary, they revolted against a decision that had been taken without their input and sought, early in 1972, an injunction against the SDBJ, the body in charge of the coordination of all work and planning of the Baie James Territory. The Natives were then convinced that the project was unavoidable; in their minds, the injunction was more a negotiation tool than an interdiction to go ahead with the project. Furthermore, it was the first time in history that the Indians (Crees) and Eskimos (Inuits) were united and were organizing their own opposition (Jay-Rayon, 1973).

The result of their opposition had been the ratification of the Baie James and North of Quebec treaty (L.Q. 1976, c. 46 and S.C. 1976-1977, c. 32). The treaty established rights, obligations and modalities

of the Natives and other parties to manage the development of the Baie James territory and the North of Quebec. The Natives obtained land for exclusive community uses and guarantees of exclusive hunting, fishing and trapping rights; they were assured a role in the decisions, a managerial power of their environment, as well as the protection of their social milieu in the amendment of the Environment Quality Act passed by the Parti Québécois government (L.Q. 1978, c. 94; L.Q. 1979, c. 25).

Therefore, at the time of the announcement of La Grande Projects by the Bourassa government in 1971, the province of Quebec did not yet have any enactment which took into consideration the environmental aspects of a project or activity other than the strictly economic aspects. It was only in 1972 that the Loi sur la qualité de l'environnement was ratified and that the notion of environmental impact assessment (EIA) was legislated (L.Q. 1972, c. 4, s. 22, 3rd para.). There were however no regulations to enforce this prescription of the law and no references to public participation and/or consultation in the decisions related to projects and activities. The power as to whether or not to apply it stayed in the hands of the Minister of Municipal Affairs and the Environment. The first regulation concerning specific projects necessitating an EIA were passed in 1975. They were directed to linear projects only (O.C. 3789-75, s. 7, 2nd para.). In the particular case of the Baie James development project, all the environmental studies—biophysical, cultural, social analyses—were prepared and published after the fact, that is, after the decision had been taken. None of the results or recommendations of the environmental assessment studies could deter the decision. A complete description of the environment of the Baie James territory and North of Quebec was finally published in 1978 by the SEBJ for a better knowledge of the environment when future projects are to be assessed.

### 5.2.3 After 1976

With the election of the Parti Québécois in 1976, the policies related to the quality of the environment were changed (see relevant

sections of the Loi sur la qualité de l'environnement, Appendix D). Gradually the policing approach to the environment was replaced by a more preventive one. Programs of purification of water and atmosphere were initiated, scientific research centred on the quality of the environment was promoted, and reports prepared by the "Services de protection de l'environnement" (SPE) and the "Conseil consultatif" (Advisory Council) had to be published.

The year 1978 marked a turning point for the environment in Quebec. New governmental directions resulted in an amendment to the Environment Quality Act, 1972. The right of all individuals to the quality of the environment (s. 19.1), the granting of injunctions by the court (s. 19.2), and the right of the public to information (s. 118.4) were now recognized. The third paragraph of section 22 of the law introduced a new procedure related more to the new preoccupation promoted by the P.Q. government: the environmental impact assessment (EIA) was then given a detailed statutory framework (chapter I, section IV.1 of the Environment Quality Act). At the same time, public participation, considered an essential mechanism of decision making, was institutionalized with the EIA. In 1979, environmental affairs were given a full-time Minister, and the new Ministry of the Environment repatriated the jurisdiction dispersed throughout other ministries (Municipal Affairs, Land and Forests, Natural Resources). The government also repealed the SPE (end of December 1978) and established the "Bureau des audiences publiques sur l'environnement" (BAPE), an independent body "to inquire into any question relating to the quality of the environment submitted to it by the Minister" (chapter I, section II.1, s. 6.3) and "hold public hearings whenever required to do so by the Minister" (chapter I, section II.1, s. 6.3, 2nd para.).

EIA may be considered the core of the Parti Québécois environmental politics (Duplessis, Hétu et Piette, 1982). The obligatory EIA integrated into the conception, planning and realization of projects and activities as well as in the decision related to projects or activities confirms its importance. It is worthwhile looking at the EIA process of

the province of Quebec, if only for the reasons given in the preceding sentences. (For comparison with other provinces, see Chapter IV.)

5.2.3.1 Characteristics of the Quebec EIA process

By giving a legislative foundation to its EIA process, Quebec has shown its intention to make environmental assessment one of the fundamental mechanisms of decision making for private and public management projects (Duplesis, Hétu et Piette, 1982). A legislative base is indispensable since the state wants to get the private sector as well as the public sector to conform; legislation assures the permanence of the EIA by its automatic publication in the *Gazette* (Hansard), in the annual collection of statutes or in revised statutes, guaranteeing public diffusion. An administrative directive, on the other hand, can be easily changed according to the priorities and preoccupations of the administration in power. Furthermore, its diffusion is very limited considering that administrative directives are transmitted mainly to ministries and governmental services, or only to the internal bureaucracy.

The right to information and consultation has been institutionalized by the Quebec legislation. The Environment Quality Act, section 118.4, states that "every person has the right to obtain from the Ministry of the Environment copy of any available information" and that "the Minister [s. 118.5(c)] shall keep a register of all environmental impact assessment statements submitted under Section 31.3 of the Act" (Rogel, 1981; L.Q. 1983, c. Q-2). The content of section 31.3 directs to two different activities, one performed by the Minister who "shall make" the EIA statement public after he receives it, and the other by the proponent of the project who is directed to "initiate the stage of public information and consultation." The proponent has 15 days after receiving his instruction from the Minister to publish it twice in a daily and a weekly journal of the region where the project is proposed and in a daily newspaper of Montreal and Quebec city (O.C. 3734-80 (1980), s. 6). The public then has 45 days to consult the authorization file in

the BAPE's office in Quebec, Montreal or the locality where the project is proposed (O.C. 3734-80 (1980), s. 11). In the meantime, the Minister is given the power in section 31.8 to "withdraw from a public consultation any information or data concerning industrial processes."

5.2.3.2 Consultation and participation of the public

The 45-day public consultation period has been initiated. The authorization file for public perusal includes (O.C. 3734-80 (1980), s. 12):

- the environmental impact assessment statement;
- any documents submitted by the applicant in support of his application for a certificate of authorization;
- any information provided or study or research carried out at the request of the Minister (pursuant to section 31.4 of the Act) available at that time;
- the notice submitted to the Minister by the proponent of the project (section 31.2 of the Act);
- the instructions given by the Minister with respect to the nature, scope and extent of the EIA statement to be prepared (according to section 31.2 of the Act); and
- any study or commentary made by the Ministry of the Environment with regard to the application for a certificate of authorization and available at that time.

It is during that period of public consultation, whether or not extended by the Minister according to section 31.8, that a person, a group or a municipality may ask for the holding of a public hearing (section 31.3, 2nd para.; O.C. 3734-80 (1980), s. 13). When the Minister receives an application "for the holding of a public hearing in connection with the project" (section 31.3, 2nd para.), "unless he considers such application frivolous" (section 31.3, 3rd para.), he has to grant it. The mandate to hold the public hearing is then given to the BAPE (section 31.3, 3rd para.), which "shall report its findings and its analysis thereof to the Minister." By virtue of the power given to it

in the first paragraph of section 6.6 of the Act, the BAPE adopts its own "rules of procedure relating to the conduct of public meetings" which are applicable to any hearing held by the BAPE (O.C. 3735-80 (1980) s. 33).

A public hearing has two different steps that are 21 days apart to permit thorough scrutiny of the question (O.C. 3735-80 (1980), s. 14). The first session provides information to the public related to the project (O.C. 3735-80 (1980), s. 23) and allows question periods related to the file (O.C. 3735-80 (1980), s. 26). The second session is the hearing per se (O.C. 3735-80 (1980), s. 27), followed by the rectification of facts if necessary (O.C. 3735-80 (1980), s. 29). Both sessions are advertised in the local newspapers (O.C. 3735-80 (1980), s. 5). After the hearing the BAPE makes a report of its findings and analysis and provides a copy to the Minister, the initiator of the hearing and to any person, group or municipality requiring a copy (L.Q. 1983, c. Q-2, chapter I, division II.1, s. 6.3 and O.C. 3735-80 (1980), s. 32). Although the Minister is given the power of confidentiality in section 31.8 of the Environment Quality Act, the legislators of the province of Quebec have enforced the prescription of the Act related to the right of information, consultation and participation of the public by adopting relevant regulations. (For comparison with other provinces the reader should refer to Tables A-3.1 and A-3.2 and section 4.2 above).

5.2.3.3 Projects subject to the EIA process

Quebec had followed its civil code tradition and had specifically described the projects or activities concerned by the Act. So, in section 31.1 of the Environment Quality Act it is stated that "No person may undertake any construction, work, activity or operation, or carry out work according to a plan or programme, *in the cases provided for by regulations of the Government*" (emphasis added). Furthermore Quebec legislators established in 1980 a list of projects which are subject to the environmental impact assessment and review procedure (O.C. 3734-80 (1980), s. 2). A project that falls in one of the 20

different categories of the list has to be assessed automatically; in other words it cannot be undertaken "without following the environmental impact assessment and review procedure and obtaining an authorization certificate from the Government" (L.Q. 1983, c. Q-2, s. 31.1). Deliberately the Quebec government had shown its desire to require an EIA before proceeding with a project by saying it plainly (Duplessis, Hétu et Piette, 1982).

It is an approach much different than in the anglophone provinces where the texts of the relevant laws use general terminology. The use of general terms may cause problems for the application of the EIA process. The process must then provide a system of screening of projects to decide their relevance to the EIA or as in the United States, depend on tribunals to define which projects are or are not subject to the statute and which are exempt. For those projects which are not included in the list provided for by the Environment Quality Act and Regulations of Quebec, their subjection to the EIA process depends upon technical limits like superficies, voltage, duration, and so forth (see Chapter IV for comparison with other Canadian provinces). Duplessis, Hétu and Piette mentioned that only a few projects were still excluded in 1982 (gas pipeline, heavy industries and mining).

There is always the possibility for the government to exempt a project from the EIA process. In Quebec the possibility has been reduced to a minimum to maintain the credibility of the statute as opposed to Ontario, for example, where exemptions have been used frequently (Duplessis, Hétu et Piette, 1982). The government of Quebec may exempt any project from the EIA in only two situations:

> (1) not later than one year after the coming into force of the regulation of the Government making that project to the said procedure (L.Q. 1983, c. Q-2, s. 31.6, 1st para.)

and

> (2) where the realization of the project is required in order to repair or prevent the damage caused by an actual or apprehended disaster. (L.Q. 1983, c. Q-2, s. 31.6, 4th para.)

To assure that there will not be an unfair advantage taken of the exemption in the first year after the promulgation of the regulation, it is stated in section 31.6, 6th paragraph of the Act, that the exemption "ceases to have effect if the physical realization of the project is not begun within the delay provided." After a decision has been taken as to whether or not to exempt a project from the EIA process, a notice shall be published in the *Gazette* (Hansard) according to section 31.6, 2nd paragraph. It permits the public or its elected representatives to question that decision. Although any project may be exempted, the government still has the power to control and supervise its realization under "the conditions it deems necessary for the protection of the environment" (section 3.16, 5th para.). These conditions bind the proponent who, particularly in case of infraction, is liable to a fine (section 106) or is prosecuted (section 111), or is ordered to demolish any non-conforming work (section 114 of the Environmental Quality Act). Any proponents, be they individuals, private corporations or public agencies, are restrained by the same obligations regarding a project subject to the EIA regulations, because in the Quebec environmental legislation there is no discrimination between private, public and para-public projects (Duplessis, Hétu et Piette, 1982; see Tables A-3.1 and A-3.2).

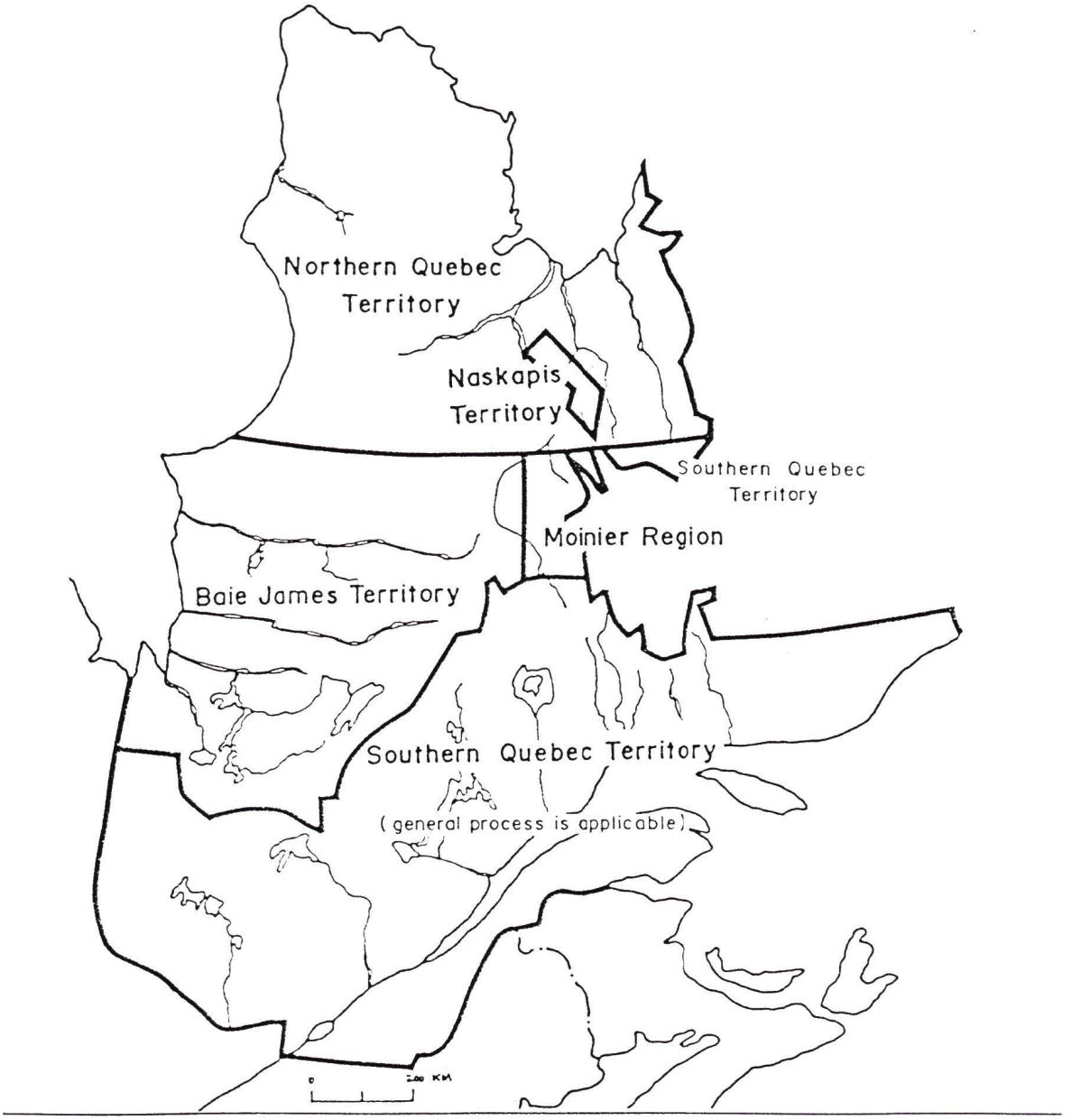
5.2.3.4 The EIA process and Quebec's territory

In chapter II, division V, section 213, the Environment Quality Act states that the EIA process "(chapter I, division IV.1 of the Act) and the regulations for the application thereof do not apply in the territories contemplated in sections 133 (Baie James territory) and 168 (New or Northern Quebec territory)." However, division IV.1 of chapter I, applicable to the southern part of the province, had been modified in 1979 to include modalities applicable also to "the territory bounded on the west by the 69th meridian, on the north by the 55th parallel, on the south by the 53rd parallel, and on the east by the eastern boundary contemplated in the Quebec boundaries extension Acts of 1912"

(L.Q. 1983, c. Q-2, s. 31.9, 2nd para.)(Map 2). This region is known as Moinier where the Naskapis have ratified with the Quebec and Canadian governments the Northeastern Agreement in January 1978. Although the objectives and general content of the EIA follow those applied in Southern Quebec, the Moinier region differs in two aspects. Firstly, the projects subject to the process are not in the categories established by section 2 of the regulation respecting the environmental impact assessment and review (O.C. 3734-80 (1980), s. 2) but in the lists provided for in Schedules A and B of the Environmental Quality Act, called projects automatically subject to or exempt from the EIA procedure. They are the same projects especially compiled for the Baie James and Northern Quebec territories. Secondly, the possibility of exempting a project "wholly or partly" from the EIA process is anticipated only "by way of exception" and without the time limit in force in Southern Quebec (L.Q. 1983, c. Q-2, s. 31.6, 7th para.). In the Moinier region, a project may be exempted from the process "for reasons of national defence or state security or for any other reason of public interest" (L.Q. 1983, c. Q-2, s. 31.6, 7th para.).

In the Baie James territory, and in Northern Quebec where the Inuit and Naskapis have their territories (see Map 2), it is another process called 'the environmental and social impact assessment and review procedure' that has been applied since the ratification of the treaties and agreements with the Natives in 1976 and 1978, following the experience of the Baie James development. These territories have necessitated special administrative procedures and requirements contemplated in divisions II to V of chapter II of the Environment Quality Act (sections 133 to 214 of the Act). The Natives are then assured Advisory Committees (sections 134 and 169) composed of members appointed by the two levels of government and by the Natives' regional authority (Crees, Inuits or Naskapis). Their function may be to:

(a) recommend the adoption of laws, regulations and other measures designed to improve the protection of the environment and of the social milieu;




MAP 2: Quebec territories subject to the Loi sur la qualité de l'environnement (Environment Quality Act).

(b) consider and formulate recommendations concerning laws, regulations and administrative procedures dealing with the environment, the social milieu and land use;

(c) consider and formulate recommendations concerning environmental and social impact assessment and review mechanisms and procedures (section 140, 3rd para; section 175, 3rd para.); and

(d) exercise administrative control over the Evaluating and Review Committees or Commissions (sections 148 and 181).

Thus the Act has provided the Natives with five bodies created under the names of the James Bay Advisory committee on the Environment, the Review Committee, the Evaluating Committee, the Kativik Environmental Advisory Committee and the Kativik Environmental Quality Commission. They replaced the Advisory Council and the BAPE in Southern Quebec and the Moinier region (sections 6.1, 7, and 31.9, 2nd para.). Duplessis et al. (1982) underlined one shortcoming in these appointments, that the Naskapies do not have good enough representation and/or consultation on the Kativik Environmental Quality Commission.

The special attention given to the Quebec territories unfortunately came into effect a few years after the announcement of the Baie James development. The experience with "Le Complexe La Grande" is forever suggested in a blemished legacy by section 209 of the Act. "Notwithstanding any other provision of this chapter or of any regulation, Le Complexe La Grande (1975)...may be undertaken and integrally carried out, without being submitted to the assessment and review procedure provided for in Division II and III of Chapter II" of the Environment Quality Act. Often the best lessons are learned from past errors. It was wise of the Lévesque administration to recognize the geographical particularities of the province of Quebec and to provide provisions applicable especially to regions and territories populated by Natives.

5.2.3.5 Responsibilities of the proponent and of the Minister of the Environment

The whole process of environmental impact assessment depends on the proponent and the Minister. A proponent whether from a public agency or private enterprise, "wishing to undertake the realization of any projects...must file a written notice with the Minister...[who]...in turn shall indicate to the proponent of the project the nature, the scope and the extent of the EIA statement" (L.Q. 1983, c. Q-2, s. 31.2). Once the proponent has verified that his/her project is included in the categories "contemplated" by the Act, an environmental impact assessment statement is prepared (with or without the help of consultants), according to the direction of the Minister of the Environment. This is a current practice in Canada (see Table A-3.1), as opposed to the United States, where it is a minister or a regulating agency that prepares the statement (Duplessis, Hétu et Piette, 1982). The statement is then prepared using accepted scientific methods by properly qualified professionals because eventually it will be examined by other professionals and by the public which may point up any deficiency, omission or hiatus. It is not to the advantage of the proponent to demean his/her reputation and credibility (Duplessis, Hétu et Piette, 1982).

When the EIA statement has been duly presented to the Minister, the Minister "shall make the EIA statement public and indicate to the proponent to initiate the stage of public information and consultation" (section 31.3, 1st para.). If an application for a hearing has been filed with the Minister (section 31.3, 2nd para.), the Minister "shall direct the BAPE to hold a public hearing, unless he considers such application to be frivolous" (section 31.3, 3rd para.). The proponent has to participate to the full extent provided for by both the regulation

respecting the environmental impact assessment and review and the regulation of proceeding with hearings (O.C. 3734-80 (1980) and O.C. 3735-80 (1980)). Furthermore, the proponent has "to furnish any information, to study certain matters or to undertake certain research" if the Minister "considers [them] necessary" (section 31.4).

"Where the environmental impact assessment statement is considered satisfactory by the Minister, it is submitted together with the application for authorization to the Government" (section 31.5, 1st para.). The solo role and responsibility of the Minister stop there, and the decision on the authorization file is later made by the Ministers-in-Council or any committee of Ministers of which the Minister of the Environment is a member (section 31.5, 1st para.; section 31.6, 1st para.). It is a centralized decision but it is done in an arbitrated forum, necessary to coordinate and harmonize the diverse preoccupations of the Quebec state.

In spite of all these innovations of the Parti Québécois administration concerning the protection of the environment, Rogel (1981) has qualified its efforts of "quiet continuity" due to the fact that the "péquiste" Environment Minister M. Léger, who replaced the acting Liberal Minister, V. Goldbloom, many times overruled the amendment of the Environment Quality Act (1972). M. Léger authorized, as did Goldbloom previously, "special case" recourses and many withdrawals of projects from the EIA process in the face of pressure and coercive threats of industries to move outside the province. A trusting public had been assured that the newly appointed BAPE would examine all aspects of an application by a proponent and would be imperative in the decision making. Irony of destiny, the Minister Léger declared that the BAPE was created in order that opposition could be expressed; but after all it is only the government that makes the decision (*Journal des débats,* Assemblée Nationale du Québec, 10 juin 1981, in Rogel, 1981).

During the second mandate of the Parti Québécois government, the new Minister of the Environment Adrien Ouellette oriented the priority of his ministry towards water treatment by incorporating it in the

Environment Quality Act (L.Q. 1984, c. 29).

