

NO. 9

IMPACT ASSESSMENT: AN EVOLVING TECHNIQUE  
A FEDERAL PERSPECTIVE

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FEAR0

1982

**TO THE**

**INTERNATIONAL CONFERENCE ON OIL AND THE ENVIRONMENT**

**HALIFAX - AUGUST 16-19, 1982**

**Impact Assessment - An Evolving Technique**  
**- A Federal Perspective**

**Introduction**

"Nature abhors a vacuum" was an early expression of scientific wisdom, and, though incorrect, this statement serves as one indicator of the beginning of empirical science.

"Nothing happens in a vacuum" is a more recent sociological statement of a similar type. What this means is that events and actions always occur in a complex, changeable and changing milieu; in a specific but changeable context.

Let me dwell briefly on this concept of context before I move on to the Environmental Assessment Review Process (EARP), administered by the Federal Environmental Review Office (FEARO), to describe for you how and why EARP has changed and is changing.

Since most of us work, think, and plan in a rather short time context - last year and next year, I'd like to begin by stepping back a pace, and touching, ever so briefly, on the development of government in Canada, in general.

There have been incredible changes in the span of a lifetime. How many of us are aware, for example, that less than 60 years ago, in 1923 to

be exact, the Department of External Affairs had only four officers? There was an important Imperial conference that year, but the Prime Minister, Mackenzie King, had to reach into the university setting to find someone who could produce the briefing papers he required. Six years later, in 1929, the Department, surely a key department in any nation, had grown to 22 officers: four in Ottawa; the others in Paris, London, Washington, Tokyo, and Geneva. In 1932, fifty years ago, when Canada played host to the British Empire at an Imperial Economic Conference, the situation was about the same,

What relevance does this have for us? Seen in the context of those 60 years, Canada is a new, young nation, still in the full spate of adolescent growth. And I believe, at conferences such as this, we should keep that in mind. Because in a way, we are here to assess how well governments are doing their planning homework, as well as to share ideas and to compare notes. The tendency will and, must be, to compare what is now being done to something approximating the "perfect model" of a planning system. Keeping an eye on the time context, how far we've come in just one lifetime might add a bit of balance and somewhat lessen the level of anxiety.

Looked at in another context, it can be said that, historically, Western governments before World War I generally accepted the principle of laissez-faire in economics and social planning. But the twin shocks, not much more than 10 years apart, of World War I and the 1930's depression forced them to re-evaluate their social responsibility and to intervene in the lives of citizens on scales which would have been inconceivable a generation earlier,

Since World War II, Western governments, including the Canadian Government, have become major architects of economic strategies and planning. Economic growth and development became primary goals in the 1950s and early 1960s. Then a shift occurred.

New concerns sprang from many sources: the aging of a generation that knew hard times and the coming of age of another that knew only prosperity; a long period of relative prosperity followed by a seeming social ennui and lack of purpose; and more concern about the quality of life. Increasing time for leisure and Increasing amounts of information allowed citizens to become more active in issues. One issue that came to the fore was the environment. They challenged both the capacity and integrity of their governing institutions to deal with environmental matters and began to demand a greater say in the functioning of public affairs.

There was, in effect, expansion in philosophy, moving from pollution control to encompass preventive planning - environmental impact assessment. Under social pressure the Government acted to create a Department of Environment in 1971. And in further response to these concerns, in 1973 it introduced the Federal Environmental Assessment and Review Process (EARP). The process was subsequently strengthened in 1977.

That's a very brief comment on the growth of public consciousness that gave rise to among, other things, formalized environmental impact assessment. Now let 'slook at what EARP is and how it has evolved, by

examining panel reviews and by stressing the evolution of the consideration of social concerns.

### The Scope of EARP.

EARP is mandatory for all federal departments and voluntary for Proprietary Crown Corporations and regulatory agencies. It applies both to federal programs and activities and to developments in the private sector where federal lands, properties or monies are required for an undertaking.

