Environmental Considerations in Decision-Making:
A Role for EIA at the Policy Level?

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ACKNOWLEDGEMENTS

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ABSTRACT

Many of the environmental problems which currently face us are the result of policy decisions which have failed to properly consider environmental consequences. Governments have begun to recognize the need to integrate environmental concerns into decision making, but the question of just how this should be done remains unresolved. This paper addresses the question of whether or not an expanded role for EIA at the policy level would be a useful way of addressing the problem of environment in decision making.

A review of existing experience with EIA at the policy level reveals that while there is considerable interest in the idea and a number of initiatives being planned or underway, there is relatively little real experience. The experience which does exist (mainly in the U.S.) has not been well documented.

An approach to policy assessment is developed which tries to integrate EIA into the policy development process. Many of the principles behind project assessment are incorporated. The approach focuses on the need to open up the decision making process to allow for more public participation and more accountability. While the principle of serf-assessment is adopted, stringent reporting mechanisms are required.

The paper concludes that while EIA at the policy level is not likely to resolve all the problems of environmental considerations in decision making, it could, if certain standards in the assessment process are met, be a very useful planning tool. Policy assessment will require a lot of commitment on the part of decision makers, bureaucrats and the public if it is to succeed. Establishing environmental quality goals will be an important first step.

RÉSUMÉ

Plusieurs *problèmes* **environnementaux** *auxquels nous fesons* **face sont** *le résultat* **de** *décisions* **politiques faites sans** *considération* **pour** *les conséquences* **environnementaum** **Les** **gouvemements commencent** `a` **comprendre le besoin** *d'intégrer* **ces** *considérations dans* **le** *processus* **politique. La question devient, comment faire** *cela?* **Ce rapport examine la** **question** *d'assujettir* **des** *décisions* **politiques** `a` *un procédé d'évaluation* **des impacts** **environnementaux.**

Tandis *qu'il* **y a** *beaucoup d'intérêt dans* **ce** *sujet,* **il y a** *beaucoup moins d'expérience.* *L'expérience* **qui** *existe,* **principalement dans** *les* **Etats-** *Unis, n'est pas* **bien** *documenté.*

Une *procédé* **d 'e/valuation des impacts environnementaux au niveau de** *décisions* **politiques est** *développé,* **qui essaye** *d'intégrer* **cet** *évaluation* **darts le processus politique.** **Plusieurs des** *principes développé* **au niveau d 'e/valuation de** *projets sont incorporé.* **Le** *procédure développé* **concentre sur la** *nécéssité d'ouvrir* **le processus politique pour** **accomoder plus de** *participation* **de la part du public.**

Le rapport conclut que pendant que *l'évaluation* **des impacts environnmentaux au** **niveau des** *décisions* **politiques ne** *pourra* **pas** *résoudre tous les problèmes associés avec* **la** *manière dans laquelle* **l'environnement est** *considéré dans* **le processus politique, une** *évaluation* **pourrait foumir** *un outil très* **utile.** **L'** *évaluation* **des** *décisions* **politiques va** **demander** *un grand* **effort sur la** *part des politiciens,* **des bureaucrates et du public.** *L'établissement* **d'objectifs et de buts indiquant la** *qualité* **d'environnement que** *nous* *désirons,* **sera un** *mesure très* **important au debut.**

1. INTRODUCTION

1.1   Problem Statement

The impact that years of poor decision making has had on the environment is evident all around us. Deforestation, soil erosion, water pollution, global warming, ozone depletion, loss of wetlands, loss of biodiversity and so many more of the environmental problems we face are the result of an accumulation of inadequate decisions taken over decades - decisions which failed to properly consider the environmental consequences of the choices being made.

The "output" of policy, as Simeon (1976) suggests, is often different from the "outcome" of policy - the former being the action that is taken by government and the latter the consequences of that action for society. Consequences can be intended, or unintended, and it is often the second of these which present problems.

It is increasingly well understood that government policies, planning measures and programs of all kinds can have impacts on environmental quality (directly or indirectly), by setting inappropriate goals and encouraging unsustainable practices and developments. In fact, these decisions at the policy and planning stages may pose more of a threat than projects, since they establish the goals and practices and yet environmental implications are often less easily recognized.