With the economic recession of the late 1970s the pace of development projects has reduced considerably; it has consequently oriented environmental preoccupations towards other problems. Furthermore, the governments of Canada have all adopted, in a more or less judicial fashion, the environmental assessment process. Quebec is one of the provinces that opted for a legally binding process. The 1980s started with new environmental considerations. Governments have to deal with the consequences of inconsiderate or non-monitored practices of the industrial developments; consequences of acid rain, consequences of the dumping of chemicals in water features, consequences of transporting and/or storing dangerous chemicals, consequences of industrial or nuclear spills, consequences of .... The province of Quebec is not protected from malpractice of past developments; it has taken measures, as have other provinces, to protect its environment. Has Quebec always followed the rest of Canada or the national trends in its environmental actions? Earlier in this chapter, certain particularities characterizing Quebec's society were briefly discussed. The author also presented the significant benchmarks registering the involvement of the Quebec governments in the protection of the environment. Today, the province of Quebec, now called the state of Quebec, has caught up socio-politically with the rest of Canada. Nonetheless, in the early 1970s, when environmental issues were of rising concern in Canada, Quebec was seen to lag behind the other provinces in its concern for environmental protection.

## 5.3 Protection of the Environment: Its Organization in Quebec

Since the 1960s, Quebec has undergone an evolution that has isolated the state from the other Canadian provinces. It is possible that the Quebec paradigm that is thought to have led to a perceived isolationist state, may have adversely impinged on governmental organization for the protection of the environment. "It is not the consciousness of men which

determines their existence but, on the contrary, their social existence which determines their consciousness" (Marx, 1859, rpt. 1979, cited in Sandbach, 1980). This statement expresses the reaction of the province of Quebec in establishing environmental matters as a priority. For almost twenty-five years the question of nationalism (independence) has predominated at the National Assembly. When the whole political life is oriented towards all the different ways to nourish nationalist realizations and ideologies, it does not give a lot of space for other preoccupations (Latouche, 1979). (The reader here can also consult *Environmentalism* in which T. O'Riordan, 1976b, discusses relevant literature on the hierarchy of national goals, derived from A.H. Maslow.)

In the early 1970s, economic growth was equated with increased provincial autonomy. The feeling of being an underdeveloped nation socially (lower wages than English Canadians for similar jobs, high unemployment) and economically (dependence upon foreign investments) slowed the importance attributed to ecological questions. In the same vein of thought, Latouche (1979) suggests that the participation in group activity is related to the socio-economic status of a population. Being in lower (income, social status, and so forth) brackets than Americans or English Canadians, it is not surprising that the québécois had not been anxious to start anti-pollution movements.

Another reason for the difficulty of organizing environmental protection in Quebec is the fact that the initiatives to fight pollution of the environment have been taken by the federal government. It has done nothing to favour the québécois who have been penalized by their cultural (linguistic) and political (Quebec nationalism) distance from Ottawa. The problem became crucial when during the federal-provincial conference of 1970 Ottawa indicated its desire to control all water courses under federal as well as provincial jurisdiction to be able to

fight pollution adequately in the name of "national interest." It created another subject of disagreement between the provinces and Ottawa especially Quebec, which had fought over the past ten years to repatriate to the province all centres of decisions on provincial matters (Latouche, 1979; Rogel, 1981). With the incessant nationalism conflict between Quebec and Ottawa, and the syndrome of being an underdeveloped province, the French fact is significant.

In Quebec, the francophones are a majority; they do not have to demonstrate by exaggerated participation that they belong to their milieu. On the contrary, the anglophones of the province need to demonstrate their appartenance. It is concretized by major English representations in associations; environmental associations are no exception. It might also be the nature of the environmental groups themselves talking about the survival of the planet Earth that can explain the backwardness of involvement of the francophone québécois. For centuries they had based their identification on their parish, this small horizon limited by the few streets of their neighbourhood (Latouche, 1979). In spite of that the fight for the environment has followed the same patterns in Quebec as elsewhere in Canada:

- concerns over the environment are initiated in urban centres (Sandbach, 1980);
- concerns are slow to spread due to the fact that public opinion places the quality of life related to the environment after other priorities such as inflation, unemployment, the economy (CROP, 1979; T. O'Riordan, 1976b; Rogel, 1981; Sandbach, 1980); and
- groups' actions are ephemeral, except at times of press releases or letters of protest they are often completely ignored (Latouche, 1979; Rogel, 1981)

The failure of environmental questions and actions to secure first place on the priority agenda is also due to the preference and ability of concerned politicians to raise them in front of their peers. They have determinedly demonstrated that the major responsibility for deterioration and protection of the environment belongs to the individuals, saving at

the same time the goat and the cabbage. When everybody is responsible, who really is? However, over the past 15 years in Quebec there has been a process of apprenticeship to broader political action related to the environment. Education about environmental matters has transformed the perception of individual implication from naive to legitimate intervention. There has been a new awareness after the Baie James experience that environment can be used as an effective tool for political lobbying; so environment cannot be totally cut from a political vision (Latouche, 1979).

With the Environment Quality Act and its major amendments over the past fifteen years, especially the application of a mandatory assessment process, Quebec has now all the necessary conditions to deal adequately with its environment. However, it has to be kept in mind by the administration and the population that environmental problems do not stop at a frontier. All the attempts and efforts, whatever the level of government, should be coordinated to overcome the "not in my backyard" mentality and too often project-by-project practices. It is time today to actuate intellectual concepts.

## 5.4 The EIA in Action Through Two Case Studies

The main concern above has been to discover whether Quebec is different when questions of environmental protection are raised. In Chapter IV, the author has discussed the federal and provincial environmental impact assessment and review processes and their place in the decision making process. Comparison of the Canadian EIAs—in principle and in practice—has permitted the isolation of the major characteristics proper to the Quebec EIA process. Section 5.2 presents in considerable detail the different aspects of the assessment process as practiced in the province of Quebec.

Although all the Canadian jurisdictions have adopted specific measures to assess these projects that may affect the human and natural environment, Quebec has developed an environmental assessment process which is one of the culminating points of its socio-political evolution

over the past twenty-five years.

Although environmental actions may have developed slower in Quebec than in Canada or the United States, nevertheless it has made the application of the Environmental Quality Act no less credible or efficient (see section 5.3). The first priority of the Quebec government has been to make its EIA process a legal one with all the authority that a Cabinet directive fails to secure. Quebec has also considered its territorial characteristics by adopting special social impact assessment where Natives are the inhabiting majority. In addition, Quebec has appointed an independent body outside the Ministry of the Environment to review any assessment statement, to monitor public participation and, no less important, to inform the population about the components of a project and of the EIA process. Furthermore, special attention has been given, in the Environment Quality Act and in the relevant Regulation, to projects which are automatically subject to the process of assessment and review. Finally, Quebec has given the government and/or the Ministers-in-Council the task of deciding whether or not to issue a certificate of authorization. It permits the Ministers in Assembly to revise the order of priorities and then decide about the necessity of authorizing such undertakings.

To clarify further the process of environmental impact assessment in action, two projects in the province of Quebec will be presented. It would have been iteresting to compare the application of the Quebec EIA for the same type of project in Southern Quebec and in a treaties' territory, but there has been no situation available to permit comparative study of the specific assessment process in effect in the different territories of the province. It could have been convenient to analyze the EIA process applied to various proposals in the same Quebec territory, but because of the established jurisprudence it is difficult for any proponent to escape the step-by-step procedure of the EIA. Therefore, from one project to another the discussion would have mainly confirmed the procedure necessary to obtain a certificate of authorization. It could have been possible to compare the assessment process of proposals

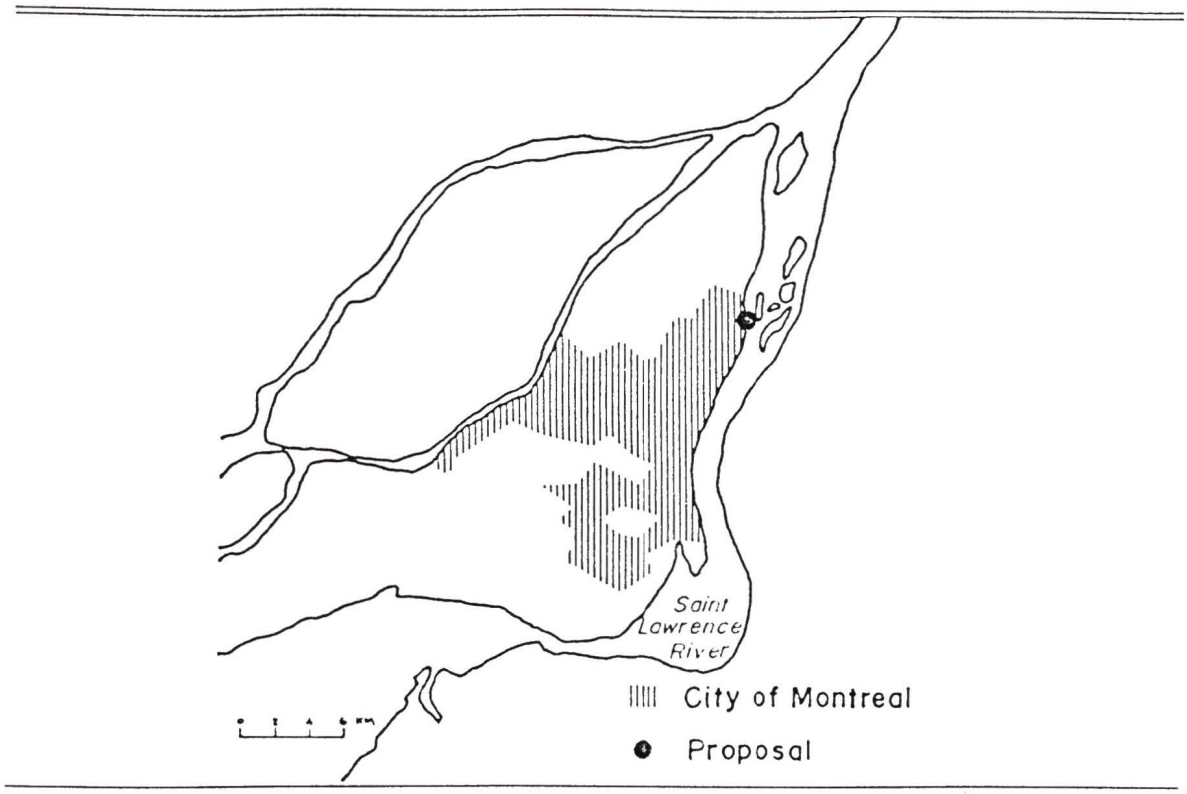
before and after the ratification of the EIA in the Act and Regulations. Unfortunately, previous assessments are not easily available due to the fact that the property rights of such studies have not been clearly established and that access to information is a very new concept in Quebec as well as in the rest of Canada. This comparison probably would have confirmed that decisions prior to the enactment of the EIA process had already been taken a long time before the initiating stage of the environmental assessment study. This is exemplified by the experience of the Baie James development project.

The author has chosen to compare two projects that were assessed and reviewed in the province of Quebec, one under the authority of the Environment Quality Act—the construction of a quay for recreational activity and occasional dumping of snow—and the other under the Administrative Directives of the Federal Environmental Assessment and Review Process—the expansion of the Port of Quebec. The provincial project has been selected after a suggestion of M. Yergeau, former vice-president of the BAPE, and the federal project during personal communication with P. Dansereau, eminent ecologist and scientist at the Université du Québec à Montréal (UQAM, see Appendix C).

### 5.4.1 The Construction of a Quay for Recreation and Occasional Dumping of Snow (Montreal)*

The Communauté urbaine de Montréal (CUM) has to grapple every winter with a 30-day (approximately) problem of clearing and dumping snow. The purpose of the construction of a quay at the eastern limit of the city of Montreal are firstly to complement the recreational activities of an existing park, the Bellerive's park-walk, during three yearly seasons, and secondly to permit the occasional (30-day) dumping of snow from most of the south-

*The information concerning the project has been acquired from the report prepared by the Bureau des audiences publiques sur l'environnement (BAPE), published in 1982 and personal communication with M. Yergeau, former vice-president of the BAPE (Appendix C).




MAP 3: Quay for recreation and occasional dumping of snow, Montreal.

eastern sector of Montreal during the winter (Map 3). The proposed wharf, extending the Port of Montreal by 2.2 hectares, faces the western extremity of a 2 kilometre park-walk. The Bellerive's park-walk is a linear lot rented by the Quebec government to the City of Montreal to offer the neighbouring population access and a window on the Saint Lawrence River as well as to fill the needs for green spaces in the urban centre.

At the time of the proposal the CUM was mainly preoccupied with the increasing necessity for more land to develop its operation "10,000 apartments." A possible alternative was to reclaim the existing surface snow deposit sites for housing construction. A solution had to be found for the elimination of snow. For the CUM,surface snow deposit sites were consuming a lot of land considering the infrequent use of the site during the winter and the lack of use during the rest of the year. The

construction of the quay was offering a good solution to the problem of costly vacant sites.

The long delay between the announcement of the project by the CUM in late 1979 and the first steps to contact the provincial government in early 1981 (Figure 15) had caused the proponent to lose possible eligibility for exemption provided for by the Act (L.Q. 1983, c. Q-2, s. 31.6, 1st para.). In filling and dredging the Saint Lawrence River for the construction of the future facility, the Communauté urbaine had to submit automatically its proposal to the EIA process (O.C. 3134-80 (1980), s. 2(6)). The proponent then faced the difficult task of exemplar. It was the first time in 1981 that such a demand both to construct a quay and to dump used snow directly in a water course necessitated a certificate of authorization under the Environment Quality Act. When the Ministry of the Environment issued the EIA directives to the proponent in July 1981, the major emphasis gravitated around the protection of the quality of the complex natural environment, the Saint Lawrence River, against abusive uses and the quality of life in the quiet urban neighbourhood of Eastern Montreal.

To prepare a conforming EIA statement, the proponent was obliged to examine all the different possibilities to alleviate the problem of eliminating contaminated snow, to research the needs for recreational activities and access to water in that sector of the urban centre, and to collect data on the natural environment of the Saint Lawrence River. Once the general information had been compiled, the proponent was asked to analyze an optimum solution, to determine its impact and the different measures to reduce, eliminate or mitigate them, to determine the measures controlling any residual impacts, and finally to monitor the project. The proponent (the hired consultant) took five months to prepare the EIA statement. At the end of December 1981, the statement was in the hands of the Minister of the Environment who, after an 8-day review, released the complete authorization file for the 45-day public consultation period. Many comments were sent to the Minister of the Environment during that period, questioning the necessity for the construction of a

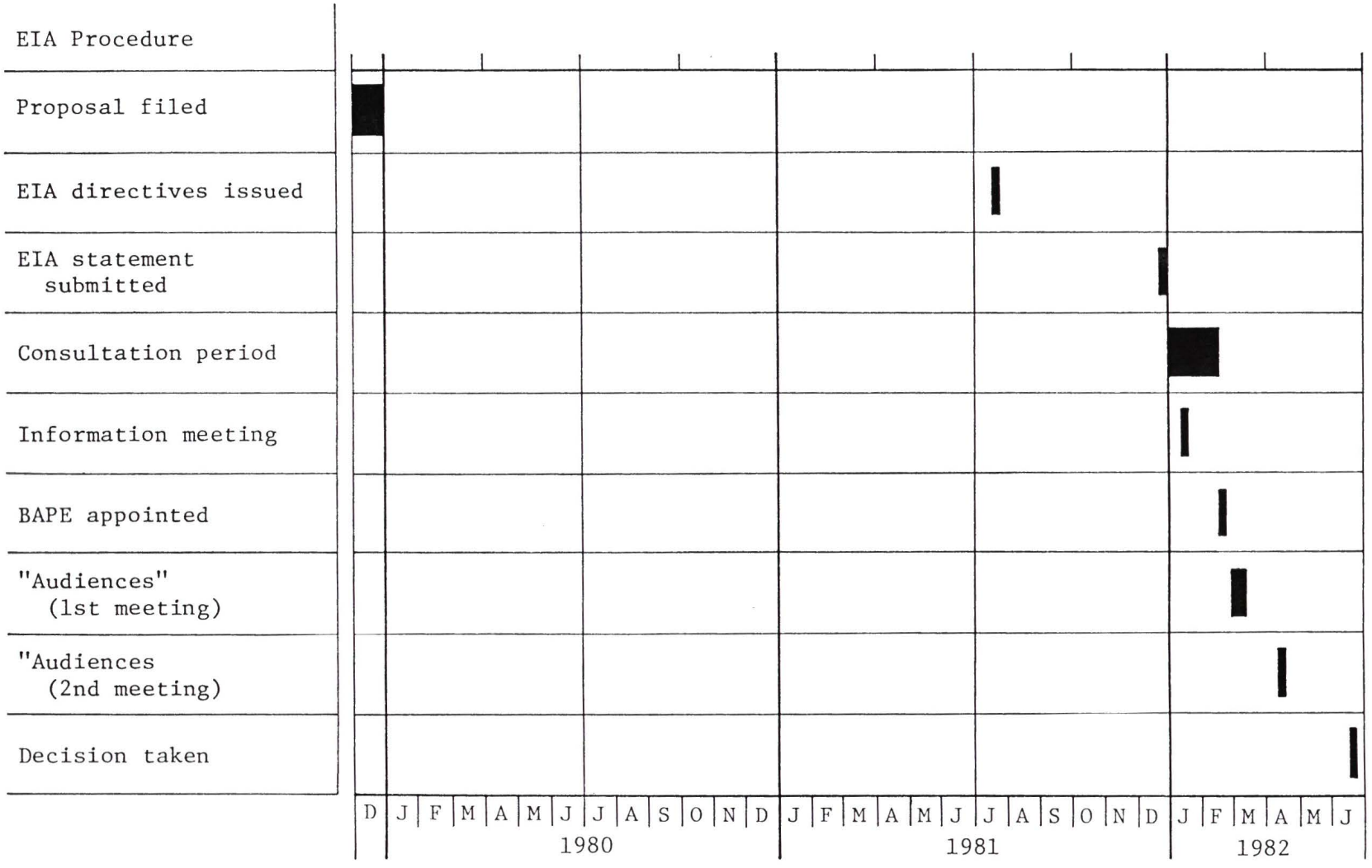



FIGURE 15: Quay for recreation and snow dumping: timetable of the required EIA (prepared by the author, based on the BAPE report).

quay and the credibility of the EIA study. There was a demand for a public hearing. The Minister recognized the non-frivolous character of the request and appointed the BAPE to perform the informational task through the two sessions provided for by the Regulation (O.C. 3735-80 (1980), s. 26-27). After the hearings the BAPE reports of the findings to the Minister for a final decision (Figure 15).

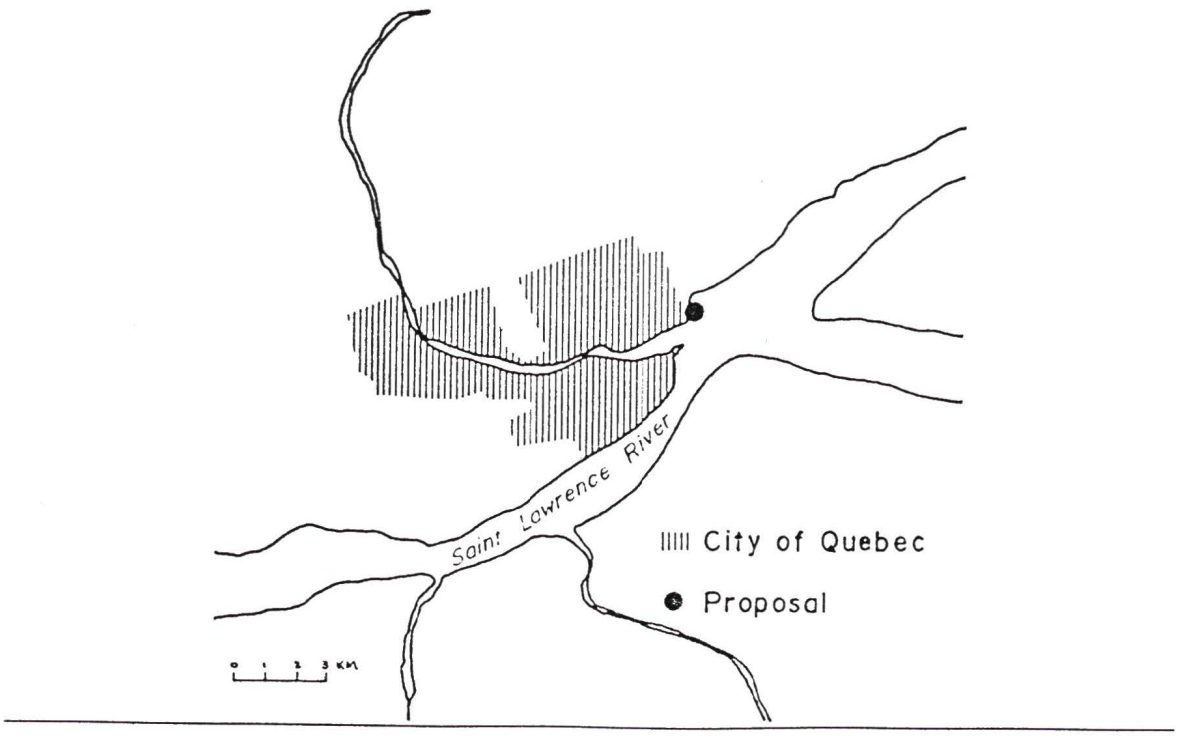
The hearing and the report on the hearing's findings brought to light many deficiencies of the EIA statement as presented by the Communauté urbaine de Montréal. Critics addressed both the Ministry of the Environment and the proponent. The BAPE underlined that only eight days to verify and review the conformity of the statement was not long enough. The acceptance of the EIA as it stood was giving a strong impression that the Ministry of the Environment was too tolerant toward the proponent. Furthermore, a weak EIA accepted by the Minister could cause a real menace to the EIA process itself. The comments were no less tender vis-à-vis the CUM. The BAPE suggested that the proponent did not understand entirely the scope of the new process. In fact the proponent ignored the directives and took its preferred solution, the construction of a quay, as already accepted, and prepared an EIA which studied that solution only. By favouring the quay for the dumping of snow the CUM did not research other techniques or methods for eliminating snow which were less demanding to the environment. Along the same line, the proponent did not adequately prove the necessity for constructing the quay for snow dumping when other valid methods exist. It was financial considerations that brought the CUM to opt for the quay: less surface deposit sites mean more possibilities for housing and an increase in tax revenues.