EARP has three principal features which set it apart from similar processes within other jurisdictions: self-assessment, public participation, and non-statutory. The first feature is self-assessment. Government departments carrying out or sponsoring a proposal are expected to make their own initial evaluation of the proposed activity, seeking technical expertise from other departments or as necessary, from the private sector. They decide whether the activity entails a potentially significant environmental impact. They may also involve affected and interested public at this point. Should they conclude that the potential impact is significant, (significance can include a judgment of probable public concern) they will recommend that their Minister refer the project to the Minister of the Environment for a full review by a Panel set up by FEARO.

This approach keeps the decision authority and responsibility in the hands of the departmental manager primarily concerned. One benefit is

the development of environmental consciousness among those who otherwise might not consider environmental concerns to be their responsibility.

I might add that FEARO sits outside the normal departmental structure - it is not a part of Environment Canada - although it reports directly to the same Minister, John Roberts.

The second feature is that the public is informed and consulted during the formal review process. The review, carried out by an independent panel, has procedures to encourage public participation, and, this participation is, in fact, a vital part of it.

Finally, the Environmental Assessment and Review Process (EARP) was established by government policy and is not statutory. Procedures are not rigidly prescribed and there is considerable scope to allow the adjustment of the process to fit the context. It is for this reason that I have spoken of it as evolving. We are continually learning from experience.

### The Evolution

#### Policy

The first step in setting up this federal environmental assessment and review process was taken by Jack Davis, the Minister of the

Environment. He held weekly breakfast meetings with his senior officials, which allowed him to share his thinking on many matters, including an environmental assessment process for Canada. He believed some legislation had proved dispute-oriented and felt that Canada could avoid this approach. Furthermore, he considered the process was too new and too experimental to be well served by legislation before experience was gained. As a result, legislation was not enacted. Instead, the Government issued a policy setting out the purpose, objectives and procedures. The following excerpt gives the essence of the process.

"The Minister of Environment in cooperation with other Ministers should establish:

- a) a procedure for administering the environmental assessment and review process including arrangements for the public to comment on the environmental issues, with provisions for public hearings when appropriate.

Note the breadth and flexibility of the instruction. And the document went on to give several other instructions:

"The Minister... should establish:

- b) an Environmental Assessment Panel, consisting of qualified personnel from within the Department of the Environment..."



Key to the Panel function is the following:

"to make the environmental prediction statements submitted for review available to the public (unless otherwise directed by the Minister of the responsible department in consultation with the Minister of the Environment) and to provide sufficient time for public response, recognizing the need to avoid unnecessary delay in completing the review".

This was a rather dramatic statement in the climate existing nearly a decade ago, well in advance of the present movement toward public participation and freedom of information.

In 1977 the Government issued a further instruction regarding the EARP. Two items in that instruction which have affected the evolution of the social side of this process are:

- "Permitting the appointment of panel members from organizations other than the Department of Fisheries and the Environment and the initiating department". (That was intended to include persons from outside the federal government service.)
- "Ensuring that the federal departments and agencies provide information on, and seek public response to their projects early in the planning stage before vital decisions are taken that may be difficult to alter regardless of public opinion".

So, the Panel was broadened to be potentially much less bureaucratic, and all participating agencies were instructed to consult the public. That this was the Government's original intention, is made clear by the Minister's initial announcement of EARP to the House of Commons, Thursday, March 14, 1974. He said, in part,

"Public disclosure is important. Written assessments made by the Panel will, therefore, be published. Public participation is also vital..."

He went on to say,

"I hope, in the process, that we can avoid the delays and other pitfalls which a strictly legalistic approach would cause in this country... We will not be charged with blocking everything. At the same time, we will make a great deal of information public..."

Successive Ministers since that date have shared this intention and our present Minister, John Roberts, has consistently supported this open policy with vigour.

### Procedure

We now move from policy to action. The policy was quite clear; how it was to be carried out was quite another matter! There were no regulations to guide, no books of instruction, nor any operating processes having similar characteristics, which could serve as possible

models. All had to be invented, using ideas and experience from many sources, with a certain amount of "cut and fit" activity. It was very much as Dylan Thomas stated about learning the art of writing poetry,

"and the poets couldn't soar from the grave to tell me how to do it.  
And I couldn't trust the critics then---or now".

The first experience was the Panel review of the proposed Point Cepreau Nuclear Generating station - New Brunswick. The public meeting was held in Saint John, April 3, 1976 and lasted one day. Reading the Panel report, one can see that there were many deficiencies in this first attempt. A major problem was that the review did not begin early enough.