The question of why decisions have tended to ignore environmental considerations, is a complex one.   The sheer number and complexity of decisions taken daily by governments makes the consideration of all consequences and interactive effects a difficult task. Sectoral lines of decision making, incremental rather than rational approaches to decision making, the distribution of power and interests involved, dominant ideas in society, decision making processes and other features could all be considered. This question is not, however, the issue to which this research has addressed itself.

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Since 1972, the year of the Stockholm Conference on the Human Environment, governments (including the federal government in Canada) have **recognized** the need to better consider the environmental consequences of decisions. Progress, however, was slow and much of this recognition only emerged following the report of the World Commission on Environment and Development in 1987 when the notion of sustainable development was really introduced and accepted for the first time by governments around the world (WCED, 1987).

In that report, the traditional separation of environmental from other **sectoral** concerns was exposed as inadequate (WCED, 1987). What was needed, it was argued, were institutional changes which would promote the consideration of ecological consequences at the same time as economic, trade, energy, social and other consequences, in what would be in effect a more integrated decision making structure. Since that time, there has been a considerable groundswell of support in Canada for the idea of integrating environmental considerations more fully into decision making processes, but the question which remains is how should this be done?

With the development of environmental impact assessment (EIA) procedures throughout the 1970s and 1980s, considerable improvements were made in the way in which environmental impacts were considered in the planning of projects. And while EIA has generally been used as a tool for assessment at the project level, supporters of EIA have long argued that assessment at other levels of decision making should form an essential part of the ETA process. These beliefs have been reemphasized in recent years (Rees, 1988; Sadler and Jacobs, 1990; Holtz, 1990; E.A.C., 1990; Cooper et al., 1991; Lindgren, 1991).

In June 1990, the Federal Minister of the Environment in Canada committed his government to carrying out environmental assessments of all new policy and program decisions (FEARO, 1990). Many theoretical and practical concerns remain however, both in terms of how policy EIA should be approached and what it might or might not

contribute to the problem of environmental considerations in decision making.

1.2   Research Question and Objectives

The principal question to which this research addressed itself was whether an expanded role for EIA, namely EIA at the policy level, was an appropriate response to the need for improved consideration of the environment in decision making. In order to answer this question, a number of more specific issues were addressed within the two principal areas of inquiry, namely public policy theory and environmental impact assessment.

The overall objectives of the research were to:

o   identify and describe any experience with policy assessment which exists in Canada or elsewhere;

o   develop a proposed framework as to how policy assessment might best be approached in Canada;

o   identify the potential strengths and weaknesses of policy assessment and make some recommendations regarding further study required.

1.3   Methodology

There are many different ways of carrying out policy research (Wildavsky, 1979; Majchrazak, 1984; Patton and Sawicki, 1986). Broadly defined, policy research is "the process of conducting research on, or analysis of, a fundamental social problem in order to provide policymakers with pragmatic, action-oriented recommendations for alleviating the problem" (Majchrazak, **1984, p.12).** Within this broad area, two divergent categories have been described. The first are "*think-pieces* that selectively pull together and synthesize theoretical literature, data, and existing research findings from a variety of sources in support of an argument or thesis", while the second are empirical approaches, "emphasiz(ing) collection and analysis of data rather than interpretive synthesis" (Majchrazak, 1984, p.58). The current study falls into the former category.

More specifically, the methodological approach used has been referred to as *focused synthesis* (Majchrazak, 1984). Focused synthesis involves a review of written material and existing research findings which are relevant to the questions being addressed, as well as discussions with experts or stakeholders and other informal surveys.

2. EXPERIENCE WITH EIA AT THE POLICY LEVELS

2.1 Canada

Federal Government

No clear definition of "proposals" is given in the 1984 Environmental Assessment Review Process (EARP) Guidelines Order (Emond, 1985, p. 60). While programs and policies are not explicitly included in the Order, neither are they necessarily excluded.