The BAPE considered that it was not acceptable to dump used raw snow in the Saint Lawrence River without appropriate treatment. It is hard to understand the dichotomous attitude of the CUM. On the one hand it was investing an enormous amount of money in the purification of the archipelagoes and the construction of a water treatment plant, and on the other hand it wanted to dump snow contaminated with dust, oil, heavy

metals, solid wastes and chloride directly into the river. The study never really localized or assessed the consequences of the proposed snow dumping facility. The proponent could have monitored or studied existing dumping sites but it analyzed only one site using insufficient samples and for a short period of time during the winter season. The CUM certainly had shown its good intentions by consulting a variety of existing inventories of the environment compiled for similar projects, but unfortunately it did not provide precise data for the proposed site.

A similar negative criticism was addressed to the CUM research to establish the recreational needs of the eastern sector of Montreal. The proponent had not been able to prove whether the project was aimed towards an increase of green spaces southeast of Montreal, or if the quay was an easier access to the river, or a better fishing facility. Fishing, as a matter of fact, was the only recreational need that the CUM could find to justify the construction of the wharf; it did not, however, survey whether the sport fishermen really wanted that service for the type of fishing they were practicing in the area. The citizens were unanimous, the Bellerive's park-walk should be protected as it was, a unique park giving the necessary access to the river. They suggested that the investment for the betterment of the area should be directed into recreational equipment rather than into a wharf.

Furthermore, the proponent did not adequately research the effects that increased heavy load truck traffic during the winter would have on the quiet neighbourhood of eastern Montreal. From what the BAPE reported to the Minister of the Environment, the proponent did not provide a useful document for planning its territory and protecting its environment as demanded by the Act (L.Q. 1983, c. Q-2, s. 31.1 and following). The government of Quebec, late in June 1982, refused to give the Communauté urbaine de Montréal a certificate of authorization for the construction of a quay for recreational activities and occasional dumping of snow.




MAP 4: Expansion of the Port of Quebec.

### 5.4.2 The Construction and Expansion of the Port of Quebec (Quebec)*

This project in the Port of Quebec concerned the expansion of existing port facilities built in the early 1960s, known as Champfleury, on the north shore of the Saint Lawrence River. The construction of wharves and facilities led to the gradual formation of a natural beach east of the mouth of the Saint Charles River referred to as the Beauport tidal flat, where the Port of Quebec Authority had intended to construct the expansion of the port (see Map 4 above). The Beauport tidal flat, adjoining the boundaries of Quebec City and the City of Beauport, is composed exclusively of a low gradient intertidal zone sheltered from

*All the facts on the project derive from the Environmental Assessment Panel's Report, *Port of Quebec (1984)*, vol. 6, nos. 1 and 4 (1984) and from personal communication with D. Johanson, Director of Communication, Port of Quebec (Appendix C).

strong winds and ice close to deep water. It is an ideal location to handle expected increases in the demand for port facilities and intermodal services. It is also an area which has over the past decade filled the considerable demand for waterfront recreational activities in the core of an urban centre. The site does furthermore sustain an excellent ecological habitat visited by migratory birds.

Originally the plan for expansion called for the construction of a 440-hectare port facility to accommodate marine as well as industrial activities. As envisaged, the expansion would have caused the Beauport tidal flat to disappear completely. Due to the extent of the project on a natural environment, EIA studies were considered necessary. When the Environmental Assessment Panel, in 1979, issued the guidelines for the preparation of the EIA statement (Figure 16), it suggested that after consultation with representatives of the three levels of government the project should be re-examined from the standpoint of its relationship to the overall development of the region. Three years later (see Figure 16), the Port of Quebec Authority presented the Panel with an environmental assessment statement of a new project, a revised 210-hectare expansion, reaching no farther than low tide mark. The industrial use on the proposed site was then completely eliminated.

After the reviewing period and public information meeting in early 1982, the Panel presented to the proponent the deficiencies of the EIA statement of the revised project. In fact, the Panel requested the proponent to describe and analyze the impacts of the project on the region's cultural, social and economic life; in other words to study the overall socio-economic and biophysical effects of the port expansion. The proponent had to outline how the expansion would affect the access to the Saint Lawrence River and the aesthetics of the area; to study the impact of each stage of the project and to elaborate and describe the mitigative measures proposed for each of the stages; and to show satisfactorily that the project would ensure the protection of the tidal flat.

At the end of 1982, 18 months after the reissuing of the revised guidelines to the proponent, the Panel received from the Quebec Port

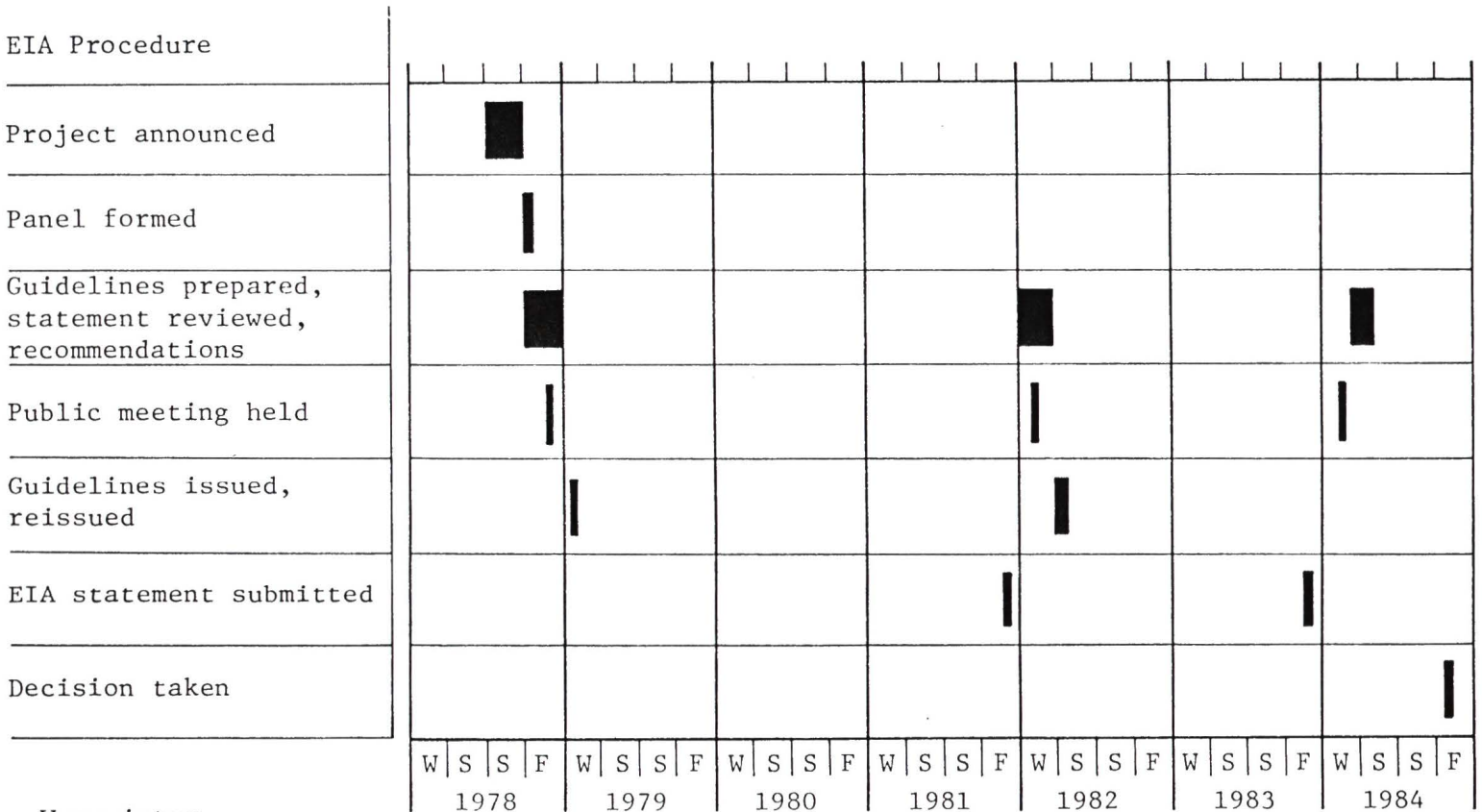



FIGURE 16: Expansion of the Port of Quebec: timetable of the required EIA (prepared by the author, based on the FEARO report).

Authority the EIA statement of another modified project covering this time only 42.5 hectares. The proponent's new choice was based on an experiment using a hydraulic model; with only 42.5 hectares of expansion the port would not encroach on the tidal flat. All the maritime operations were included in 34 hectares separated from the existing recreational activities by a 4 hectare greenbelt (60 to 90 metres wide). The residual 4.5 hectares were presented as a reserved beach in the low tide zone. So the newly proposed perimeter expansion would abut the intertidal zone at the northeastern limit of the existing facility isolated from the recreational activities and the low tide beach area.

The Panel was satisfied with the modified proposal; the proponent in the new study had responded to the Panel's requests of 1979 and 1982 (see Table 16). In March 1984, the public was invited for a second time to give written and oral comments. At the first public meeting of 1982 the Panel received 30 briefs from public interest groups concerned by the project; it helped the Panel to review the statement and to present the proponent with the deficiencies of the study. For the second public meeting in 1984, the Panel received that time 45 briefs criticizing different aspects of the new EIA statement. They were not addressed to the biophysical studies and the proposed mitigative measures on the physical environment which were judged satisfactory, but to the socio-economic impacts of the expansion project. There were still parties asking the Quebec Port Authority how the port expansion would create new employment opportunities or contribute to the betterment of the regional economy and how it would fill those demands for waterfront properties.

The majority of participants were concerned with the proposed measure to secure recreational and port facilities, especially when they were adjacent. On the question of safety of recreational activities, the city of Beauport volunteered to assume the responsibility as well as for planning and administration. It is to the Panel that was reserved the task of dealing with the problems of mitigation and protection of the environment during and after the construction of the facility. Its recommendations can be brought to the following four main subjects:

(1) The protection of the important bird habitat by concentrating the construction period outside spring and fall movements of migragory birds, by zoning the inlet as important bird habitat, and by limiting the expansion to 42.5 hectares.

(2) The protection of the residential population surrounding the tidal flat by monitoring ambient noise as well as noxious emissions during and after each construction activity, and by examining the effectiveness of green belts as dust removal.

(3) The protection of the Beauport tidal flat by forming a monitoring committee, by asking for an EIA each time the Port Authority considers new activity, and by adopting a contingency plan in case of spillage accidents and a preventive plan to reduce environmental risks during activities.

(4) The maintaining of an existent service on the site by ensuring the weather station to continue its activities.

In October 1984, six years after the announcement of the expansion of the Port of Quebec, the Minister of the Environment gave conditional approval to the project. The conditions for the approval were for the proponent to respect the provisions recommended by the Panel and the preparation of a supplementary study to evaluate the Beauport intertidal spaces and their productivity.

### 5.4.3 Discussion of the Case Studies: Comparison and Evaluation

The most obvious factor observed in the timetables (Figures 15 and 16) of the EIAs performed by the federal government (the expansion of the Port of Quebec) and by the Communauté urbaine (the construction of a quay for recreational activities and occasional dumping of snow) is the variation in time consumed from the preparation of the guidelines or directives through to the final decision. It took six years for the federal project while only one year for the province of Quebec before a decision was reached regarding the proposal. How can that discrepancy be explained?

One year appears to be a reasonable time to perform the whole assessment process; however, its spread over a six year period as in the federal case study does not deny the unanimous criticism that the Canadian EIA process is time consuming and money consuming. One reason can be attributed to the proponent, the Quebec Port Authority, which did announce the expansion of the Port of Quebec in the shadow of the mega projects: the expansion was initially ten times too big for what the environment (economic, social, biophysical) could absorb. It was a huge white elephant that was presented at the apex of the mega project hysteria in 1978. Fortunately, during such a long period (six years) the economic priorities had changed coincidentally with the national and international demands for port facilities. In fact, the reduction of the port expansion may not have been totally for the protection of the environment of the Beauport tidal flat, although the environmental considerations were used as the reason for the reduction—it may have been related more to the economic recession and more modest requirements and needs. After six years of study, the presentation of a smaller expansion project had satisfied the environmentalists and recreational users of the tidal flat and at the same time saved the reputation of the Port Authority opting finally for a smaller and more realistic facility. Another explanation may be that the expansion project passed easily due to the waning interest in this project prolonged over a six year period. Used as a tactic or not, the six year period worked to the advantage of the proponent.

Another reason for the longer time lag of the Canadian process compared to the province of Quebec can be related to the Canadian system where all jurisdictions affected by the project have to be consulted. Added to that constraint there is also the EIA process that asks for consultation with agencies or different governmental experts as well as for participation of the public. The Quebec process necessitates consultation, but the federal assessment procedure does not impose a step-by-step method provided for in an Act or Regulation. It then gives leeway and makes the EIA application arduous often leading to backtracking.

(It was only recently in 1984 that the federal government ratified EIA regulations.)

A major weakness of the federal assessment and review process is that it gives the proponent carte blanche to screen a proposal and to decide whether there will or will not be potential effects or impacts on the environment. The situation is totally different when a proponent verifies if the proposal is in the categories provided for by the Act and Regulations as is the case of the province of Quebec. In Quebec a project is (or is not) subject to the Environment Quality Act; the proponent does not have a choice but to prepare the assessment statement. For a federal project, when the proponent has established that there might be certain impacts on the environment, the second step is to try mitigating them in a preliminary or formal assessment statement. All the research and assessment studies of the expansion of the port seem to have aimed mainly at minimizing the possible impacts until they were judged satisfactory. After presenting a first reduction of the expansion the Port Authority had another chance to modify the project and prepare another assessment statement. Contrary to the federal project, the Quebec project cannot be modified: any modification results in forfeiture of the original proposal and forces the proponent to reapply as a new project. Whereas the federal government projects lay on a continuum, Quebec projects do not. The modifications are certainly indicative of the time frame for the federal EIA process.

The time frame and its consequences have helped constrast the EIA processes practiced by the federal and Quebec governments. There is, however, another important difference, while less visible, between the two EIA processes; that of the decision taken or to be made. The Quebec EIA provides the proponent with a certificate or visa which confirms that the proposal conforms to the environment. It does not give the final authorization to start construction. The certificate of authorization, should it be granted to the proponent, would only have allowed the CUM to take steps for other requirements contained under other Quebec Act and Regulations. On the contrary the acceptance of the EIA statement by the

federal Minister of the Environment (in collaboration with the Minister of the initiating department), has permitted the Port Authority to proceed immediately with the expansion of the Port of Quebec. The federal EIA study was not an important item to initiate other permitting requirements but rather the last detail necessary to obtain the acceptance of the proposal as suitable to the environment. Therefore it introduces the controversy as to when an EIA should be prepared and for what purpose a project should be assessed.

The federal assessment is assured to be conducted before the final decision (Table A-3.1). The two words "final decision" suggest however that a previous decision has been taken. The expansion of the Port of Quebec had been set as a priority by the government before its announcement by the Port Authority. The federal environmental assessment process placates the final decision and at the same time mitigates the environmental impacts. Furthermore the decision to allow the project does not return to the government but stays in the hands of the Minister of the Environment. This situation with the Port of Quebec does not deny another unanimous critique addressed to the EIA practiced in Canada, that of being a bandaid process. In Quebec, the decision to grant a certificate of authorization to any person under the Act is taken by the government or the Ministers-in-Council. It is at that point that the question of the priority of the project is discussed. The proposal for the construction of the quay by the CUM was refused according to the recommendations of the BAPE; if the assessment had conformed to the directives, it would be then and only then that the necessity of its construction would have been discussed by the government of Quebec. The province of Quebec performs the EIA before the taking of a decision and its agendization into the priority system. It is required in the Environment Quality Act to consider whether a proposal is ecologically compatible rather than ecologically viable.

No less important in the discussion of the two case studies are the questions of the administration of the EIA exercise and the participation of the public. As already discussed in Chapter IV, the federal

environmental assessment and review process is administered by the FEARO (Federal Environmental Assessment Review Office) set up as an independent agency separate from Environment Canada. Although FEARO is an independent agency, its Executive Chairman has to report directly to the Minister of the Environment. In Quebec it is the Minister of the Environment himself who administers the EIA process. Whether an independent office or not, the administration gravitates for each jurisdiction around the Minister of the Environment. It is not as much the administration of the process as it is the scrutiny of the EIA statement that should be performed by an independent agency. Both governments have instituted the necessary offices called the Federal Environment Assessment Panel and the Quebec Bureau des audiences publiques sur l'environnement (BAPE).

The federal Panel is chaired by the Executive Chairman of the FEARO, who is directly responsible to the administration of the EIA process then in constant rapport with the federal Minister of the Environment. A Panel is appointed for each federal undertaking necessitating assessments and reviews; its major tasks are the preparation of project-specific guidelines, the review of the EIA statement, and the supervision of public meetings. (For more details the reader can refer to Chapter IV.) The Panel's involvement in a project is however ephemeral, terminating with the acceptance of the project. Its role reflects the federal EIA process: as a semi-independent agency the Panel lacks not only authority but also continuity in its tasks at the mercy of changed rules and timing. The Quebec BAPE is a permanent 'bureau' established by prescriptions of the Environment Quality Act and totally independent of the Ministry of the Environment and the Minister responsible. The BAPE can more easily act as a watchdog and direct its comments and recommendations either to the proponent or to the administration of the EIA process as was the case with the CUM's proposal. Its tasks are the compilation of comments—theirs and those of interest groups, the preparation of recommendations following or not the holding of 'audiences' (hearings), and the supervision of hearings when necessary. Contrary to the federal Panel, the Quebec BAPE is orchestrated by

the step-by-step system provided for in the Act; furthermore, the permanence confers to the BAPE a more visible responsibility in the process.

Consultation and/or participation of the public affected by a proposal cannot be realized without appropriate techniques, those of meetings and hearings. The federal government had wanted its assessment and review process as open as possible. For this purpose it asks for public comments and meetings to obtain necessary public reaction as early as possible in the process. Quebec also encourages public meetings but it has instituted, for interested parties, public hearings. In the view of the author there is a difference between public meetings and public hearings. A meeting is conducted with predetermined terms of reference while during a hearing all interventions are usually recorded and acknowledged. This makes hearings more receptive to subsidiary input than meetings and in the same manner affects the output of the exercise of participation. Is it right to talk about public participation in the case of the EIA process? In the two case studies was there perceived participation of the public?

It is recognized that the public in general is characterized by its passivity. The only participation really fulfilled by the public is through political choice at election time. Through personal experiences and evidence of other researchers (see Jain, Urban and Stacey, 1981), what is referred to as 'public participation' is not such, but the activation of any interest groups—whether they be governmental groups or not—belonging to the community. In reality, the information is fed to the public, except that the responses only arise within the awareness of concerned groups experiencing activation. This system precludes individual response in preference to group input. Thus it brings to the forefront the aspect of activation as analyzed in Chapter III and applied to the EIA process in Chapter IV.

To remember how activation is performed, it is appropriate to re-examine the intervening parties of the EIA in practice or as prescribed by Acts and policies as shown in Tables 18 and 19. They are the

government, the public, the experts, and the company. In the two case studies of Port of Quebec and the construction of a quay in Montreal, the major actors are the administrations of the EIA process referred to in the activation system as government; the public; the Panel and the BAPE being the experts; the Port Authority being the proponent and at the same time a federal agency remains in the governmental sphere while the CUM, a local authority in the province of Quebec, is considered as the proponent or company. Once the EIA is in action within the project (as opposed to the activation of EIA in practice, see section 4.2), other actors appear on the scene. They are the interest groups which are classified in the province of Quebec under the following four categories (Rogel, 1981):

- the political groups (le rassemblement des citoyens ou citoyennes de Montréal, RCM; le rassemblement populaire de Québec, RPQ);
- the citizen groups (l'association environnement archipel; l'association des citoyens de Beauport; STOP; etc.);
- the private groups (la chambre de commerce; l'association des biologistes du Québec);
- the consumer groups (le club des ornithologues; le club des véliplanchistes, etc.).

The groups mentioned in parenthesis are just a few examples of those involved in the two case studies.

To establish the scenarios of activation of the interest groups, the reader can return to Table 17 to examine those scenarios of activation when the interest groups connect and communicate with the four main actors involved in environmental impact assessment procedures. In fact, the introduction of this new actor—the interest group—does not modify the theoretical proportional level of high,power and low activation established for the EIAs as presented in Tables 20 and 21 and in Figure 13; on the contrary, it reinforces the hypothesized trends. Looking at the province of Quebec (Figure 13), the involvement of the main actors in the EIA process demonstrates that there is a slight domination of high activation but at the same time it is counterbalanced by

power activation and low activation. When the interest groups enter the scene to deal with the BAPE or vice versa, on a continuum, they perform for the former case in high activation and in the latter in power activation, barely changing the proportion. Whether the government wants the EIA process favouring power, high or low activation, its attitude should be to encourage preferable activation of those performing actors in accordance to its political concerns.

At the federal level, the same situation existing for the EIA in practice is repeated when the EIA is in action in the project. Although the interest groups are the spokesmen for the public in general when meeting with the Panel (experts), the high proportion of low activation remains static because of the federal EIA process itself using the communiqué format for dealing with the public or its spokesmen. Any good intentions of individuals, when in a participatory exercise, on the one hand can be flooded by too much information and on the other hand can perceive that the matter is well taken care of, giving rise to less desire to further respond to it and to activate it. The federal government has wanted the process of EIAs as open as possible, but it has not activated the process in any way.

Participatory exercise is one thing, but there must be activation into it. Should there be an equal proportion of high, power and low activation in Quebec? It is believed that when the three tiered activations are balanced, the whole exercise appears more dynamic. The ideal for a government wanting to initiate or modify its EIA and to promote the participation of all involved actors, will be to study carefully their performance of activation, in other words to look at the actors' activation by pairs as conceived in Tables 17 and 19. It should then give a good idea of both the dynamism and effectiveness of activation of the decision making tool, as well as a view of its possible levels of occurrence. With this theory, and in accordance with its concern, the government might be able to make a decision causing less controversial results. Thus, instead of having participation as an EIA buzzword, in the future it may be more realistic to talk of activation within the decision making process.

# VI.

## SUMMARY AND CONCLUSIONS

Summary. The development of natural resources in Canada has long been practiced for economic growth, expansion and the prosperity it helps to sustain. Since the Constitution Act, 1867 (British North American Act, 1867) has provided the federal and provincial governments exclusive responsibilities for natural resource development, confusion over the ambiguity of the terms have raised incessant questions between the different levels of government. In an attempt to clarify their respective positions, the Constitution Act, 1867 was amended in 1982 to reaffirm provincial ownership of natural resources and to give the provinces greater power over their development, production, export and taxation where it does not conflict with that of the central government.