From that experience FEARO learned a crucial lesson: credibility is the only basis for a successful evaluation process; both substantive credibility - What is produced, and process or procedural credibility - How it is produced! It seems pretty simple now, the idea that the public must believe that you are fair, open and honest before any real and useful interaction results. But getting and maintaining that credibility, not by "what we did but the way that we did it", to paraphrase an old song, was hard.

You see, the key to an EARP Panel review is the analysis of the environmental impact assessment. And for the analysis, the Panel, despite input from hired experts and from governmental representatives,

depends heavily on the public input during the review. The public, or if you will, the people, constitute a very necessary, critical element.

The second review was of Nova Scotia's Wreck Cove Hydro Electric Project, ~~w~~ reported online July 1977: o u g h " b u t a n improvement and led to more answers.

Reading that report reveals the hard lessons learned about the need to strengthen both public information and public input to achieve and maintain credibility. A public meeting, attended by about 200 people, was held at Baddeck N.S.. As a result, it was discovered that the projected Cheticamp Reservoir would flood about 3 to 5 acres of Cape Breton Highlands National Park. But this was not part of the original impact statement! Therefore Nova Scotia Power Corporation was asked to document the problem and to find alternative reservoir plans or structures which would avoid or minimize flooding in the Park. Another Environmental Impact Statement was produced. The Panel decided to distribute this second report more widely; to Halifax and Cape Breton libraries, to offices of Parks Canada, and the Nova Scotia Power Corporation. Copies were also mailed to intervenors who had appeared at the Baddeck public meeting.

The Panel also advertised the upcoming public meetings In several Nova Scotia newspapers, so it could hear the public views of the environmental implications of using federal lands in the Cheticamp Lake area. These ads indicated where the final Environmental Impact Statement could be viewed and gave 30 days notice for the meetings.

In summary, the improvements stemming from these first two formal Panel reviews were:

1. To ask for a better EIS when the original was found to be in error, to wait for it, and to examine it again, in public.
2. To make the EIS widely available at least 30 days before public meetings.
3. To advertise locally, where public meetings would be and where documentation could be seen.
4. To hold public meetings in several centers to make it easier for the public to attend.

The blueprint of future developments had been produced: adequate information; adequate access; adequate time to review; expert opinion available, and ease of access of the public to the Panel to make views know.

Before looking at later reviews and what was learned, let me state the obvious: the environment is complex and consists of many interrelated factors. It involves physical and biological features. It also involves people. And we have found during the past few years that it is not feasible to segregate discussion of the social from the ecological issues. This has now evolved to the point where the routine and expected course for public reviews is to give simultaneous balanced

consideration to both aspects and to define the relationships between them. For example, it is now common for a letter referring a project for review to speak of assessing 'environmental and related social impacts'.

It is important to remember that we have a system of government that depends on citizen participation; citizens stating how they wish to be governed. In theory, our greatest influence as citizens over the representatives we elect comes through our ballot. In practice, various groups attempt to influence our representatives between elections. Individuals and small or poorly organized groups may feel at a disadvantage.

In this context, EARP helps redress the balance. It allows the normally inarticulate and powerless to have a say in government planning at times other than elections, at times when a development proposal is being seriously contemplated.

The next report that I wish to cite is that of the Panel reviewing the proposed Uranium Hexafluoride Refinery at Port Granby, Ontario. This review marks another significant development of the review process. Briefly, the proposal called for a refinery with on-site disposal of low-level radioactive waste near the shore of Lake Ontario. The Panel recommended that the proposed site not be accepted for two main reasons:

- the waste management system proposed was unacceptable;

- the refinery would have an overall negative effect on the local area because of impacts on prime agricultural land and could be the "thin edge of the wedge", changing the land use from agricultural to industrial.

Note that there are two separate bases for the "no" recommendation; the first being ecological, and the second essentially social, although derived from physical change.

I began this presentation with three early reviews, emphasizing the simplicity of the first two approaches, and the evolution to consideration of social concerns in the third review. I propose now to summarize the main steps of an ongoing EARP review, that of the proposed developments in the Beaufort Sea. I will also explain some of the further changes that have evolved within the flexible EARP mandate. Following that, I will talk briefly about the present social setting of impact assessment, and take a bold look into the future.