Over the years, the development of natural resources has necessitated sophisticated technology and extensive amounts of capital to support the increasing scale of the mega schemes. Canada has opened gradually to greater foreign investment. It has consequently given them significant control of natural resources and impaired Canadian autonomy. Until the late 1960s, the practice has been to skim the most desirable resources, ignoring in many instances their renewal or depletion; this is especially significant in the little concern shown by foreign and domestic corporations for the Canadian environment.

By 1970, in the face of environmental and social dangers of further resource exploitation, in the wake of a perceived worldwide energy shortage and depletion of raw materials, in the midst of pollution and health problems and the growing awareness of Canadians across the country, governments recognized the necessity for new policies and for public involvement in their formulation. Both levels of government gradually implemented environmental policies and environmental impact assessment (EIA) procedures with the common objective of not only preventing the deterioration of the environment but also effectively

assessing the possible environmental consequences of future development projects. The benefit of developing natural resources had been recognized while the cost was seen as a deteriorating environment.

The EIA process has been innovative in offering greater possibilities of participation in decision making and access to governmental information. The pattern of interaction in the participatory strategy brought by EIA exists only within an arena which has been described in the thesis as the Canadian political culture. This is best characterized as a pragmatic game wherein the motivation of actors as well as its operation is part of the participation in the Canadian political system.

The EIA introduced in Canada in the early 1970s is perceived as having been shaped in a dichotomous context. As a rational (prescriptive) decision making tool, EIA has helped set decisional activities in a routine manner, but due to the constitutional debates, the lack of expertise and often necessary data, and at the same time due to the acceptance of crisis mentality (hazards related to the development of resources in any environment) it has also presented an aura of incrementalism (descriptive) where a decision follows more of a non-routine pattern. The decision making process with which the EIA has been associated is then consistent with the multiple-sequence decision making theory.

As a decision making tool, the EIA has been devised to encourage the integration of environmental considerations into proactive planning, and to help the public sector make decisions. As an assessment technique, EIA examines the existing conditions of the environment, evaluates its probable changes, and provides environmental guidance contained in the environmental impact assessment statement and recommendations. As a forum for participation, the EIA aims to decentralize the making of a decision and offers the involved actors, be they from inside or outside the public service, a change to expose their view and confront those of others. The whole ambience of participation is closely related to the location of the EIA in the decision making process. To verify whether EIA's location in the decisional exercise has any bearing not only to

the validity of its outcomes but also on participation (first objective of the thesis*), the author has hypothesized the concept of *activation* which examines the way actors deal and perform in pairs. The concept of activation does not represent the participation of actors in a conflictual ambience or as a quest for consensus where communication techniques and adequate coordination are utilized to alleviate the rupture between the actors. Activation specifies and analyzes the inherent interaction rate of actors in response to their perceived roles and attitudes. The concept of activation is theorized as the umbrella under which a pair of actors connects and communicates.

This concept of activation theorized as a preventive experience attempts to circumscribe the whole exercise of participation in simpler format than conflict resolution. To do so, activation has to occur with the EIA before a decision has been made and before the decision maker has developed a proprietary interest in an idea and begins to resent criticisms or suggestions for change.

The application of the concept of activation to the EIAs implemented by the federal and provincial governments of Canada has permitted an appraisal. Further, it permits visualization of (1) the degree of openness of the Canadian assessment processes to scrutiny, verified by their proportion of high activation; (2) the efficiency of the participatory exercise, verified by their proportion of low activation; and (3) the authority of the EIAs, verified by the proportion of power activation into them.

Although both the federal and provincial governments have all adopted the EIA policy, the comparative assessment has underlined the lack of uniformity between the federal and provincial practices according to the degree of authoritative basis they have chosen and their integration and requirement within the licensing system. In fact, the

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*In order to validate the significance of EIA's outcomes (EIA statement and recommendations) and to maintain the credibility of the information generated by the various participants, EIA has to be performed at a predecisional stage complemented by an activation exercise.

Canadian EIAs are not all legally binding processes and the EIA statements are not always sound documents. The Canadian environmental assessments are discriminatory as they do not always address all the proposed undertakings. As for the discretionary power given to the decision maker in the Canadian political culture, it remains constant and evident in both federal and provincial EIA processes. EIA's credibility is very often jeopardized because (1) they resemble assurances to go ahead with a specific project, or (2) they are investigated too late in the management process, or (3) they do not provide a monitoring phase. In general, the Canadian EIAs tend to be conducted in response to specific proposals consequently not as early in the decision making process as anticipated, to assess limited options and alternatives with short-sighted perspective, and to be reactive and justificative rather than a priority planning instrument.

The important variations suggested by the comparison of the EIAs as practiced in Canada have emphasized once more the regional character of the country. It is significant in the order and importance granted from one region to another to EIA as policy priority and as effective solutions to the decision making process. The regional character of Canada is particularly evident in the case of Quebec (second objective of the thesis*). Quebec is distant and dissonant from the Canadian political culture in its socio-political paradigm often symbolically identified by the linguistic dimension.

In the late 1960s, when environmental issues were of rising concern in Canada, Quebec was seen to lag behind the other provinces in lacking protection of the environment. In fact, Quebec was preoccupied by the repatriation to the province of all centres of decision on provincial matters, together with the questions of nationalism and economic growth. The involvement of the French-speaking population of

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*The EIA procedure adopted by all the Canadian governments, has been adopted to serve regional priorities, needs, and socio-cultural contrasts. This is recognized in the province of Quebec paradigm which has set the implementation of environmental management and EIA related policy at a delayed pace.

Quebec in environmental groups was inhibited by its economic status in the lower economic brackets, by its unnecessary need to demonstrate its majority in groups' activities, and by its identification to a rather limited milieu defined as the parish biasing its view of a wider world.

Today Quebec has all the necessary conditions to deal adequately with its environment. After the experience of the Baie James in 1971, the Quebec government enacted the Environment Quality Act (1972), with the purpose of adding to project evaluation the environmental factor. The law was later amended by the Parti Québécois which opted for an EIA secured in a detailed statutory framework. By the same token it institutionalized participation. A permanent and independent body, the BAPE was established to review the EIA statement, to monitor the participation task and the two-step hearings, and to inform the public. EIA became obligatory for projects as a result of the Act and its relevant regulations without discrimination as to whether a project is initiated in the public or private sector. The possible exemption of a project to the procedure has also been reduced to the minimum. Furthermore, Quebec has considered in the Environment Quality Act the regional particularities of its territory and distanced itself from the rest of Canada in its application of EIA in relation to the location of its resource development projects. It instituted a specific assessment procedure for the territories under Native treaties and specifically exempted the assessment of La Grande development. As for the decision of whether or not to issue a certification of authorization, it has been given to the Government of Quebec and/or the Ministers-in-Council.

The evaluation of two case studies illustrating the federal and Quebec assessment processes, reinforce further the regional characteristics of the Canadian EIA procedures. Their differences derive from their bases—legal in Quebec and administrative procedure at the federal level. Where federally the proponent is given carte blanche in screening a proposal and deciding whether or not there will be necessity to comply with the Federal Environmental Assessment Review Process, the

Environment Quality Act and the relevant EIA regulations of Quebec provide a list of projects for which assessment is necessary and/or automatic. This questions the basic terms of reference for conducting the EIA: the federal process examines whether a project is ecologically viable and the Quebec process considers whether a proposal or project is compatible with the environment.

Many more incongruities have been observed in the EIA in action. They concern the time consumed from the preparation of the specific assessment guidelines or directives through to the final decision; the location of the assessment in the decision making process; the scrutiny of the EIA statement; the level and proportion of activation; and the outcome of the final decision whether a go-no-go project approval as in the federal procedure, or a certificate of authorization to obtain other pertinent licenses, as shown in Quebec.

Concluding remarks. Environmental quality is an emotional topic. In the late 1960s it had hardly displace other urgent 'bread-and-butter' issues. Although interest groups awakened public awareness of environmental deterioration and danger of uncontrolled natural resource exploitation, their duration has been ephemeral and sometimes completely ignored by politicians. Environment in Canada is not and never was a firm governmental priority for any extended period. In fact, in the Canadian system, it depends upon the preference and ability of concerned politicians to raise the protection of the environment to a priority and secure it in first place. However, efforts should not stop here: the progressive environmental learning acquired by the population today challenges the politicians to embark on another stage, that of actuating intellectual concepts regarding the quality of life in the environment.

If environmental issues have too often been put on the backburner in the Canadian agenda, the attention given to environmental management and EIA related policy and their adoption by the federal and provincial governments have been both dissimulated within jurisdictional matters

and/or other priorities. The situation was worst in Quebec where the EIA process was implemented in the shadow of the announcement of 'La Grande' development. Its benefits were lessened by the confusion of the post-October Crisis and the preparation of the Referendum task. Today, all Canadian governments have developed a form of EIA practice suitable to their regional requirements. This is particularly evident in the case of Quebec which has institutionalized its EIA prescriptions and procedures in relation to the location of its resource development undertakings and whether or not in territories under Indian treaties.

To be forceful and to provide environmental guidance for decisions, EIA has to be conducted at an early stage of the decisional process. It is paramount for the performance of one of its main tasks, that of participation. But because the EIA itself is restricted to the evaluation of individual projects in most of the provinces, it is brought into play very late in the planning and decision making process. Added to that, the comparative study of the EIA in practice and the examination of the EIA in action in the project of the Port of Quebec expansion by the federal government has underscored the fact that if the EIA is performed before a final decision, it is expected that a decision had been taken previously. Federal EIAs are performed specifically for projects initiated by the public sector where a prior decision has already been made. This can be true for other Canadian jurisdictions which assess principally public undertakings. After a preliminary decision, participation becomes more of a conflict resolution exercise in reaching consensus. For effective participation to occur, EIA should include activation as a working process and be placed earlier on the agenda, prior to *any* decision. It becomes proactive rather than reactive.

Whether examined in principle, in practice or in action, the Canadian EIA still suffers today from the same short-sighted view of its early days, especially shown by the number of environmental catastrophies which continue to occur. The potential danger of development projects are difficult to prove except after the fact. The EIA

procedure has maintained its reputation of addressing the symptoms instead of the causes. At a turning point, with almost fifteen years of experience, EIA in Canada needs stamina. Four steps are recommended in an effort to help increase the dynamism and credibility of the EIA for future resource development projects as well as for the continuity of the existing undertakings.

(1) Environmental impact assessment should be addressed in future to all natural resource development projects. It will help discourage the narrowness of project-by-project practice.

(2) Environmental impact assessment should be scrutinized as an homogeneous, national and single data base procedure. It will permit:

- the recovery of data gathered from past and present experiences and create a bank of data and reference maps useful not only for environmental matters, but also within any other planning and management process;
- the compilation of Environmental Land Reserve maps from basic general themes like Nordicity regions, territories under Indian treaties, biogeoclimatic zones, and so forth;
- the establishment of a uniform authoritative procedure encouraging cooperation among all the Canadian jurisdictions and reducing the overuse of discretionary power.

(3) Environmental assessment should be initiated early in the environmental management and decision making process. It will help increase the credibility of EIA's recommendations and will enhance the performance of positive participation within the terms of "activation." The earlier the assessment is performed before a decision, the longer will be the time available to complete the study.

(4) Monitoring procedures should be implemented as a logical continuation of the environmental assessment studies. Once environmental assessment on a national basis has been established and experiences —past and present—compiled, the exercise will be oriented more on a learning-by-doing operation according to previous successes and failures.

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# APPENDIX A

## 1. Environmental Statutes and Regulations in Canada

Canada.
- British North America Acts, 1867-1976, 30 and 31 Victoria, c. 3 (renamed Constitution Act 1867).
- Constitution Act, 1982; CP45-22/1982, Part I, Schedule B.
- Government Organization Act, 1979, SC 1979; c. 13.
- Environmental Assessment and Review Process Guidelines Order, SOR, 84-464.

Newfoundland.
- Environmental Assessment Act 1980; SN 1980, c. 3.
- EIA Regulations; 225-84.

Prince Edward Island.
- Planning Act 1974; RSPEI 1974, c. P-6.
- Environmental Protection Act 1975; SPEI, 1975, c. 9.

Nova Scotia.
- Environmental Protection Act 1973; SNS 1973, c. 6.

New Brunswick.
- Clean Environment Act 1973; RSNB, 1973, c. C-6.
- Amended; SNB 1983, c. 17.

Quebec.
- Loi sur la qualité de l'environnement 1972; RSQ 1983, c. Q-2.
- Evaluation des impacts sur l'environnement dans le territoire de la Baie James et le Nord québécois; 3452-79.
- Evaluation des impacts sur l'environnement dans une partie du Nord-Est québécois; 2705-81.
- Evaluation et examen des impacts sur l'environnement; 3734-80.
- Bureau d'audiences publiques sur l'environnement—règles de procédure; 3735-80.

Ontario.
- Environmental Assessment Act 1975; RSO 1980, c. 140.
- EIA Regulations; RRO 1980, 293; 775-82; 414-83; 783-83.

Manitoba.
- Clean Environment Act 1972; SM 1972, c. 76.

Saskatchewan.
- Environmental Assessment Act 1980; SS 1980, c. E-10.1.

Alberta.
- Land Surface Conservation and Reclamation Act 1973; RSA 1980, c. L-3.

British Columbia.
- Environment and Land Use Act 1971; RSBC 1979, c. 16.
- Environment Management Act 1981; SBC 1981, c. 14.
- EIA Regulations; 330-81.
- Order-in-Council, Cowichan Estuary; 3339-77.
- Orders-in-Council, Fraser Estuary; 908-77.
- EIA Regulations, Cowichan Valley; 486-77.

2. Resource Persons

CANADA:
Federal Environmental Assessment Review Office
Fontaine Building, 13th Floor
Hull, Quebec, K1A 0H3
- M.P. Harrisson, Executive Chairman
- Carol Martin, Secretary

NEWFOUNDLAND AND LABRADOR:
Environmental Assessment Division
Department of the Environment
P.O. Box 4750
St. John, Newfoundland, A1C 5T7
- David H. Barnes, Director

PRINCE EDWARD ISLAND:
Community Planning
Department of Community and Cultural Affairs
P.O. Box 2000
11 Kent Street
Charlottetown, Prince Edward Island, C1A 7N8
- Dennis B. Friesen, Director

NOVA SCOTIA:
Environmental Assessment
Department of the Environment
P.O. Box 2107
Halifax, Nova Scotia, B3J 3B7
- W.A. Coulter, Environmental Engineer

NEW BRUNSWICK:
Environmental Services Branch
Department of the Environment
P.O. Box 6000
Fredericton, New Brunswick, E3B 5H1
- David I. Besner, Director

QUEBEC:
Bureau d'audience publique sur l'environnement
Gouvernement du Québec
5199, rue Sherbrooke Est, bureau 3860
Montréal, Québec, H1T 3X9
- Pierre Auger, Analyste

ONTARIO:
Environmental Assessment Branch
Ministry of the Environment
135 St. Clair Avenue West
Toronto, Ontario, V4V 1P5
- Paul H. Rennick, Director

MANITOBA:
Environmental Management
Manitoba Environment and Workplace Safety and Health
P.O. Box 7, Building 2
139 Tuxedo Avenue
Winnipeg, Manitoba, R3N OH6
- Bryan Blunt, Chief, EARP

SASKATCHEWAN:
Coordination and Assessment Branch
Saskatchewan Environment
1855 Victoria Avenue
Regina, Saskatchewan, S4P 3V5
- Ron J. Quinn, Research Officer

ALBERTA:
Environmental Evaluation Services
Environmental Assessment Division
982 - 106 Street
Edmonton, Alberta, T5K 2J6
- F.J. Schulte, Director

BRITISH COLUMBIA:
Planning and Resource Management Division
Ministry of the Environment
777 Broughton Street
Victoria, British Columbia, V8V 1X5
- W. Bruce Morgan, Resource Geographer, Planning & Assessment Branch
- Bryan R. Gates, Coordinator, Generation & Linear Project Analysis
- Judy A. Wigmore, Project Analysis Branch
- Raymond L. Crook, Metal Mines Steering Committee

## 3. EIA in Canada and the Provinces

To facilitate the comparison of the EIA practiced in Canada and the provinces, the author has summarized the information under the two following topics: Responsibilities (Table A-3.1), and Undertakings and Procedures (Table A-3.2). Furthermore, the author has collected the lists of projects assessed by the federal and provincial administrations within Tables A-3.3 and A-3.4.

Another task has been to map those projects formally assessed by the federal and provincial procedures. To this date, only the federal government has published a locational map of its assessed projects (Map A-3.1; information updated by the author). In the provinces, the lists of the projects are available but their compilation for the entire country has not yet been carried out (such lists were requested by the author from each EIA related provincial service). The resulting map (Map A-3.2, prepared by the author) is a genuine attempt considering the diversities of techniques used by the provinces to process this information.

TABLE A-3.1: EIA in Canada and the Provinces: Responsibilities

| | Newfoundland and Labrador | Prince Edward Island | Nova Scotia | New Brunswick |
|---|---|---|---|---|
| EIA relevant legislation /policy; date of acceptance | •Environmental Assessment Process (1976)<br>•Environmental Assessment Act (1980) | •Environmental Impact Screening: Directives (1973)<br>•Planning Act (1974)<br>•Environmental Protection Act (1975); amended (1980) | •Environmental Protection Act (1973); amended (1975) | •Environmental Assessment Procedure: Directives (1975)<br>•Clean Environment Act of 1973; amended (1983) |
| EIA Regulations; date of acceptance | •EIA Regulations (1984) | — | — | — |
| Administration of EIA | Minister of the Environment helped by Environmental Assessment Division, Dept. of the Environment. | Dept. of Community and Cultural Affairs (or a designated member of the Executive Council). | Dept. of the Environment helped by Environmental Assessment Division. | Environmental Services Branch, Environment New Brunswick. |
| Preparation of EIA by a proponent: Who is he? | Provincial department or agency, or private corporate body, or individual. | Provincial department and/or agencies. Major towns are not included. | Private partnership or corporation, municipality or provincial department, agency or crown corporation. | Provincial agencies, departments or crown corporations. |
| Decision to grant or to refuse a project | Cabinet | Cabinet | Minister of the Environment | Cabinet |
| Information provided to the public | During preparation of EIA statement the proponent must develop a public information program. | — | Prior to drafting guidelines, following the preparation of guidelines, during the preparation of EIA statement, or following the submission of the final EIA statement. | When EIA report is accepted, it is released to the public. |
| Holding of public hearings | Environmental Assessment Board | Land Use Commission or Public Utilities Commission or others | Environmental Control Council | Dept. of the Environment |

- continues -

Table continues

| | Quebec | Ontario | Manitoba | Saskatchewan |
|---|---|---|---|---|
| EIA relevant legislation /policy; date of acceptance | •Loi surla Qualité de l'Environnement (Environment Quality Act)(1972); amended (1978) | •Environmental Assessment Act (1975); amended (1976, 1977) | •Environmental Assessment Review Process and Planning Act (1975)<br>•Clean Environment Act of 1972; amended (1978, 1980) | •Environmental Impact Assessment: Directives (1976)<br>•Environmental Assessment Act (1980) |
| EIA Regulations; date of acceptance | •EIA Regulations Relating to James Bay and north-west of Quebec (1979)<br>•EIA General Regulations (1980)<br>•Regulations concerning "les Audiences" (Hearings)(1980)<br>•EIA Regulations Relating to a part of north-east Quebec (1981) | • EIA Regulations (1976) revised (1980); amended (1982, 1983) | — | — |
| Administration of EIA | Minister of the Environment helped by the Service d'analyse des études d'impact (SAEI) (Technical Services), Ministry of Environment and Evaluating Committee in Natives' Territories. | Environmental Assessment Branch, Environmental Planning Division Ministry of Environment. | Environmental Assessment and Review Agency (EARA), Manitoba Environment and Workplace Safety and Health (or a designated member of the Executive Council) | Environmental Coordination and Assessment Branch, Saskatchewan Environment. |
| Preparation of EIA by a proponent: Who is he? | Any person. | Provincial department, agency or provincial public body, a municipality, or a private corporate body, or individual (unless exempted). | Provincial department, or agency, or provincial crown corporation. | Provincial department or agency, provincial crown corporation, municipality, private corporation or individual. |
| Decision to grant or to refuse a project | Government or delegated committee of Ministers; Deputy Minister in Natives' Territories. | Minister of Environment with Cabinet approval, or the Environement Assessment Board with Cabinet approval (if hearing is requested). | Cabinet. | Minister of Environment gives ministerial approval. |
| Information provided to the public | When the EIA statement is received by the Minister of Environment it has to be released to the public. | After being reviewed the environmental assessment and its coordinated review are released to the public by the Minister of the Environment. | During preparation of EIA, the proponent may elect to introduce citizen involvement and to include public concerns, recommendations and criticism. The Minister may give notice of receipt of the EIA. | In the preparation of EIA, the proponent is required to undertake a public participation program. |
| Holding of public hearings | Bureau d'Audiences Publiques sur l'Environnement (BAPE) | Environmental Assessment Board | Environmental Assessment Review Support Services, other appropriate body when project proceeds subject to mitigating measures. | Board of Inquiry |

- continues -

Table ' continues

| | Alberta | British Columbia | Federal Lands Canada |
|---|---|---|---|
| EIA relevant legislation /policy; date of acceptance | •Land Surface Conservation and Reclamation Act (1973) | •Environment and Land Use Act (1971); amended (1977)<br>•Environment Management Act (1981), and about 43 other statutes | •Federal Environmental Assessment and Review Process: Directives (1973); adjusted (1977)<br>•Government Organization Act (1979) |
| EIA Regulations; date of acceptance | — | •Orders-in-Council concerning: Fraser Estuary, Cowichan Estuary (1977)<br>•EIA Regulation Relating to Cowichan Valley (1977)<br>•EIA Regulations (1981) | •Environmental Assessment and Review Process Guidelines Order (1984) |
| Administration of EIA | Minister of Environment helped by Environmental Evaluation Services, Environmental Assessment Division, Alberta Environment. | Cabinet Committee:<br>•Environment and Land Use Committee (ELUC)<br>•Environment Assessment Committee, etc. chaired by Minister of the Environment. | Federal Environmental Assessment Review Office (FEARO). |
| Preparation of EIA by a proponent: Who is he? | A person, company, provincial agency or crown corporation. | Any person. | *INITIATOR:* federal department or agency. *PROPONENT:* company, province or other within the scope. Proprietary crown corporation and regulatory agency are excluded. |
| Decision to grant or to refuse a project | Cabinet. | Minister of Environment or Deputy Minister on behalf of Minister. | Minister of Environment and Minister of initiating department. |
| Information provided to the public | In preparation of the EIA statement, the proponent is required to carry out public involvement programs. | When further study is required after a preliminary environmental assessment, public consultation programs may be included. | As early as screening process, the initiator is expected to provide information on the proposal to the public. |
| Holding of public hearings | Environment Council | Environment and Land Use Committee (ELUC), or other committees | Environmental Assessment Panel |

Source: Compiled by the author, based on data from Appendices A and B and FEARO Summary of EIA practices in Canada (1983).

TABLE A-3.2: EIA in Canada and the Provinces: Undertaking and Procedures

| | Newfoundland and Labrador | Prince Edward Island | Nova Scotia | New Brunswick |
|---|---|---|---|---|
| When formal assessment is conducted | Prior to the commencement of any undertaking and before proceeding with final design. | Before a decision for each important undertaking (in the opinion of the Minister). | Before the approval of an undertaking. | Prior to making a decision on whether or not to proceed with a project. |
| Which undertaking is assessed | Any enterprise, activity, project, work, structure, policy, proposal, plan, or program including a modification, an extension, an abandonment, a demolition and a rehabilitation thereof. | Majority of proposed industrial project (qualified for DREE grants); construction, extension, improvement or addition of any utility line, plant or system over $5000; any important use of land (in, over, or under land). | Major development project (qualified for DREE grants); two classes of projects, mine and highway; any project subject to the permitting processes (administered by DOE). | Any enterprise, work, activity, project, structure, or program designated by regulation to be an enterprise, activity, work, project, structure or program. It includes a modification, an extension, an abandonment, a demolition, and a rehabilitation. |
| Undertaking is screened by proponent, by government body or subject to regulation | Screening by Environmental Assessment Division in consultation with other resource management agency (subject to regulation since 1984). | Screening by agency or agencies having an interest in project. | Screening by Environmental Assessment Division, Department of the Environment. | Screening by Environmental Services Branch, Environment New Brunswick. |
| Preparation of preliminary assessment (PIA) and/or formal assessment (EIA) | PIA and/or EIA | EIA | EIA | EIA |
| Preparation of EIA:<br>A. project specific guidelines<br>B. directives or scoping (considered project specific guidelines) | A | A | A | A |
| Monitoring program carried out | Yes, by proponent throughout construction and operation. | — | — | — |

- continues -

Table continues

| | Alberta | British Columbia | Federal Lands Canada |
|---|---|---|---|
| When formal assessment is conducted | Any operation or activity that will result or is likely to result in surface disturbance. It includes one or more of the following surface disburbances: linear, extractive, impoundment, or intensive land use, specifically oilsands recovery schemes, coal mines, thermal or hydro power generation.* | Any existing or proposed work, product use or resource use that has or potentially has a detrimental impact which occurs when a change in the quality of air, land or water substantially reduces the usefulness of the environment or its capacity to support life. Others are specified by terms of reference. | New federal project, program, and activity having potential adverse effects on the quality of the natural environment. |
| Which undertaking is assessed | When, in the opinion of the Minister, an undertaking is likely to or will result in disturbance. | Where the Minister considers that an undertaking would have a detrimental impact, or before obtaining energy certificate. | As early as possible, before final decision. |
| Undertaking is screened by proponent, by government body or subject to regulation | Screening by Committee of Alberta Environment Directors. | Screening by proponent or by Environmental Assessment Committee, or subject of Utilities Commission Regulation. | Screening by proponent (subject of Regulation since 1984). |
| Preparation of preliminary assessment (PIA) and/or federal assessment (EIA) | EIA | PIA and/or EIA | PIA and/or EIA |
| Preparation of EIA:<br>A. project specific guidelines<br>B. directives or scoping (considered project specific guidelines) | B | A | A |
| Monitoring program carried out | — | Yes, by any Cabinet Committee as appropriate. | — |

*Projects, refineries and petrochemical plants, sour gas plants, transmission lines, pipelines, recreation complexes and water resource developments.

Source: Compiled by the author based on data from Appendices A and B, and FEARO Summary of EIA practices in Canada (1983).

Table continues

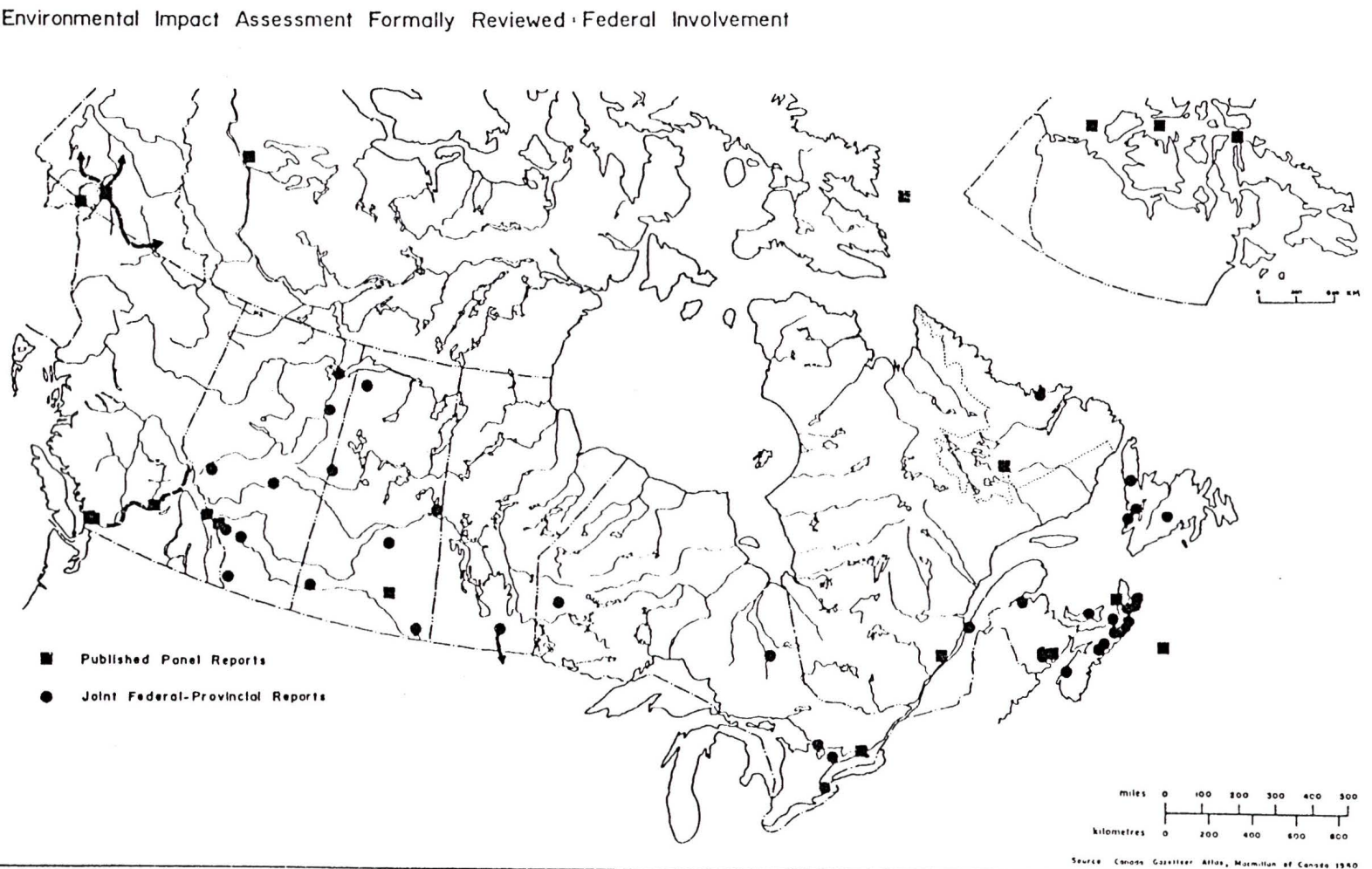
| | Quebec | Ontario | Manitoba | Saskatchewan |
|---|---|---|---|---|
| When formal assessment is conducted | After filing a written notice before issuance of certificate of authorization (subject to regulation). | Before is issues license, permit, approval, permission or consent (subject to regulation or exemption). | After a submission has been considered. | After filing a proposal for undertaking (subject to the Act). |
| Which undertaking is assessed | Any construction, work, activity or operation undertaken or carried out according to a plan or program, and subject of a certificate of authorization; project automatically subject to procedure (James Bay, Northern Quebec). | Any enterprise, activity, proposal, plan or program (subject to licensing); two bases, "specific" or individually defined undertaking, and "class" or type of undertaking with common characteristics, relatively small scale, frequent recurrence, and with generally predictable range of effects. | Construction or alteration of premises, or setting into operation of any industry, plant, or process resulting in the discharge or emission of any contaminant into the environment. | Any project, operation, or activity, or any alteration of any project, operation or activity likely to:<br>•have an effect on unique, rare, endangered feature;<br>•utilize any provincial resource;<br>•cause public concern;<br>•involve new technology inducing environmental change;<br>•have a significant impact. |
| Undertaking is screened by proponent, by government body or subject to regulation | EIA Regulation | EIA Orders and Regulations | Screening by proponent | Screening by Environmental Coordination and Assessment Branch, Saskatchewan Environment. |
| Preparation of preliminary assessment (PIA) and/or federal assessment (EIA) | EIA | EIA | PIA and/or EIA | EIA |
| Preparation of EIA:<br>A. project specific guidelines<br>B. directives or scoping (considered project specific guidelines) | B | A | A | A |
| Monitoring program carried out | Yes, by proponent in collaboration with Ministry of Environment and others concerned by the project. | — | Yes, the Environmental Assessment Support Service is responsible during and after the construction. | |

- continues -

TABLE A-3.3: Federal Projects on Federally Owned Land*

| | Newfoundland and Labrador | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia | Yukon and N.W. Territories |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hydro development (dam, station, lines) | ● | | ● | | | ● | | ● | ● | | |
| Nuclear generating station | | | | ● | | | | | | | |
| Thermal generating station | | | | | | | | | ● | | |
| Oil and gas (exploration, pipelines) | | | ● | | | | | | ● | | ● |
| Extraction (minerals) | ● | | ● | ● | | ● | | ● | | | |
| Road and railroad | | | ● | ● | | ● | ● | ● | ● | ● | |
| Airport | | | | | | | | | | ● | |
| Harbour | ● | | | | ● | | | | | ● | |
| Industrial park | | | ● | | | | | | | | |
| Chemical industry | | | | | | | | | ● | | |
| Forest products complex | | | | | | ● | | | | | |

*Compiled by the author, based on data from Appendix A-2 and FEARO Summary of EIA practices in Canada (1983).

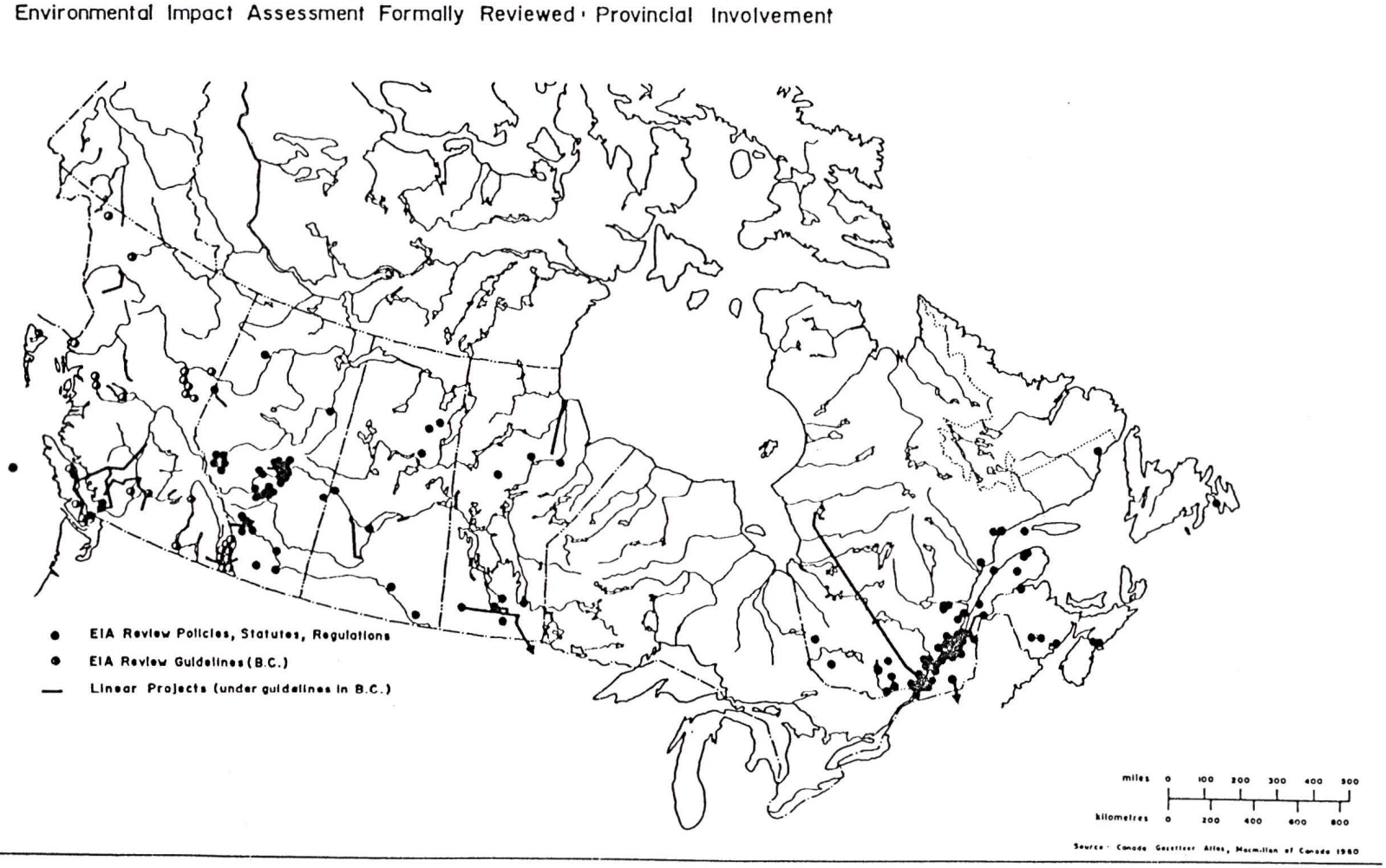



MAP A-3.1: Formally reviewed projects on federal lands or for which federal grants were needed (compiled by the author, based on data from Appendix A-2).

TABLE A-3.4: Provincial Projects by Provinces*

| | Newfoundland and Labrador | Prince Edward Island | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | British Columbia |
|---|---|---|---|---|---|---|---|---|---|---|
| Hydro generating station | | | | | ● | | ● | | | |
| Hydro lines | | | | | ● | | ● | ● | ● | ● |
| Thermal generating station | | | | ● | | | | ● | | ● |
| Pipelines | | | | | ● | | | | | ● |
| Water management | | | | | ● | | ● | | | ● |
| Dam, diversion, reservoir | | | | | ● | | ● | | ● | ● |
| Dredging | | | | | ● | | ● | | | |
| Flood control (stabilization) | | | | | ● | | | | ● | |
| Terminal (methane gas port) | | | | | ● | | | | | |
| Marina, wharf, harbour | | | | | ● | | | | | |
| Extraction (mine and quarry) | | | ● | | ● | | ● | ● | ● | ● |
| Landfill | | | | | ● | | | | | |
| Road and highway | | | | ● | ● | | ● | | | ● |
| Airport | | | | | ● | | | | | |
| Industrial park | ● | | | | | | | | | |
| Chemical plant | | | | | ● | | ● | ● | ● | |
| Sour gas plant | | | | | | | | | ● | |
| Petrochemical industry | | | | | | | | ● | ● | |
| Offshore development | | | | | | | | | | ● |
| Spraying of pesticides | | | | | ● | | | | | |
| Park and recreation | | | | | ● | | | | ● | |

*Compiled by the author, based on data from Appendix A-2.




MAP A-3.2: Formally reviewed projects in the provinces (compiled by the author, based on data from Appendix A-2).

# APPENDIX B

Letter to Resource Persons

Victoria, B.C.
..., 1984

Mr. or Dr. ----------, Director
.
.
.
.

Dear ----------:

For the past few weeks, I have been editing my Master's thesis on environmental impact assessment (EIA) in Canada and in the provinces. In conducting the research I have been comparing the different procedures, the content of the relevant statutes, the administrative structure, the participation of the public, the projects to be assessed, the timing, etc....

I have already acquired substantial information related to the diverse Canadian experiences; however, the information available to me in the libraries is limited. As I wish to produce a map situating the different projects for which environmental impact assessment was reviewed under provincial legislation, these pertinent data have proven to be impossible to locate. The information I require from you, if possible, is a list of projects (names and locations) that have been assessed (whether approved or refused) in your province since the establishment of the EIA under ----------. In the --------- years prior to the statute enactment and/or Orders-in-Council how did your government handle environmentally sensitive projects? If you are unable to supply this information, could you please direct me to an alternate source?

Thank you for your assistance.

Sincerely yours,

CHRISTIANE GÉLINAS
University of Victoria

# APPENDIX C

Contact Persons

- M. Pierre Dansereau, Professeur émérite, Université du Québec à Montréal.
- M. Bernard Harvey, Sous-ministre adjoint aux opérations-centrales, Ministère de l'environnement, Québec.
- M. Dave Johanson, Directeur des communications, Port de Québec, Ports Canada.
- Mme. Editte Manseau, bibliothécaire, Université du Québec à Trois-Rivières.
- M. André Marsan, Président, André Marsan et Ass. Inc., Groupe Lavalin, Montréal.
- M. Jean Piette, Directeur du service juridique, Ministère de l'environnement, Québec.
- M. Derrick Sewell, Professeur titulaire, département de géographie, Université de Victoria.
- M. Colin Wood, Directeur du département de géographie, Université de Victoria.
- M. Michel Yergeau, Avocat, Pouliot, Mercure et Associés, Montréal.

# APPENDIX D

Loi dur la qualité de l'environnement

Relevant Sections

## SECTION II.1

## LE BUREAU D'AUDIENCES PUBLIQUES SUR L'ENVIRONNEMENT

Bureau d'audiences publiques.

**6.1.** Un organisme, ci-après appelé «le Bureau» est institué sous le nom de «Bureau d'audiences publiques sur l'environnement».

1978, c. 64, a. 1.

Composition.

**6.2.** Le Bureau est composé d'au plus cinq membres dont un président et un vice-président nommés, pour un mandat d'au plus cinq ans qui peut être renouvelé, par le gouvernement qui fixe, suivant le cas, le traitement ou le traitement additionnel, les allocations ou les indemnités auxquels ils ont droit ainsi que les autres conditions de leur emploi.

Membres additionnels.

Toutefois, lorsque l'expédition des affaires dont le Bureau a la charge le requiert, le gouvernement peut nommer pour le temps et avec la rémunération qu'il détermine des membres additionnels.

1978, c. 64, a. 1.

Fonctions.

**6.3.** Le Bureau a pour fonctions d'enquêter sur toute question relative à la qualité de l'environnement que lui soumet le ministre et de faire rapport à ce dernier de ses constatations ainsi que de l'analyse qu'il en a faite.

Audiences publiques.

Il doit tenir des audiences publiques dans les cas où le ministre le requiert.

Exception.

Cependant, le Bureau ne peut enquêter dans le cadre de la procédure d'évaluation et d'examen prévue aux sections II et III du chapitre II.

Avis d'enquête.

Sauf dans le cadre de l'application de l'article 31.3, le ministre publie un avis à la *Gazette officielle du Québec* de tout mandat d'enquête qu'il confie au Bureau.

1978, c. 64, a. 1.

Audiences publiques simultanées.

**6.4.** Le Bureau peut tenir simultanément plusieurs audiences publiques.

Conduite des audiences publiques.

Les audiences publiques sont conduites par un ou plusieurs membres du Bureau selon que le détermine le président.

1978, c. 64, a. 1.

Pouvoirs et immunité des membres du Bureau.

**6.5.** Les membres du Bureau possèdent, pour les fins des enquêtes qui leur sont confiées, les pouvoirs et l'immunité des commissaires nommés en vertu de la Loi sur les commissions d'enquête (chapitre C-37).

1978, c. 64, a. 1.

Pouvoir de réglementation.

**6.6.** Le Bureau adopte des règlements pour sa régie interne de même que des règles de procédure relatives au déroulement des audiences publiques.

Entrée en vigueur.

Ces règles entrent en vigueur, après leur approbation par le gouvernement, à la date de leur publication dans la *Gazette officielle du Québec.*

1978, c. 64, a. 1.

Rapports d'enquête rendus publics.

**6.7.** Tous les rapports d'enquête du Bureau sont rendus publics par le ministre dans les soixante jours de leur réception.

1978, c. 64, a. 1.

Dispositions applicables.

**6.8.** Les articles 15, 16, 17 et 19 s'appliquent, en les adaptant, au Bureau.

1978, c. 64, a. 1.

## SECTION III

## LE CONSEIL CONSULTATIF DE L'ENVIRONNEMENT

Institution.

**7.** Un organisme de consultation ci-après appelé « le Conseil » est institué sous le nom de « Conseil consultatif de l'environnement ».

1972, c. 49, a. 7; 1977, c. 5, a. 14; 1978, c. 64, a. 2.

Devoirs.

**8.** Le Conseil doit donner son avis au ministre sur toute question que celui-ci lui soumet relativement aux sujets visés par la présente loi.

Avis en matière d'environnement.

Il peut aussi, de sa propre initiative ou à la demande de personnes ou de groupes, formuler un avis sur les politiques en matière d'environnement.

Études.

Il peut, à ces fins, entreprendre les études nécessaires.

1972, c. 49, a. 8; 1978, c. 64, a. 2.

Constatations au ministre.

**9.** Le Conseil doit communiquer au ministre les constatations qu'il a faites et les conclusions auxquelles il arrive et lui faire les recommandations qu'il juge appropriées.

Avis et étude rendus publics.

Le Conseil peut rendre public tout avis formulé en vertu du deuxième alinéa de l'article 8 et toute étude afférente, soixante jours après l'avoir transmis au ministre.

1972, c. 49, a. 9; 1978, c. 64, a. 3.

Composition.

**10.** Le Conseil se compose d'un président et de dix membres nommés par le gouvernement.

1972, c. 49, a. 10.

Durée.

**11.** Le président du Conseil est nommé pour une durée de cinq ans et les autres membres pour une durée de deux ans.

Durée.

Le mandat des membres ne peut être renouvelé consécutivement qu'une fois.