### Present Practice

The Beaufort Sea Hydrocarbon Production Proposal calls for the production and transportation of hydrocarbons from the Beaufort Sea to southern markets. The proponents are Dome Petroleum, Gulf Canada and Esso Resources. The initiator (which in our jargon means the organization referring the project for review) is the Department of Indian and Northern Development (DIAND). The Panel was appointed by the Environment Minister in 1980 and has seven members. It is chaired

by Dr. John Tener. It is important to note that in this particular review none of the Panel members is now a public servant.

One should also note, that this review is somewhat unique in another way; the initiator, DIAND, explicitly asked that the Panel consider broad social impacts as well as the environmental ones, as distinct from those social effects which result directly from bio-physical change. It is further unique in that it covers by far the largest geographical area of any review undertaken to date and is the most expensive proposal. The development, production and transportation of hydrocarbons in this case would involve the Beaufort Sea, the Mackenzie Valley and the whole Northwest Passage and Baffin Strait. And for the first time in an EARP review there is significant funding of participants. But, I'll say more about this later.

The key process steps in this review to date have been:

- 1) Early consultation was undertaken as soon as the referral was received to arouse interest and to identify issues and concerns.
  - all native organizations with an interest in the North were contacted;
  - some community contacts were made directly in the Mackenzie Delta and Valley, and on Baffin Island;
  - all major environmental non-government organizations (ENGO's) - were contacted;



- federal departments and Northwest Territory and Yukon Territory governments were contacted.

2) An issues seminar was held in Calgary Sept 30, 1980; the central location for most groups.

- Statements of issues were solicited in advance, printed, and distributed to all participants. Presentations were made and discussions held. The proponents outlined their plans.
- Transcripts of this discussion of issues were distributed to all registered participants.

3) Several visits were made to the 26 northern communities to tell them about upcoming activities and to give them other information. Interpreters were used.

4) Many panel publications and bulletins were issued in Inuit dialects.

5) A local office was opened in Inuvik, staffed by a native northerner, to give and get information.

6) There is continual contact between the Panel secretariat and all participating and affected groups, as well as government agencies.

7) Draft guidelines, which indicate which impact studies should be made, were written, translated and widely distributed, so the public could offer suggestions about the final guidelines.

- 8) Public meetings to discuss the draft guidelines were held in eight northern communities in November and December, 1981. Transcripts of the meetings were made available to all participants. Simultaneous translation was used in both the eastern & western Arctic.
- 9) The panel issued the final guidelines, which are in part, based on the comments received at these meetings. The final guidelines have been sent to all participants.
- 10) The Panel requested position statements, including explanations of relevant policies from all government departments affected by the proposal, and from the Yukon and Northwest Territorial governments.
- 11) An interim report to the Minister was submitted by the Panel. It was distributed in May, 1982 to all participants after being released by the Minister.
- 12) Panel members have held workshops in all the affected remote communities to help improve the participation skills of the local population.
- 13) The proponents are producing a comprehensive Environmental Impact Statement (EIS) reflecting the Panel's guidelines and this too will be available to the public.

A number of key events are yet ahead.

- Based on its own review and comments received, the Panel will determine whether the EIS is complete and acceptable.
- If the EIS is broadly acceptable, public meetings will be held in the regions possibly to be affected to discuss the proposal. To accommodate other interested people, some meetings may be held in a southern centre. Written briefs will be requested, though oral presentations will be accepted. Transcripts will be available to people who make presentations.
- - The Panel will then write a report for the Minister of the Environment making a series of recommendations. All participants and those interested will receive a copy, when it is released by the Minister.
- Our present expectation is that the Beaufort review will be completed next summer. However, delays could occur if the EIS, already behind schedule, is slow in coming or if it is significantly deficient.

I promised earlier to say something about funding of participants. For the first time, the government has undertaken a pilot funding program to assist public participation in the review, in response to recommendations from previous panels and public interest groups. An

independent committee, reporting to the Executive Chairman of FEARO, offered \$315,000 to 10 groups in 1981-82; the money coming from DIAND. So far in 1982-83, some \$292,500 has been offered. Funding appears to have had a positive effect on the meetings as the level of research and participation has been high, permitting groups to deal more effectively with substantive issues.