1972, c. 49, a. 11.

Fonctions continuées.

**12.** Les membres du Conseil demeurent en fonction, nonobstant l'expiration de leur mandat, jusqu'à ce qu'ils soient nommés de nouveau ou remplacés.

Vacance.

La charge d'un membre du Conseil devient vacante s'il s'absente de quatre séances consécutives.

1972, c. 49, a. 12.

Président.

**13.** Le président du Conseil en dirige les activités; il prépare l'ordre du jour des séances du Conseil, les convoque et les préside; il coordonne les travaux du Conseil et en assure la continuité, veille à la préparation des dossiers et fournit aux membres du Conseil les renseignements relatifs aux questions à étudier. Il assure, de plus, la liaison entre le Conseil et le ministère de l'environnement.

Honoraires.

Le gouvernement fixe les honoraires, allocations ou le traitement du président qui doit s'occuper exclusivement du travail du Conseil et des devoirs de sa fonction.

1972, c. 49, a. 13; 1979, c. 49, a. 38.

Indemnisation.

**14.** Les membres du Conseil autres que le président sont remboursés de ce qu'il leur en coûte pour assister aux séances du Conseil et reçoivent une allocation de présence fixée par le gouvernement.

1972, c. 49, a. 14.

Secrétaire et autres fonctionnaires.

**15.** Le secrétaire ainsi que les autres fonctionnaires et employés du Conseil sont nommés et rémunérés suivant la Loi sur la fonction publique (chapitre F-3.1).

1972, c. 49, a. 15; 1978, c. 15, a. 140.

Situation. **16.** Le secrétariat du Conseil est dans le territoire de la Communauté urbaine de Québec.

Séances Le Conseil peut tenir ses séances à tout endroit du Québec.

1972, c. 49, a. 16.

Absence. **17.** Au cas d'absence ou d'incapacité d'agir du président, il est remplacé par le vice-président lequel est désigné par le gouvernement parmi les membres du Conseil.

1972, c. 49, a. 17.

Règlements. **18.** Le Conseil peut adopter des règlements pour sa régie interne; ces règlements doivent, pour avoir effet, être approuvés par le gouvernement.

1972, c. 49, a. 18.

Rapport annuel. **19.** Le Conseil doit, au plus tard le 30 juin de chaque année, transmettre au ministre qui le communique à l'Assemblée nationale, un rapport de ses activités pour l'année financière précédente.

1972, c. 49, a. 19.

## SECTION III.1

## LE DROIT À LA QUALITÉ DE L'ENVIRONNEMENT ET À LA SAUVEGARDE DES ESPÈCES VIVANTES

Droit à la qualité de l'environnement. **19.1.** Toute personne a droit à la qualité de l'environnement, à sa protection et à la sauvegarde des espèces vivantes qui y habitent, dans la mesure prévue par la présente loi, les règlements, les ordonnances, les approbations et les autorisations délivrées en vertu de l'un ou l'autre des articles de la présente loi.

1978, c. 64, a. 4.

Recours. **19.2.** Un juge de la Cour supérieure peut accorder une injonction pour empêcher tout acte ou toute opération qui porte atteinte ou est susceptible de porter atteinte à l'exercice d'un droit conféré par l'article 19.1.

1978, c. 64, a. 4.

Exercice du recours.

**19.3.** La demande d'injonction visée dans l'article 19.2 peut être faite par toute personne physique domiciliée au Québec qui fréquente un lieu à l'égard duquel une contravention à la présente loi ou aux règlements est alléguée ou le voisinage immédiat de ce lieu.

Exercice du recours.

Elle peut être faite également par le procureur général et par toute municipalité où se produit ou est sur le point de se produire la contravention.

1978, c. 64, a. 4.

Cautionnement.

**19.4.** Dans le cas où une injonction interlocutoire est demandée, le cautionnement visé dans l'article 755 du Code de procédure civile ne peut excéder $500.

1978, c. 64, a. 4.

Signification.

**19.5.** Toute action ou requête faite en vertu de la présente section doit être signifiée au procureur général.

1978, c. 64, a. 4.

Priorité de la demande.

**19.6.** Toute demande d'injonction faite en vertu de la présente section doit être instruite et jugée d'urgence.

1978, c. 64, a. 4.

Dispositions non applicables.

**19.7.** Les articles 19.2 à 19.6 ne s'appliquent pas dans le cas d'un projet dûment autorisé en vertu de la présente loi, sauf dans le cas d'un acte non conforme aux dispositions du certificat d'autorisation ou de tout règlement applicable.

1978, c. 64, a. 4.

## SECTION IV

## LA PROTECTION DE L'ENVIRONNEMENT

Émission d'un contaminant.

**20.** Nul ne doit émettre, déposer, dégager ou rejeter ni permettre l'émission, le dépôt, le dégagement ou le rejet dans l'environnement d'un contaminant au-delà de la quantité ou de la concentration prévue par règlement du gouvernement.

Émission d'un contaminant.

La même prohibition s'applique à l'émission, au dépôt, au dégagement ou au rejet de tout contaminant, dont la présence dans l'environnement est prohibée par règlement du gouvernement ou est susceptible de porter atteinte à la vie, à la santé, à la sécurité, au bien-être ou au confort de l'être humain, de causer du dommage ou de

accidentelle dans l'environnement d'un contaminant visé à l'article 20 et prescrire la tenue de registres pour ces fins ainsi que pour les fins de l'article 21;

*k*) prescrire, pour une ou plusieurs catégories de projets, la période de validité de tout certificat d'autorisation, approbation, autorisation, ou certificat délivré en vertu de l'un ou l'autre des articles de la présente loi;

*l*) régir ou prohiber l'usage de tout contaminant et la présence de tout contaminant dans un produit vendu, distribué ou utilisé au Québec;

*m*) déterminer les modalités selon lesquelles doit être faite toute demande de permis, certificat, autorisation, approbation ou permission prévue en vertu de la présente loi.

1972, c. 49, a. 31; 1978, c. 64, a. 9; 1979, c. 49, a. 33.

## SECTION IV.1

## ÉVALUATION ET EXAMEN DES IMPACTS SUR L'ENVIRONNEMENT DE CERTAINS PROJETS

Certificat d'autorisation requis.

**31.1.** Nul ne peut entreprendre une construction, un ouvrage, une activité ou une exploitation ou exécuter des travaux suivant un plan ou un programme, dans les cas prévus par règlement du gouvernement, sans suivre la procédure d'évaluation et d'examen des impacts sur l'environnement prévue dans la présente section et obtenir un certificat d'autorisation du gouvernement.

1978, c. 64, a. 10.

Procédure préalable.

**31.2.** Celui qui a l'intention d'entreprendre la réalisation d'un projet visé à l'article 31.1 doit déposer un avis écrit au ministre décrivant la nature générale du projet. Le ministre indique alors à l'initiateur du projet la nature, la portée et l'étendue de l'étude d'impact sur l'environnement que celui-ci doit préparer.

1978, c. 64, a. 10.

Etude d'impact sur l'environnement.

**31.3.** Après avoir reçu l'étude d'impact sur l'environnement, le ministre la rend publique et indique à l'initiateur du projet d'entreprendre l'étape d'information et de consultation publiques prévue par règlement du gouvernement.

Audience publique.

Une personne, un groupe ou une municipalité peut, dans le délai prescrit par règlement du gouvernement, demander au ministre la tenue d'une audience publique relativement à ce projet.

Demande frivole.

À moins qu'il ne juge la demande frivole, le ministre requiert le Bureau de tenir une audience publique et de lui faire rapport de ses constatations ainsi que de l'analyse qu'il en a faite.

1978, c. 64, a. 10.

Demande de renseignements par le ministre.

**31.4.** Le ministre peut, à tout moment, demander à l'initiateur du projet de fournir des renseignements, d'approfondir certaines questions ou d'entreprendre certaines recherches qu'il estime nécessaires afin d'évaluer complètement les conséquences sur l'environnement du projet proposé.

1978, c. 64, a. 10.

Remise du certificat d'autorisation.

**31.5.** Lorsque l'étude d'impact est jugée satisfaisante par le ministre, elle est soumise, avec la demande d'autorisation, au gouvernement. Ce dernier peut délivrer un certificat d'autorisation pour la réalisation du projet avec ou sans modification et aux conditions qu'il détermine ou refuser de délivrer le certificat d'autorisation. Cette décision peut être prise par tout comité de ministres dont fait partie le ministre et auquel le gouvernement délègue ce pouvoir.

Communication de la décision.

Cette décision est communiquée à l'initiateur du projet et à ceux qui ont soumis des représentations.

1978, c. 64, a. 10.

Projet soustrait de la procédure d'évaluation.

**31.6.** Le gouvernement ou tout comité de ministres visé à l'article 31.5 peut soustraire en tout ou en partie de la procédure d'évaluation et d'examen des impacts sur l'environnement prévue dans la présente section, un projet dont la réalisation physique doit commencer au plus tard un an après l'entrée en vigueur du règlement du gouvernement assujettissant ce projet à ladite procédure.

Avis.

Au moins quinze jours avant de prendre une telle décision, le gouvernement publie un avis de son intention dans la *Gazette officielle du Québec*.

Avis.

Avis de la décision est ensuite publié dans la *Gazette officielle du Québec*.

Projet soustrait de la procédure d'évaluation sans avis.

Le gouvernement ou un comité de ministres visé à l'article 31.5 peut cependant, sans avis, soustraire un projet de la procédure d'évaluation et d'examen des impacts sur l'environnement, dans le cas où la réalisation du projet est requise afin de réparer ou de prévenir des dommages causés par une catastrophe réelle ou appréhendée.

Certificat d'autorisation assorti de conditions.

Dans le cas où il soustrait un projet de la procédure d'évaluation et d'examen des impacts sur l'environnement en vertu du présent article, le gouvernement ou le comité de ministres visé à l'article 31.5 doit délivrer un certificat d'autorisation pour le projet et l'assortir des conditions qu'il juge nécessaires pour protéger l'environnement.

Décision sans effet.

La décision prise en vertu des trois premiers alinéas et le certificat d'autorisation afférent cessent d'avoir effet si la réalisation physique du projet n'est pas commencée dans le délai visé au premier alinéa.

Disposition non applicable.

Le présent article ne s'applique pas au territoire visé au deuxième alinéa de l'article 31.9. Le gouvernement peut toutefois, pour des motifs reliés à la défense nationale, à la sécurité de l'État ou pour d'autres motifs d'intérêt public, soustraire exceptionnellement un projet, en tout ou en partie, de la procédure d'évaluation et d'examen des impacts sur l'environnement applicable sur ce territoire.

1978, c. 64, a. 10; 1979, c. 25, a. 104.

Sous-ministre lié.

**31.7.** Toute décision rendue en vertu des articles 31.5 ou 31.6 lie le sous-ministre lorsque celui-ci exerce par la suite les pouvoirs prévus aux articles 22, 32 ou 54.

1978, c. 64, a. 10; 1979, c. 49, a. 33.

Renseignements non requis dans certains cas.

**31.8.** Le ministre peut soustraire à une consultation publique des renseignements ou données concernant des procédés industriels et prolonger, dans le cas d'un projet particulier, la période minimale de temps prévu par règlement du gouvernement pendant lequel on peut demander au ministre la tenue d'une audience publique.

1978, c. 64, a. 10.

Règlements.

**31.9.** Le gouvernement peut adopter des règlements pour:

*a*) déterminer les catégories de constructions, d'ouvrages, de plans, de programmes, d'exploitations, de travaux ou d'activités auxquelles s'applique l'article 31.1;

*b*) déterminer les paramètres d'une étude d'impact sur l'environnement en ce qui concerne notamment l'impact d'un projet sur la nature, le milieu biophysique, le milieu sous-marin, les communautés humaines, l'équilibre des écosystèmes, les sites archéologiques et historiques et les biens culturels;

*c*) prescrire les modalités de l'information et de la consultation publique relative à toute demande de certificat d'autorisation ou d'étude d'impact sur l'environnement pour certaines ou toutes catégories de projets visées dans l'article 22 ou dans l'article 31.1, y compris la publication d'avis dans les journaux par le requérant, la teneur et la forme de tels avis, le délai pendant lequel les personnes, groupes et municipalités peuvent faire des représentations et

demander la tenue d'une audience publique et le délai imparti au Bureau pour tenir une audience publique et faire rapport;

*d*) prescrire le mode de publicité des audiences publiques du Bureau et indiquer les personnes auxquelles les rapports d'audience et les études d'impact doivent être transmis;

*e*) définir des types d'études d'impact et les modalités de la présentation des études d'impact.

Règlements. Le gouvernement peut également adopter des règlements concernant les matières visées dans le premier alinéa, qui ne soient applicables qu'au territoire borné à l'ouest par le 69e méridien, au nord par le 55e parallèle, au sud par le 53e parallèle et à l'est par la limite «est» prévue par les lois de 1912 relatives à l'extension des frontières du Québec (II George V, chapitre 7) et Statuts du Canada (II George V, chapitre 45).

***non en vigueur***

Modification au règlement. Une fois adopté, le règlement édicté en vertu du paragraphe *a* du premier alinéa et applicable seulement au territoire visé au deuxième alinéa, peut être modifié à la suite d'une consultation avec la corporation du village naskapi visée au paragraphe 7.1° de l'article 131.

1978, c. 64, a. 10; 1979, c. 25, a. 105.

## SECTION V

## LA QUALITÉ DE L'EAU ET LA GESTION DES EAUX USÉES

Autorisation. **32.** Nul ne peut établir un aqueduc, une prise d'eau d'alimentation, des appareils pour la purification de l'eau, ni procéder à l'exécution de travaux d'égout ou à l'installation de dispositifs pour le traitement des eaux usées avant d'en avoir soumis les plans et devis au sous-ministre et d'avoir obtenu son autorisation.

Autorisation. Cette autorisation est également requise pour les travaux de reconstruction, d'extension d'installations anciennes et de raccordements entre les conduites d'un système public et celles d'un système privé.

1972, c. 49, a. 32; 1978, c. 64, a. 11; 1979, c. 49, a. 33.

Permis d'exploitation. **32.1.** Une personne ne peut exploiter un système d'aqueduc ou d'égout, à moins d'avoir obtenu un permis d'exploitation du sous-ministre. Ce permis, de même que toute autorisation délivrée en vertu de la présente section, peut être émis au nom d'une raison sociale.

1978, c. 64, a. 11; 1979, c. 49, a. 33.

***non en vigueur***

Dispositions applicables.

**126.1.** Les sections IX et X du chapitre I ne s'appliquent pas à un établissement visé dans la Loi sur la santé et la sécurité du travail lorsque seules la santé, la sécurité ou l'intégrité physique des travailleurs sont concernées.

1979, c. 63, a. 309.

## SECTION XV

## DISPOSITIONS DIVERSES

Règlements en vertu de la Loi.

**127.** Les règlements adoptés par l'arrêté en conseil 479 du 12 février 1944 et leurs amendements, sauf les chapitres 5 et 10 desdits règlements, constituent des règlements adoptés en vertu de la présente loi.

1974, c. 51, a. 1.

Effet rétroactif.

**128.** L'article 127 a effet depuis le 21 décembre 1972.

1974, c. 51, a. 2.

Infractions et peines.

**129.** Quiconque contrevient aux règlements visés à l'article 127 est passible des pénalités prévues à l'article 109, nonobstant toute stipulation contraire contenue dans lesdits règlements.

1974, c. 51, a. 3.

**130.** Abrogé.

1978, c. 64, a. 54.

## CHAPITRE II

## DISPOSITIONS APPLICABLES À LA RÉGION DE LA BAIE JAMES ET DU NORD QUÉBÉCOIS

## SECTION I

## DÉFINITIONS

Interprétation:

**131.** Dans le présent chapitre, à moins que le contexte n'indique un sens différent, on entend par:

*«Administration régionale crie»;*

1° «Administration régionale crie»: la corporation publique constituée par la Loi sur l'Administration régionale crie (chapitre A-6.1);

*«Administration régionale Kativik»*: 2° «Administration régionale Kativik»: la corporation publique constituée par la Loi sur les villages nordiques et l'Administration régionale Kativik (chapitre V-6.1);

*«autochtone»*; 3° «autochtone»: les Cris et les Inuit;

*«bande»*; 4° «bande»: une des bandes au sens de la Loi sur les Indiens (Statuts révisés du Canada, 1970, chapitre I-6), de Fort George, Old Factory, Rupert House, Waswanipi, Mistassini, Némiscau, Poste-de-la-Baleine et Eastmain, jusqu'à sa constitution en corporation tel que prévu par le chapitre 9 de la Convention et, par la suite, cette corporation;

*«Conseil régional de zone»*; 5° «Conseil régional de zone»: le Conseil régional de zone de la Baie James constitué par la Loi sur le Conseil régional de zone de la Baie James (chapitre C-59.1);

*«Convention»*; 6° «Convention»: la Convention visée à l'article 1 de la Loi approuvant la Convention de la Baie James et du Nord québécois (chapitre C-67) ainsi que les Conventions complémentaires nos 1 et 3 déposées sur le bureau du secrétaire de l'Assemblée nationale, le 18 avril 1978, à titre de document de la session portant le numéro 114;

*«corporation de village cri»*; 7° «corporation de village cri»: toute corporation de village cri constituée par la Loi sur les villages cris (chapitre V-5.1);

*«corporation du village naskapi»*; 7.1° «corporation du village naskapi»: la corporation du village naskapi de Schefferville constituée par la Loi sur les villages cris (chapitre V-5.1);

*«corporation de village nordique»*; 8° «corporation de village nordique»: toute corporation de village nordique constituée par la Loi sur les villages nordiques et l'Administration régionale Kativik (chapitre V-6.1);

*«Cris»*; 9° «Cris»: les bénéficiaires cris, aux termes de la Loi sur les autochtones cris, inuit et naskapis (chapitre A-33.1);

*«Inuit»*; 10° «Inuit»: les bénéficiaires inuit, aux termes de la Loi sur les autochtones cris, inuit et naskapis (chapitre A-33.1);

*«Naskapis»*; 10.1° «Naskapis»: les bénéficiaires naskapis, aux termes de la Loi sur les autochtones cris, inuit et naskapis (chapitre A-33.1);

*«projet»*. 11° «projet»: un ouvrage ou activité de mise en valeur ou d'utilisation du territoire ou une mise en application d'un procédé industriel susceptible d'affecter l'environnement ou le milieu social, à l'exclusion de l'entretien et de l'exploitation des installations ou entreprises après leur mise en place.

1978, c. 94, a. 4; 1979, c. 25, a. 106.

Référence.

**132.** Dans le présent chapitre, la mention d'une catégorie de terres, soit les catégories I, IA, IA-N, IB, IB-N, II, II-N et III, réfère aux terres délimitées suivant la Loi sur le régime des terres dans les territoires de la Baie James et du Nouveau-Québec (chapitre R-13.1).

1978, c. 94, a. 4; 1979, c. 25, a. 107.

## SECTION II

## DISPOSITIONS PARTICULIÈRES À LA RÉGION DE LA BAIE JAMES SITUÉE AU SUD DU 55e PARALLÈLE

Champ d'application.

**133.** La présente section s'applique au territoire borné au nord par le 55e parallèle, à l'ouest par les frontières de l'Ontario et des Territoires du Nord-Ouest, à l'est par le 69e méridien et au sud par une ligne qui coïncide avec la limite méridionale de la zone médiane et des terrains de piégeage cris situés au sud de ladite zone médiane, tel que déterminé en vertu de la Loi sur les droits de chasse et de pêche dans les territoires de la Baie James et du Nouveau-Québec (chapitre D-13.1), ainsi qu'aux terres de la catégorie I et II pour les Cris de Poste-de-la-Baleine.

1978, c. 94, a. 4.

### §1.— *Comité consultatif pour l'environnement de la Baie James*

Comité consultatif.

**134.** Un organisme est constitué sous le nom de «Comité consultatif pour l'environnement de la Baie James». Cet organisme peut aussi être désigné sous le nom, en cri, de «Gaweshouwaitego Asgee Weshouwehun» et, en anglais, de «The James Bay Advisory Committee on the Environment».

1978, c. 94, a. 4.

Composition, nomination des membres.

**135.** Le Comité consultatif est composé de quatre membres nommés par le gouvernement, quatre par le gouverneur général en conseil ou toute autre personne qu'il autorise à cette fin et quatre autres par l'Administration régionale crie. Ces membres, nommés durant bon plaisir, sont rémunérés ou indemnisés par ceux qui les nomment, lesquels pourvoient en outre à leur remplacement.

Membre d'office.

En outre, le président du Comité conjoint de chasse, de pêche et de piégeage, nommé en vertu de l'article 60 de la Loi sur les droits de chasse et de pêche dans les territoires de la Baie James et du

Nouveau-Québec (chapitre D-13.1) est membre d'office du Comité consultatif. Toutefois, dans les cas où, en vertu de l'article 60 de ladite loi, c'est la Société Makivik, visée à la Loi sur la Société Makivik (chapitre S-18.1), qui nomme le président dudit Comité conjoint, c'est le second vice-président qui est membre d'office du Comité consultatif.

1978, c. 94, a. 4; 1979, c. 25; a. 108.

*a*) la protection des droits de chasse, de pêche et de piégeage des autochtones, dans le territoire visé à l'article 133 et de leurs droits dans les terres de la catégorie I, eu égard à toute activité reliée aux projets ayant des répercussions sur ledit territoire;

*b*) la protection de l'environnement et du milieu social, notamment au moyen des mesures proposées à la suite de la procédure d'évaluation et d'examen visée aux articles 153 à 167, en vue de diminuer le plus possible, auprès des autochtones, les répercussions négatives des activités reliées aux projets touchant le territoire visé à l'article 133;

*c*) la protection des autochtones, de leurs sociétés, de leurs communautés et de leur économie, eu égard à toute activité reliée aux projets touchant le territoire visé à l'article 133;

*d*) la protection de la faune, du milieu physique et biologique et des écosystèmes du territoire visé à l'article 133, eu égard à toute activité reliée aux projets touchant ledit territoire;

*e*) les droits et garanties des autochtones dans les terres de la catégorie II, établis en vertu de la Loi sur les droits de chasse et de pêche dans les territoires de la Baie James et du Nouveau-Québec (chapitre D-13.1);

*f*) la participation des Cris à l'application du régime de protection de l'environnement et du milieu social prévu dans la présente section;

*g*) les droits et intérêts, quels qu'ils soient, des non-autochtones;

*h*) le droit de réaliser des projets, que possèdent les personnes agissant légalement, dans le territoire visé à l'article 133.

1978, c. 94, a. 4.

§3.— *Procédure d'évaluation et d'examen des impacts sur l'environnement et le milieu social*

Énumération des projets.

**153.** Les projets obligatoirement assujettis à la procédure d'évaluation et d'examen prévue dans la présente sous-section sont énumérés à l'annexe « A » et les projets qui en sont obligatoirement soustraits sont énumérés à l'annexe « B ».

Modifications.

Le gouvernement peut, par règlement adopté en vertu de l'article 205, modifier les annexes « A » et « B » et assujettir ou soustraire obligatoirement d'autres projets à la procédure d'évaluation et d'examen.

1978, c. 94, a. 4.

Réalisation de projet.

**154.** Nul ne peut entreprendre ou réaliser un projet non obligatoirement soustrait de la procédure d'évaluation et d'examen à moins:

*a*) de la délivrance, par le sous-ministre, d'un certificat d'autorisation, après application de la procédure d'évaluation et d'examen; ou

*b*) de la délivrance, par le sous-ministre, d'une attestation de non-assujettissement du projet à la procédure d'évaluation et d'examen.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Avis au sous-ministre.

**155.** Quiconque a l'intention d'entreprendre un projet obligatoirement assujetti à la procédure d'évaluation et d'examen doit, au moment de l'étude des options possibles et des implications techniques, économiques et sociales dudit projet, aviser par écrit le sous-ministre de son intention et indiquer, sommairement, la nature du projet, le lieu où le projet doit être entrepris, ainsi que la date prévisible du début des travaux.

Avis au Comité d'évaluation.

Le sous-ministre en avise le Comité d'évaluation qui peut formuler des recommandations au sujet du moment où l'initiateur du projet devrait soumettre au sous-ministre les renseignements visés à l'article 156. Le sous-ministre transmet ces recommandations, qu'il peut modifier, à l'initiateur du projet.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Renseignements à transmettre.

**156.** Dans le but d'obtenir le certificat d'autorisation ou l'attestation visé à l'article 154, l'initiateur d'un projet doit transmettre au sous-ministre les renseignements préliminaires exigés par règlement adopté en vertu de l'article 205.

Renseignements à transmettre.

Le sous-ministre transmet sans délai les renseignements préliminaires au Comité d'évaluation.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Recommandations du Comité d'évaluation.

**157.** Lorsqu'il s'agit d'un projet qui n'est pas visé à l'article 153, le Comité d'évaluation formule au sous-ministre des recommandations sur l'opportunité d'assujettir ou non le projet à la procédure d'évaluation et d'examen.

Décision, consultation.

Le sous-ministre décide alors d'assujettir ou non le projet. S'il ne suit pas en cette matière la recommandation du Comité d'évaluation, il doit consulter à nouveau celui-ci avant de transmettre sa décision à l'initiateur du projet.

Attestation.

Si la décision finale du sous-ministre est de ne pas assujettir le projet, il délivre l'attestation visée au paragraphe *b* de l'article 154.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Recommandations au sous-ministre.

**158.** Le Comité d'évaluation formule au sous-ministre des recommandations sur le genre d'étude d'impact, préliminaire ou détaillée, ou les deux, de même que sur la portée de chacune de ces études, le cas échéant, que l'initiateur d'un projet assujetti à la procédure d'évaluation et d'examen doit préparer.

Directives, recommandations.

Le sous-ministre communique à l'initiateur ses directives et recommandations sur l'étude d'impact que ce dernier doit préparer. S'il ne suit pas en cette matière l'avis du Comité d'évaluation, le sous-ministre doit consulter à nouveau celui-ci avant de transmettre sa décision à l'initiateur du projet.

Partie intégrante du projet.

L'exploitation des installations ou entreprises après leur mise en place fait partie intégrante du projet assujetti à la procédure d'évaluation et d'examen.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Décisions.

**159.** Les décisions prises par le sous-ministre en vertu des articles 157 et 158 doivent être communiquées à l'initiateur du projet et à l'Administration régionale crie dans les trente jours de la réception par le sous-ministre des renseignements préliminaires à moins que celui-ci ne juge qu'un délai supplémentaire est requis pour prendre ces décisions ou pour permettre au Comité d'évaluation de formuler ses recommandations. Le sous-ministre peut prendre l'avis du Comité d'évaluation avant de prolonger le délai de trente jours.

Renseignement préliminaire, recommandation.

L'Administration régionale crie peut prendre connaissance de tout renseignement préliminaire fourni par l'initiateur d'un projet, de même que de toute recommandation du Comité d'évaluation.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Étude d'impact.

**160.** L'initiateur du projet prépare une étude d'impact préliminaire ou détaillée, ou les deux, selon les directives et recommandations du sous-ministre et conformément aux règlements adoptés en vertu de l'article 205.

Étude d'impact transmise au sous-ministre.

L'initiateur du projet transmet l'étude d'impact au sous-ministre, accompagnée d'une demande de certificat d'autorisation. Le sous-ministre communique copie de l'étude d'impact au Comité d'examen et à l'Administration régionale crie.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Représentations au comité d'examen.

**161.** L'Administration régionale crie, de même que toute bande ou corporation de village cri peut, dans un délai de trente jours suivant la réception de l'étude d'impact par l'Administration régionale crie, faire des représentations au Comité d'examen. En outre, dans le cas où la bande ou la corporation de village cri intéressée le permet, un individu intéressé peut faire des

représentations verbales ou écrites au Comité d'examen. Le délai fixé au présent alinéa peut être prolongé par le sous-ministre, qui prend avis du Comité d'examen.

Consultation publique. Le sous-ministre peut, selon les circonstances, autoriser d'autres modes de consultation publique.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Recommandations du comité d'examen. **162.** Dans un délai de quarante-cinq jours suivant la réception de l'étude d'impact par le Comité d'examen, celui-ci recommande au sous-ministre d'autoriser ou non le projet et, le cas échéant, à quelles conditions, ou lui recommande d'exiger que le requérant poursuive certaines recherches ou études supplémentaires qu'il indique, ou prépare une étude d'impact détaillée, le cas échéant.

Délai prolongé. Le délai fixé au premier alinéa peut être prolongé par le sous-ministre, qui prend l'avis du Comité d'examen.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Solutions de rechange proposées, recherches ou études supplémentaires. **163.** Dans le cas d'une étude d'impact préliminaire ou d'une étude d'impact jugée insuffisante, le sous-ministre doit, après avoir pris l'avis du Comité d'examen, donner son avis au sujet des solutions de rechange proposées, exiger que le requérant poursuive certaines recherches ou études supplémentaires qu'il indique, ou prépare une étude d'impact détaillée.

Portée d'étude ou recherche supplémentaire. Le sous-ministre après consultation du Comité d'évaluation, détermine la portée de toute étude ou recherche supplémentaire ou de toute étude d'impact détaillée.

Cheminement de l'étude d'impact. L'étude d'impact détaillée ou les études ou recherches supplémentaires préparées en vertu du présent article sont soumises au cheminement prévu aux articles 160 à 162 pour les études d'impact.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Décision. **164.** Lorsque le sous-ministre est satisfait des études d'impact fournies par un requérant, il lui transmet un certificat d'autorisation ou un refus écrit. Copie de la décision est transmise à l'Administration régionale crie.

Conditions. Une décision favorable peut être assortie de conditions, que le requérant doit respecter lors de la réalisation et de l'exploitation du projet.

Consultation. Si le sous-ministre ne suit pas, dans les matières visées au présent article et à l'article 163, les recommandations du Comité d'examen, il doit consulter à nouveau celui-ci avant de transmettre toute décision.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Renseignements non divulgués.

**165.** Le ministre peut, exceptionnellement, pour des motifs reliés à la défense nationale, à la sécurité de l'État ou pour d'autres motifs sérieux, décréter que certains renseignements préliminaires exigés de l'initiateur d'un projet en vertu de la présente sous-section ne soient pas divulgués.

1978, c. 94, a. 4.

Terres de catégorie IB et IA.

**166.** Chaque corporation de village cri et chaque bande nomment une personne pour exercer respectivement sur les terres des catégories IB et IA situées dans le territoire visé à l'article 133, les fonctions, devoirs et pouvoirs conférés au sous-ministre par la présente section, en lieu et place de celui-ci.

Compétence.

Les personnes nommées en vertu du présent article n'ont toutefois aucune compétence sur les projets visés aux paragraphes *a* et *d* de l'article 35 de la Loi sur le régime des terres dans les territoires de la Baie James et du Nouveau-Québec (chapitre R-13.1). La procédure d'évaluation et d'examen afférente à ces projets relève du sous-ministre.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Autorisation du gouvernement.

**167.** Sous réserve des dispositions applicables aux terres de la catégorie I en vertu de la Loi sur le régime des terres dans les territoires de la Baie James et du Nouveau-Québec (chapitre R-13.1) et malgré l'article 154, le gouvernement peut, en tout temps, lorsqu'il le juge à propos dans l'intérêt public, autoriser, à ses conditions, l'exécution et l'exploitation d'un projet qui n'a pas été autorisé par le sous-ministre, ou modifier certaines conditions imposées par ce dernier.

Recommandations du sous-ministre.

Dans ces cas, le sous-ministre peut, après consultation du Comité d'examen, recommander au gouvernement d'assortir sa décision de certaines conditions destinées à assurer la protection de l'environnement et du milieu social. Le gouvernement peut imposer de telles conditions ou toute autre condition qu'il juge utile.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

## SECTION III

## DISPOSITIONS PARTICULIÈRES APPLICABLES AU TERRITOIRE SITUÉ AU NORD DU 55e PARALLÈLE

Champ d'application.

**168.** La présente section s'applique à tout le territoire situé au nord du 55e parallèle, sauf aux terres de catégories I et II pour les Cris de Poste-de-la-Baleine.

1978, c. 94, a. 4.

§1.— *Comité consultatif de l'environnement Kativik*

Comité consultatif.

**169.** Un organisme est constitué sous le nom de « Comité consultatif de l'environnement Kativik ». Cet organisme peut aussi être désigné sous le nom, en inuttituut, de « Kativik Nunamut Isumasaliuriyingita Katimayingit » et, en anglais, de « Kativik Environmental Advisory Committee ».

1978, c. 94, a. 4.

Composition, nomination.

**170.** Le Comité consultatif est composé de neuf membres, dont trois sont nommés par le gouvernement, trois par le gouverneur général en conseil ou toute autre personne qu'il autorise à cette fin, et les trois autres par l'Administration régionale Kativik. Ces membres, nommés durant bon plaisir, sont rémunérés ou indemnisés par ceux qui les nomment, lesquels pourvoient en outre à leur remplacement.

1978, c. 94, a. 4.

Vacance.

**171.** Une vacance n'interrompt pas le fonctionnement du Comité consultatif, dans la mesure où le quorum peut être atteint.

1978, c. 94, a. 4.

Nombre de membres.

**172.** Malgré l'article 170, le gouvernement du Québec, celui du Canada et l'Administration régionale Kativik peuvent, par entente unanime, modifier le nombre de membres nommés par chacun d'entre eux.

Avis.

Avis d'une telle entente doit être publié dans la *Gazette officielle du Québec.*

1978, c. 94, a. 4.

Spécialistes.

La Commission peut retenir les services de spécialistes dont les conseils ou l'expertise peuvent être requis et permettre à certains de ses membres de retenir, aux frais de la Commission, de tels services.

1978, c. 94, a. 4.

Principes.

**186.** Dans l'exercice de leurs fonctions et de leurs compétences, le gouvernement du Québec, les municipalités, le Comité consultatif de l'environnement Kativik et la Commission accordent une attention particulière aux principes suivants:

*a*) la protection des droits de chasse, de pêche et de piégeage des Inuit et des Naskapis, dans le territoire visé à l'article 168, ainsi que de leurs autres droits dans ledit territoire, eu égard à toute activité reliée aux projets ayant des répercussions sur ledit territoire;

*b*) les principes énumérés aux paragraphes *b*, *c*, *d* et *g* de l'article 152 en autant qu'ils peuvent s'appliquer au territoire visé à l'article 168;

*c*) la participation de tous les habitants du territoire visé à l'article 168 à la mise en oeuvre du régime de protection de l'environnement et du milieu social.

1978, c. 94, a. 4; 1979, c. 25, a. 110.

§3.— *Procédure d'évaluation et d'examen des impacts sur l'environnement et le milieu social*

Évaluation des impacts.

**187.** L'évaluation des impacts d'un projet par l'initiateur de celui-ci et le déroulement de la procédure d'évaluation et d'examen par la Commission s'effectuent aussitôt qu'il est possible de le faire.

1978, c. 94, a. 4.

Énumération des projets.

**188.** Les projets obligatoirement assujettis à la procédure d'évaluation et d'examen prévue dans la présente sous-section sont énumérés à l'annexe «A» et les projets qui en sont obligatoirement soustraits sont énumérés à l'annexe «B».

Modifications.

Le gouvernement peut, par règlement adopté en vertu de l'article 205, modifier les annexes «A» et «B» et assujettir ou soustraire obligatoirement d'autres projets à la procédure d'évaluation et d'examen.

1978, c. 94, a. 4.

Réalisation de projet.

**189.** Nul ne peut entreprendre ou réaliser un projet non obligatoirement soustrait de la procédure d'évaluation et d'examen à moins:

*a*) de la délivrance, par le sous-ministre, d'un certificat d'autorisation, après l'application de la procédure d'évaluation et d'examen; ou

*b*) de la délivrance, par le sous-ministre, d'une attestation de non-assujettissement du projet à la procédure d'évaluation et d'examen.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Renseignements à transmettre.

**190.** Dans le but d'obtenir le certificat d'autorisation ou l'attestation visés à l'article 189, l'initiateur d'un projet doit transmettre au sous-ministre les renseignements préliminaires exigés par règlement adopté en vertu de l'article 205.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Renseignements à transmettre.

**191.** Le sous-ministre transmet les renseignements préliminaires à la Commission.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Décision.

**192.** Lorsqu'il s'agit d'un projet qui n'est pas visé à l'article 188, la Commission transmet au sous-ministre sa décision sur l'opportunité d'assujettir ou non le projet à la procédure d'évaluation et d'examen.

***non en vigueur***

Transmission des renseignements préliminaires.

Dans le cas où aucun Naskapi ou aucun mandataire des Naskapis n'est membre de la Commission au moment où celle-ci s'apprête à ne pas assujettir à la procédure d'évaluation et d'examen un projet prévu sur les terres de la catégorie IB-N ou II-N, la Commission doit transmettre les renseignements préliminaires visés à l'article 190 à la corporation du village naskapi qui peut soumettre des recommandations à la Commission.

Décision.

La Commission peut prendre la décision visée au deuxième alinéa après l'échéance d'un délai de vingt jours suivant la date où la corporation du village naskapi a reçu les renseignements préliminaires ou après réception des recommandations de cette dernière, selon l'éventualité qui se produit la première.

Attestation du sous-ministre.

Si la décision de la Commission est de ne pas assujettir le projet, le sous-ministre délivre l'attestation visée au paragraphe *b* de l'article 189.

1978, c. 94, a. 4; 1979, c. 25, a. 111; 1979, c. 49, a. 33.

***non en vigueur***

Décision transmise.

**192.1.** Dans le cas où, en vertu de l'article 192, la Commission décide d'assujettir à la procédure d'évaluation et d'examen un projet prévu sur les terres de la catégorie IB-N ou II-N, elle en informe la corporation du village naskapi.

1979, c. 25, a. 112.

Cheminement du projet.

**193.** Tout projet assujetti à la procédure d'évaluation et d'examen doit suivre le cheminement prévu à la présente sous-section, quels que soient les autres approbations, licences ou permis requis.

Crédits ou prêts.

Sous réserve de l'article 203, le gouvernement ne peut, avant la délivrance du certificat d'autorisation ou de l'attestation visés à l'article 189, accorder des crédits ou des prêts pour un projet non obligatoirement soustrait de la procédure d'évaluation et d'examen, à moins que le ministre responsable de ces crédits ou de ces prêts n'en décide autrement.

Approbation, crédits, financement.

Rien dans le présent article n'a pour effet d'empêcher l'initiateur du projet d'obtenir une approbation, des crédits, du financement ou des garanties pour effectuer des études de praticabilité ou des recherches ou pour faciliter le cheminement du projet dans le cadre de la procédure d'évaluation et d'examen.

1978, c. 94, a. 4.

Avis.

**194.** Avis qu'un projet doit faire l'objet d'une étude d'impact sur l'environnement et le milieu social est publié par la Commission dans la *Gazette officielle du Québec*, dans les trente jours de la date à laquelle elle a reçu les renseignements visés à l'article 191 ou, le cas échéant, de la date de la décision rendue en vertu de l'article 192, selon le cas.

Absence de publication.

L'absence de publication de l'avis dans le délai prescrit n'entache pas d'illégalité la procédure d'évaluation et d'examen d'un projet.

1978, c. 94, a. 4.

Décision du sous-ministre.

**195.** Le sous-ministre, après avoir pris l'avis de la Commission, décide de la portée et du contenu de l'étude d'impact sur l'environnement et le milieu social que l'initiateur du projet doit préparer et il en informe ce dernier.

Décision du sous-ministre.

Le sous-ministre prend cette décision en s'inspirant notamment du contenu suggéré pour une telle étude d'impact par règlement du gouvernement adopté en vertu de l'article 205.

Partie intégrante du projet.

L'exploitation des installations ou entreprises après leur mise en place fait partie intégrante du projet assujetti à la procédure d'évaluation et d'examen.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Recherches et études supplémentaires exigées par le sous-ministre.

**196.** L'initiateur du projet remet au sous-ministre l'étude d'impact sur l'environnement et le milieu social, accompagnée d'une demande de certificat d'autorisation. Le sous-ministre peut exiger que le requérant mène des recherches et études supplémentaires, qu'il indique. Le sous-ministre remet à la Commission l'étude d'impact et

les résultats de telles recherches et études supplémentaires au fur et à mesure qu'il les reçoit.

Dossier complet. Lorsqu'il juge que le dossier est complet, le sous-ministre en informe la Commission.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Décision de la Commission. **197.** La Commission examine et évalue l'étude d'impact et rend la décision prévue à l'article 200 en tenant compte, notamment, des considérations suivantes auxquelles elle accorde l'importance qu'elle juge appropriée:

*a*) les aspects bénéfiques et néfastes du projet ainsi que ses impacts positifs et négatifs sur l'environnement et le milieu social;

*b*) les atteintes à l'environnement, qui ne peuvent être évitées par les moyens techniques actuels, et celles que le requérant n'a pas choisi d'éviter complètement de même que les suggestions de ce dernier en vue de limiter ces atteintes;

*c*) les mesures raisonnables et disponibles pour prévenir ou réduire les impacts négatifs et pour intensifier les impacts positifs du projet;

*d*) les solutions de rechange raisonnables au projet et à ses éléments;

*e*) les méthodes et autres mesures proposées par le requérant pour contrôler suffisamment l'émission de contaminants dans l'environnement ou pour régler d'autres problèmes d'environnement, le cas échéant;

*f*) la conformité du projet envisagé avec les lois et règlements concernant les problèmes environnementaux engendrés par ce genre de projet, y compris avec les projets de loi et de règlement déposés officiellement par le ministre;

*g*) les mesures de protection dont la mise en oeuvre est prévue par le requérant en cas d'accident.

1978, c. 94, a. 4.

Erreurs, inexactitudes non considérées. **198.** Le requérant indique à la Commission, avant qu'elle ne rende la décision prévue à l'article 200, les erreurs, inexactitudes, contradictions ou nouvelles circonstances qui peuvent entraîner des impacts négatifs importants sur l'environnement et le milieu social et qui n'auraient pas été dûment considérées dans l'étude d'impact.

1978, c. 94, a. 4.

Représentations. **199.** Toute personne intéressée, groupe intéressé ou municipalité intéressée peut, de sa propre initiative, soumettre des représentations écrites à la Commission relativement à un projet. La Commission

peut aussi inviter les personnes intéressées, groupes intéressés ou municipalités intéressées à lui faire des représentations relativement à un projet.

1978, c. 94, a. 4.

Autorisation du projet.

***non en vigueur***

Étude d'impact transmise pour commentaires.

**200.** La Commission décide si le sous-ministre doit autoriser ou non le projet et, le cas échéant, à quelles conditions.

Dans le cas où aucun Naskapi ou aucun mandataire des Naskapis n'est membre de la Commission au moment où celle-ci s'apprête à prendre la décision visée au premier alinéa concernant un projet prévu sur les terres de la catégorie IB-N ou II-N, la Commission doit transmettre une copie de l'étude d'impact à la corporation du village naskapi, pour commentaires, avant de prendre cette décision.

Décision.

Dans le cas prévu par le deuxième alinéa, la Commission peut prendre sa décision après l'échéance d'un délai de trente jours suivant la date où la corporation du village naskapi a reçu copie de l'étude d'impact ou après réception des recommandations de cette dernière, selon l'éventualité qui se produit la première.

Délai supplémentaire.

La Commission peut prolonger le délai visé au troisième alinéa lorsque la nature ou l'importance du projet le justifie et dans la mesure où le délai supplémentaire ne l'empêche pas de transmettre sa décision dans les délais prescrits en vertu du cinquième alinéa.

Transmission de décision.

La Commission transmet sa décision au sous-ministre et au ministre dans un délai de quarante-cinq jours dans le cas d'un projet qu'elle a décidé d'assujettir à la procédure d'évaluation et d'examen conformément à l'article 192 et dans un délai de quatre-vingt-dix jours dans le cas d'un projet assujetti obligatoirement à cette procédure, à moins que le sous-ministre n'accorde un délai supplémentaire lorsque la nature ou l'importance du projet le justifie.

Délais.

Les délais visés au présent article courent à compter de la date à laquelle le sous-ministre a avisé la Commission que le dossier du projet était complet.

1978, c. 94, a. 4; 1979, c. 25, a. 113; 1979, c. 49, a. 33.

Décision, certificat d'autorisation.

**201.** Le sous-ministre exécute la décision de la Commission et, le cas échéant, délivre un certificat d'autorisation assorti des conditions fixées par la Commission, à moins que le ministre ne l'autorise à substituer une décision différente.

Certificat d'autorisation, refus.

Le sous-ministre transmet au requérant un certificat d'autorisation ou un refus écrit, en conformité avec toute décision visée au premier alinéa. Copie de la décision du sous-ministre est transmise à la Commission et à l'Administration régionale Kativik.

***non en vigueur***

Décision transmise.

Le sous-ministre transmet également une copie de sa décision à la corporation du village naskapi dans les cas visés au deuxième alinéa de l'article 200.

1978, c. 94, a. 4; 1979, c. 25, a. 114; 1979, c. 49, a. 33.

Demande de renseignement.