It was noted earlier that Panels have necessarily begun to consider social as well as ecological impacts in their reviews. This is particularly true for the Beaufort Sea review. The social impacts include those resulting from the proposal generally and from specific environmental impacts. Although this is the first Panel to have terms of reference that instruct it to consider direct social impacts, most have had to take such impacts into account in their deliberations. The reason is simple: the public normally views environmental impacts in terms of their possible effects on lifestyle, expectations and social well being.

It is, I think, true to say that the more the public becomes accustomed to being brought into impact reviews, the more effective the comment (much of which is pithy and well thought-out) that is received on the possible social impacts of a proposal. This is a real intellectual resource which should be regularly tapped, not ignored.

Conclusion: Where we are

So far we have had 20 panel reports covering port expansion, a nuclear power station, uranium refineries, highways, hydro projects, airports,

oilfields, pipelines, and offshore drilling. I think it is clear from the quick trip through the Beaufort Sea Panel activities that governmental public consultation procedures have come a long way since the beginning of EARP. This is reflected in the fact that changes have been made and are occurring in the decision-making processes of government. These changes can place new demands on planners and corporate managers and sometimes they give environmental issues a central role. From our experience, if environmental and related social issues are given prominence at the earliest stages of project planning or major decision-making, and if the public is informed and consulted at appropriate points, and if corporate managers sit down in their own boardrooms with environmental and social planners just as they sit with design engineers and accountants, problems in securing project approvals or support for development decisions can be greatly reduced. More important, the quality, the long-term viability, of the decisions should be considerably enhanced.

#### The Future: Directions for Impact Assessment

There are a number of clear trends for impact assessment processes in the future.

First, the involvement of the public early in proposal review will continue to grow as our ability to make such involvement useful to all participants grows.

Second, the practice of assessment will continue to grow and improve. Indeed, 1982 has seen the completion of an effort to describe Environmental Impact Assessment (EIA) practice in Canada begun in 1980 by the Council of Canadian Resource and Environment Ministers (CCREM). In May FEARO published, for the CCREM, an executive summary "Environmental Impact Assessment Practice in Canada" edited by Dr. William Couch of FEARO's staff. All the provinces and the federal government co-operated to make this possible.

In the same vein, a strong effort to improve the science of EIA is being completed by Dr. Gordon Beanlands at Dalhousie University, on interchange from Environment Canada. For the past two years he has been at the Institute of Environmental Studies, Dalhousie, working to complete an analysis of present practice and to make recommendations for future EIA practice. The objective is to improve the scientific basis of EIA and enable us to focus our scientific efforts more effectively and efficiently. He will be spending the coming year in various settings encouraging the application of conclusions reached to date.

Another direction for growth and improvement, is, I believe in the practice of Social Impact Assessment (SIA) techniques. In 1980, FEARO engaged Reg Lang and Audrey Armour of York University to prepare the study "The Assessment and Review of Social Impacts". This served as a basis for a two-day discussion by all FEARO officers and a number of external experts on social impact assessment.

Using this as a point of departure, together with concepts from the Beanlands work, we in FEARO are working to improve our practice of social impact assessment, by creating a complete set of suggested guidelines for SIA as a part of ecological impact. We are contemplating another conference next winter to try to refine these guidelines.

It is my view that the improvement of practice in these areas will continue through the eighties. This is supported, incidently, through partial results of another research program we have begun, which is called "University EIA Research Program". Through this work we plan to identify institutions and persons teaching EIA/SIA across Canada, and their research efforts. The data gathering part of this project is nearly 50% completed and the results to date show that there is great activity in these two areas of impact assessment. As a personal view, I'd like to say, that I believe when all the smoke clears from these efforts, by the mid-eighties, I expect you will find Canada a clear world leader in impact assessment.

This is quite an achievement for a country as young as ours. Yet, in some ways it is not surprising. Most Canadians sense that our collective future depends on how well we manage the extraordinary natural heritage with which we are blessed. Indeed, if we ignore that challenge of management, we do so at our peril,