**202.** Dans la mesure où c'est nécessaire ou utile à l'exercice de ses fonctions, la Commission a le droit de recevoir tout renseignement ordinairement disponible que possède le gouvernement et tout organisme gouvernemental relativement à quelque activité qui se déroule sur le territoire visé à l'article 168 ou touchant ce territoire.

1978, c. 94, a. 4.

Autorisation du gouvernement.

**203.** Malgré l'article 189, le gouvernement peut, pour cause, autoriser, à ses conditions, l'exécution et l'exploitation d'un projet qui n'a pas été autorisé par le sous-ministre ou modifier les conditions imposées par celui-ci. Il peut même, lorsqu'il le juge nécessaire dans l'intérêt public, soustraire un projet à l'ensemble ou à toute partie de la procédure d'évaluation et d'examen prévue à la présente sous-section.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Conformité des plans et devis.

**204.** Dans l'exercice des pouvoirs que lui confèrent les autres dispositions de la présente loi, le sous-ministre s'assure en collaborant, au besoin, avec la Commission, que les plans et devis de tout projet autorisé sont conformes aux exigences du certificat d'autorisation et que le projet est exploité conformément auxdites exigences.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

## SECTION IV

## RÈGLEMENTS

Règlements.

**205.** Le gouvernement peut, par règlement:

*a*) adopter les règles de régie interne du Comité consultatif pour l'environnement de la Baie James, celles du Comité consultatif de l'environnement Kativik, et celles de la Commission de la qualité de l'environnement Kativik, sous réserve des articles 140, 175 et 185;

*b*) adopter les règles de régie interne du Comité d'évaluation et du Comité d'examen;

*c*) modifier, à la suite d'une recommandation de l'Administration régionale crie à cet effet, les annexes « A » et « B » et assujettir ou soustraire obligatoirement d'autres projets à la procédure d'évaluation et d'examen visée à la section II du présent chapitre, à la suite d'une semblable recommandation;

*d*) modifier, à la suite d'une recommandation de la Société Makivik à cet effet, les annexes « A » et « B » et assujettir ou soustraire obligatoirement d'autres projets à la procédure d'évaluation et d'examen visée à la section III du présent chapitre, à la suite d'une semblable recommandation;

*e*) identifier les renseignements préliminaires que doit transmettre un initiateur de projet, en vertu des articles 156 et 190;

*f*) définir le sens des expressions « étude d'impact préliminaire » et « étude d'impact détaillé » mentionnées à la section II et déterminer les objectifs et le mode de présentation des études d'impact sur l'environnement et le milieu social;

*g*) déterminer le contenu des études d'impact visées à l'article 158 et suggérer le contenu de celles visées à l'article 195.

Exception.

Ces règlements ne sont pas soumis aux dispositions des deux premiers alinéas de l'article 124 ni à celles du premier alinéa des articles 140 et 175.

Présomption.

Dès que les règlements visés aux paragraphes *a* et *b* du premier alinéa sont en vigueur, ils sont présumés avoir été adoptés par les organismes visés auxdits paragraphes.

1978, c. 94, a. 4.

## SECTION V

## DISPOSITIONS DIVERSES

Régie interne.

**206.** Les règles de régie interne adoptées par le Conseil consultatif de l'environnement de la Baie James, le Conseil consultatif de l'environnement Kativik et la Commission de la qualité de l'environnement Kativik en vertu des quatrième et cinquième alinéas

des articles 140 et 175 et du premier alinéa de l'article 185 et les règles régissant la participation de la Commission de la qualité de l'environnement Kativik à la procédure d'évaluation et d'examen adoptées en vertu du premier alinéa de l'article 185 entrent en vigueur lors de leur publication dans la *Gazette officielle du Québec.*

1978, c. 94, a. 4.

Dispositions non applicables.

**207.** La section XI du chapitre I ne s'applique pas aux décisions rendues par le sous-ministre ou par une personne visée à l'article 166 en vertu des sections II et III du présent chapitre.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Procédure d'évaluation et d'examen.

**208.** Les projets visés à l'article 8.1.3 de la Convention sont assujettis à la procédure d'évaluation et d'examen prévue aux sections II et III du présent chapitre, mais uniquement quant à leurs conséquences écologiques.

Conséquences sociologiques.

Le présent article n'a cependant pas pour effet d'empêcher l'initiateur d'un tel projet de procéder, de sa propre initiative ou sur recommandation du sous-ministre, à l'évaluation des conséquences sociologiques du projet.

Réduction d'impact négatif.

En outre, l'initiateur d'un tel projet doit mettre en oeuvre des mesures d'atténuation raisonnables requises pour réduire l'impact négatif de ces projets sur les activités de chasse, de pêche et de piégeage des Cris, des Inuit et des Naskapis.

1978, c. 94, a. 4; 1979, c. 25, a. 115; 1979, c. 49, a. 33.

Complexe La Grande.

**209.** Malgré toute autre disposition du présent chapitre ou d'un règlement, le Complexe La Grande (1975), décrit à l'Annexe 1 du chapitre 8 de la Convention, peut être entrepris et exécuté intégralement, sans être soumis à la procédure d'évaluation et d'examen prévue aux sections II et III du présent chapitre.

1978, c. 94, a. 4.

Personne désignée par gouvernement.

**210.** Sous réserve du premier alinéa de l'article 166, le gouvernement peut désigner une autre personne pour exercer les fonctions, pouvoirs et devoirs conférés au sous-ministre par les sections II et III du présent chapitre.

1978, c. 94, a. 4; 1979, c. 49, a. 33.

Procédure d'évaluation et d'examen.

**211.** Aucun projet ne peut être soumis, en vertu de la présente loi, à plus d'une procédure d'évaluation et d'examen, à moins qu'il touche en partie l'un, et en partie l'autre, des territoires visés aux articles 133 et 168 ou qu'il touche en partie un territoire non visé par lesdits articles.

1978, c. 94, a. 4.

Immunité.

**212.** Les membres du Comité consultatif pour l'environnement de la Baie James, du Comité d'évaluation, du Comité d'examen, du Comité consultatif de l'environnement Kativik et de la Commission de la qualité de l'environnement Kativik ne sont personnellement responsables d'aucun acte accompli de bonne foi dans l'exercice de leurs fonctions.

1978, c. 94, a. 4.

Disposition non applicable.

**213.** La section IV.1 du chapitre I et ses règlements d'application ne s'appliquent pas sur les territoires visés aux articles 133 et 168, sauf en ce qui concerne les règlements d'application de l'article 22 et les règlements applicables généralement au Bureau d'audiences publiques sur l'environnement adoptés en vertu des paragraphes *c* et *d* de l'article 31.9.

1978, c. 94, a. 4; 1978, c. 64, a. 52.

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*L'article 45 de la présente loi entrera en vigueur à la date qui sera fixée par proclamation du gouvernement.*
*L'article 45 de la présente loi sera remplacé lors de l'entrée en vigueur de l'article 1 du chapitre 55 des lois de 1977 à la date qui sera fixée par proclamation du gouvernement pour l'entrée en vigueur dudit article 45.*
*La présente loi sera modifiée par l'insertion d'autres articles après l'article 45, lors de l'entrée en vigueur de l'article 2 du chapitre 55 des lois de 1977, à la date fixée par proclamation du gouvernement.*
*Les articles 72 à 75 de la présente loi seront abrogés par l'entrée en vigueur de l'article 303 du chapitre 63 des lois de 1979 à la date ou aux dates fixées par proclamation du gouvernement.*
*L'article 87 de la présente loi sera modifié par l'entrée en vigueur de l'article 304 du chapitre 63 des lois de 1979 à la date fixée par proclamation du gouvernement.*
*Les articles 88 et 89 de la présente loi seront abrogés par l'entrée en vigueur de l'article 305 du chapitre 63 des lois de 1979 à la date ou aux dates fixées par proclamation du gouvernement.*
*L'article 91 de la présente loi sera remplacé par l'entrée en vigueur de l'article 306 du chapitre 63 des lois de 1979 à la date fixée par proclamation du gouvernement.*
*L'article 92 de la présente loi sera modifié par l'entrée en vigueur de l'article 307 du chapitre 63 des lois de 1979 à la date fixée par proclamation du gouvernement.*
*L'article 106 de la présente loi sera modifié par l'entrée en vigueur de l'article 308 du chapitre 63 des lois de 1979 à la date fixée par proclamation du gouvernement.*
*Les dispositions de la présente loi mentionnées comme «non en vigueur» entreront en vigueur à la date ou aux dates fixées par proclamation du gouvernement. (1979, c. 25, a. 146; 1979, c. 63, a. 337).*

ANNEXE A

*(Articles 153, 188, 205)*

PROJETS OBLIGATOIREMENT ASSUJETTIS
À LA PROCÉDURE D'ÉVALUATION ET D'EXAMEN

Les projets mentionnés ci-dessous sont obligatoirement assujettis à la procédure d'évaluation et d'examen prévue aux articles 153 à 167 et 187 à 204:

*a*) tout projet minier, y compris l'agrandissement, la transformation ou la modification d'une exploitation minière existante;

*b*) tout banc d'emprunt, sablière ou carrière dont la superficie à découvrir couvre trois hectares ou plus;

*c*) toute centrale hydroélectrique ou électronucléaire et ouvrage connexe;

*d*) tout réservoir d'emmagasinage et bassin de retenue d'eau relié à un ouvrage destiné à produire de l'énergie;

*e*) toute ligne de transport d'énergie électrique d'une tension de plus de 75kV;

*f*) toute opération ou établissement d'extraction ou de traitement de matières destinées à produire de l'énergie;

*g*) toute centrale thermique alimentée par un combustible fossile et dont la capacité calorifique est égale ou supérieure à 3000 kW;

*h*) toute route ou tronçon d'une telle route d'une longueur d'au moins 25 kilomètres et dont la durée d'utilisation est prévue pour au moins 15 ans à des fins d'exploitation forestière;

*i*) toute scierie, usine de pâtes et papiers ou autre usine de transformation ou de traitement des produits forestiers;

*j*) tout projet d'utilisation des terres qui affecte plus de 65 km;

*k*) tout système d'égout sanitaire comportant plus d'un km de conduites et toute usine d'épuration des eaux usées sanitaires destinée à traiter plus de 200 kl d'eaux usées sanitaires par jour;

*l*) tout système d'enlèvement et d'élimination des déchets;

*m*) tout projet de création de parc ou de réserve écologique;

*n*) toute pourvoirie destinée à recevoir simultanément 30 personnes ou plus, y compris les réseaux d'avant-postes;

*o*) toute nouvelle ville, communauté ou municipalité et tout agrandissement de 20% ou plus de territoire global de celles-ci ou du territoire urbanisé de celles-ci;

*p*) toute route d'accès à une localité ou infrastructure routière en vue d'un nouveau projet;

*q*) toute installation portuaire, chemin de fer, aéroport, gazoduc, oléoduc ou tous travaux de dragage destinés à l'amélioration de la navigation.

Les projets énumérés dans la présente annexe ne comprennent pas les activités visées au paragraphe *g* de l'annexe « B ».

Malgré le paragraphe *a*, les projets d'exploration minière ne sont pas obligatoirement assujettis à la procédure d'évaluation et d'examen prévue aux articles 153 à 167.

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1978, c. 94, a. 6.

## ANNEXE B

(*Articles 153, 188, 205*)

PROJETS OBLIGATOIREMENT SOUSTRAITS
À LA PROCÉDURE D'ÉVALUATION ET D'EXAMEN

Les projets mentionnés ci-dessous sont obligatoirement soustraits à la procédure d'évaluation et d'examen prévue aux articles 153 à 167 et 187 à 204:

*a*) tout hôtel ou motel de 20 lits ou moins et toute station-service située le long d'une route;

*b*) toute autre construction destinée à l'habitation ou au commerce de gros et de détail, destinée à servir de bureaux ou de garage ou destinée à l'artisanat ou au stationnement des voitures;

*c*) toute centrale thermique alimentée par un combustible fossile et d'une capacité calorifique inférieure à 3000 kW;

*d*) tout établissement scolaire ou éducatif, halte routière, belvédère routier, banque, caserne de pompiers ou immeuble destiné à des fins administratives, aux loisirs, aux activités culturelles, au culte, aux sports, à la santé ou aux télécommunications;

*e*) tout poste de manoeuvre ou de transformation d'une tension de 75 kV ou moins et toute ligne de transport d'énergie électrique d'une tension de 75kV ou moins;

*f*) toute conduite d'aqueduc, d'égout, d'oléoduc ou de gazoduc de moins de 30 cm de diamètre et d'une longueur inférieure à 8 km;

*g*) tout sondage, étude préliminaire, recherche, expérience hors d'usine, travail de reconnaissance aérienne ou terrestre, carottage, étude ou relevé technique préalable à un projet quelconque;

*h*) toute exploitation forestière faisant partie d'un plan de gestion de la forêt du ministère de l'énergie et des ressources;

*i*) toute rue ou trottoir municipal;

*j*) l'entretien et l'exploitation de tout chemin public ou privé;

*k*) la réparation et l'entretien des ouvrages municipaux;

*l*) toute installation temporaire destinée à la chasse, à la pêche ou au piégeage et tout service de pourvoirie ou campement destiné à loger moins de 30 personnes;

*m*) toute coupe d'arbres destinée à une utilisation personnelle ou communautaire;

*n*) tout banc d'emprunt destiné à l'entretien routier.

En outre, tout projet réalisé dans les limites territoriales d'une communauté non-autochtone et qui n'a pas de répercussion sur la faune à l'extérieur de ces limites, est soustrait aux articles 153 à 167.

Enfin, tout projet dans les limites territoriales d'une communauté qui n'a pas de répercussion sur la faune à l'extérieur de ces limites ainsi que l'extraction et la manutention de la stéatite, du sable, du gravier, du cuivre et du bois à des fins d'utilisation personnelle ou communautaire sont soustraits aux articles 187 à 204.

Les exemptions prévues aux paragraphes *a* à *f* et aux paragraphes *l* et *n* de la présente annexe s'appliquent à l'implantation, la construction, la modification, la rénovation et la relocalisation des projets visés.

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1978, c. 94, a. 6; 1979, c. 81, a. 20.

# APPENDIX E

## GENERAL STATISTICS RELATED TO RESOURCE DEVELOPMENT

TABLE E.1: Foreign Control in Canada[1]

| | 1954 | 1955 | 1960 | 1965 | 1966 | 1969 | 1970 | 1974 | 1975 | 1976 | 1979 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| % OF TOTAL CONTROL BY ALL NON-RESIDENTS | | | | | | | | | | | |
| Manufacturing[2] | 51 | 52 | 59 | 59 | 57 | 60 | 61 | 57 | 55 | 55 | 51 |
| Petroleum, natural gas | 69 | 79 | 73 | 73 | 74 | 74 | 76 | 75 | 74 | 68 | 53 |
| Mining, smelting | 51 | 57 | 61 | 60 | 62 | 70 | 70 | 58 | 60 | 55 | 51 |
| Railways | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Other utilities | 8 | 8 | 5 | 4 | 4 | 6 | 7 | 4 | 4 | 4 | 4 |
| Total of above industries, merchandising | 28 | 30 | 33 | 34 | 34 | 36 | 36 | 33 | 33 | 31 | 28 |
| % OF TOTAL CONTROL BY THE UNITED STATES | | | | | | | | | | | |
| Manufacturing[2] | 41 | 42 | 44 | 46 | 45 | 47 | 47 | 43 | 42 | 42 | 39 |
| Petroleum, natural gas | 67 | 73 | 64 | 58 | 59 | 60 | 61 | 59 | 59 | 54 | 40 |
| Mining, smelting | 49 | 55 | 53 | 52 | 53 | 59 | 59 | 45 | 46 | 41 | 37 |
| Railways | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Other utilities | 7 | 6 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Total of above industries, merchandising | 24 | 26 | 26 | 27 | 27 | 28 | 28 | 26 | 26 | 24 | 22 |

[1] J. Niosi, 1982 and Statistics Canada 67-202.
[2] In manufacturing are included: vegetable products, animal products, textiles, wood and paper, iron, non-ferrous metals, non-metallic minerals, chemical and allied products, miscellaneous manufactures

TABLE E.2: Gross General Natural Resource Revenue (GGNRR) by Provinces, as a Percentage of the Gross General Revenue[1] (% computed by the author)

| | 1952 | 1956 | 1960 | 1964 | 1968 | 1972 | 1976 | 1980 | 1984[2] | Average (32 yrs) |
|---|---|---|---|---|---|---|---|---|---|---|
| Newfoundland and Labrador | 2.24 | 1.81 | 1.85 | 0.90 | 1.34 | 1.25 | 1.20 | 1.71 | 1.03 | 1.48 |
| Prince Edward Island | 0.14 | 0.17 | 0.07 | 0.05 | 0.08 | 0.06 | 0.25 | 0.10 | 0.16 | 0.12 |
| Nova Scotia | 2.36 | 2.39 | 1.16 | 0.89 | 0.45 | 0.36 | 0.35 | 0.46 | 0.54 | 0.99 |
| New Brunswick | 6.12 | 6.24 | 3.28 | 2.79 | 1.52 | 1.20 | 0.99 | 1.36 | 1.05 | 2.72 |
| Quebec | 8.13 | 7.39 | 4.90 | 2.57 | 2.32 | 1.60 | 1.12 | 0.77 | 0.36 | 3.24 |
| Ontario | 6.20 | 5.52 | 4.29 | 2.58 | 1.54 | 0.97 | 1.26 | 1.28 | 0.64 | 2.69 |
| Manitoba | 4.18 | 6.05 | 2.85 | 2.65 | 1.42 | 1.26 | 1.86 | 2.24 | 1.97 | 2.72 |
| Saskatchewan | 6.96 | 17.34 | 10.36 | 11.81 | 8.04 | 6.40 | 21.90 | 25.44 | 19.80 | 19.39 |
| Alberta | 40.95 | 54.10 | 36.80 | 44.64 | 34.18 | 22.37 | 48.06 | 55.00 | 45.10 | 42.36 |
| British Columbia | 12.98 | 15.52 | 13.89 | 17.20 | 12.20 | 9.05 | 6.50 | 15.60 | 6.60 | 12.17 |
| Canada | 11.16 | 14.45 | 8.83 | 8.34 | 5.88 | 8.60 | 11.96 | 7.99 | 3.81 | 9.00 |

[1]Statistics Canada, 68-207, Table 1, 1952 to 1984.
[2]1984 estimated.

Note: Natural resource revenue comes from fish and game, forests, mines, oil and gas, and water.

TABLE E.3: Gross General Natural Resource Expenditure (GGNRE) by Provinces, as a Percentage of the Gross General Expenditure[1] (% calculated by the author)

| | 1952 | 1956 | 1960 | 1964 | 1968 | 1972 | 1976 | 1980 | 1984[2] | Average (32 yrs) | GGNRR minus GGNRE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Newfoundland & Labrador | 4.76 | 4.54 | 4.51 | 3.16 | 4.40 | 8.40 | 6.70 | 6.60 | 6.10 | 5.46 | - 3.98 |
| Prince Edward Island | 5.63 | 6.05 | 4.72 | 5.27 | 4.67 | 8.66 | 9.35 | 13.45 | 8.19 | 7.33 | - 7.21 |
| Nova Scotia | 5.95 | 4.71 | 6.91 | 4.36 | 4.42 | 4.62 | 7.31 | 6.72 | 5.71 | 5.63 | - 4.64 |
| New Brunswick | 8.15 | 7.56 | 5.13 | 5.16 | 4.23 | 5.06 | 7.14 | 5.39 | 4.95 | 5.86 | - 3.14 |
| Quebec | 10.05 | 11.13 | 9.26 | 6.23 | 4.39 | 3.90 | 4.52 | 4.09 | 3.93 | 6.38 | - 3.14 |
| Ontario | 5.74 | 5.21 | 3.64 | 3.86 | 3.12 | 3.10 | 2.62 | 3.53 | 3.48 | 3.81 | - 1.12 |
| Manitoba | 9.08 | 7.41 | 7.38 | 15.39 | 7.23 | 5.85 | 6.59 | 4.41 | 5.72 | 7.67 | - 4.95 |
| Saskatchewan | 7.73 | 7.29 | 6.94 | 7.17 | 5.73 | 6.32 | 10.33 | 13.38 | 12.35 | 8.58 | +10.81 |
| Alberta | 10.07 | 7.43 | 8.86 | 6.88 | 5.20 | 5.16 | 8.56 | 11.43 | 18.63 | 9.13 | +33.23 |
| British Columbia | 8.70 | 7.20 | 7.62 | 6.18 | 6.53 | 6.31 | 5.65 | 5.46 | 5.79 | 6.60 | + 5.57 |
| Canada | 7.96 | 7.40 | 6.55 | 5.80 | 4.40 | 4.33 | 4.93 | 5.61 | 6.59 | 5.95 | + 3.05 |

[1] Statistics Canada, 68-207, Table 2, 1952 to 1984.
[2] 1984, estimated.

Note: Natural resource expenditure (resource conservation and industrial development) comes from agriculture, fish and game, forests, mines, oil and gas, tourism, trade and industry, and water.

# VITA

Surname: GÉLINAS Given Names: CHRISTIANE

Place of Birth: Trois-Rivières, Que. Date of Birth: Feb. 5, 1951

Educational Institutions Attended, with Dates of Entering and Leaving:

| | |
|---|---|
| COLLÈGE D'ENSEIGNEMENT GÉNÉRAL ET PROFESSIONAL DE TROIS RIVIÈRES, QUÉBEC | 1968 to 1970 |
| UNIVERSITÉ DE MONTRÉAL, QUÉBEC | 1970 to 1973 |
| UNIVERSITÉ DE MONTRÉAL, QUÉBEC | 1980 to 1981 |
| UNIVERSITY OF VICTORIA, B.C. | 1981 to 1986 |

Degrees, Diplomas, Etc., Awarded, with Dates and Names of Institutions:

| | | |
|---|---|---|
| D.E.C. (Sciences) | 1970 | CEGEP de Trois-Rivières |
| Bac. Landscape Architecture | 1981 | Université de Montréal |

Experience, Names of Employers and Dates:

| | |
|---|---|
| Gaétan Richard, City Planner, Montréal | Apr. - Aug. 1973 |
| Panasult, Consultants in Management, Montréal | Jan. - June 1974 |
| Daniel Arbour, Regional Planner & Urbanist, et André Marsan, Ecologist & Resource Management Consultant, Lavalin, Montréal | June 1974 - June 1980 |
| Rober Gélinas, Land Surveyor & Forest Engineer, Trois-Rivières | Apr. - Aug. 1981 |

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CHRISTIANE GÉLINAS

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