If the wording is ambiguous, the interpretation within government has been quite clear. Between 1972 and 1986, only 30 public reviews were carried out under the EARP process, and most of these were of large capital projects (hydrocarbon related, hydroelectric or transportation projects have dominated) (Fenge and Smith, 1986). An unknown number of projects have also been screened for environmental implications by government proponents and initiators. This emphasis on assessing capital projects has meant that few other kinds of public initiatives have been assessed. According to Rees (1988) "the impacts of many national and provincial policy decisions, regulated activities, and routine management procedures are collectively greater than those of capital works, but are simply not covered by the process" (p.281).[1]

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[1] *It should be mentioned that there were a number of public reviews of a broader nature, including for example the West Coast Offshore Exploration Environmental Assessment in 1986, which focused more on the idea of exploration rather than any particular proposal, but these were certainly the exception. See Nicholson (1990) for a review of 5 cases of policy level assessment in Canada.*

In June 1990, the proposed new Canadian Environmental Assessment Act was tabled in the House of Commons (originally Bill C-78, this proposed Act is now numbered Bill C-13). The new Act was an effort to end some of the uncertainty associated with the 1984 Guidelines Order. Bill C-13 interprets proposals very narrowly, making reference only to projects, which are defined as "in relation to a physical work, any proposed construction, operation, modification, decommissioning, abandonment or other undertaking in relation to that physical work..." The intent quite obviously is to limit the scope of application of EIA to projects, leaving programs, plans, policies and other government activities outside the legal framework.

While policy and program assessment were excluded from the new legislation, they were considered to be a "key element of the reform package", details of which were announced concurrently with the newly proposed legislation. The government promised that "the environmental implications of all proposed policy and program initiatives will be considered before decisions are made" (FEARO, 1990). The assessment will be carried out by the responsible authority in question, with advice from the Minister of the Environment. With regard to public scrutiny of this process, the government has committed itself to make public a statement about the environmental implications of a new policy or program, but only when such a policy or program is being announced.

The government has described this new initiative as a "much enhanced and progressive environmental review. process for all of its new policies and programs" (FEARO, 1990), and yet the apparent lack of procedural guidelines and public accountability has led some to question the usefulness of this approach (Bregha, 1990; Lindgren, 1991; EAC, 1990).

A number of such assessments have been done since this policy was announced. There is currently, for example, an Interdepartmental Review Committee in place to consider the environmental implications of the North American Free Trade Agreement. This review process may well be seen as a kind of prototype within the federal

government as to how policy assessment should be approached.

The Federal Environmental Assessment Review Office has developed a Sourcebook on Environmental Assessment to assist departments as they begin the process of assessing policies and programs (FEARO, 1992). There appears to be a distinct intention to stay away from any more formal commitment to guidelines or procedures. The sourcebook is seen as a set of "helpful concepts and ideas from which managers can pick and choose" and "not a prescriptive manual or directive" **(FEARO,** 1992, p. 4).

Provincial Governments

Policy assessment at the provincial level in Canada is seen in a number of different lights. While some provinces have taken considerable steps to address this issue and to recommend changes to current practices, others are suggesting that they do not intend to move toward policy assessment within the context of EIA.

In Alberta, Manitoba, Prince Edward Island and Quebec, there are currently no provisions for policy and program assessment within environmental assessment legislation, and there does not appear to be any intention of changing this in the near future. Similarly, in New Brunswick the EIA regulation only applies to projects, however, the process is under review and the issue of policy assessment is to be addressed by this review.

Legislation in both Newfoundland and Nova Scotia applies not just to projects but to "any enterprise, activity, project, structure, work, policy, proposal, plan or program that may, in the opinion of the Minister of Environment, have a significant environmental impact." In both cases, however, the EIA process has yet to be applied to anything but projects.

In British Columbia, while the various environmental assessment processes are all

project related, there is some structured opportunity to consider the implications of policies and programs outside of the EIA process. There is a Cabinet Committee on Sustainable Development in B.C. which is comprised of Ministers responsible for environmental management, resource development and economic development. The role of the Committee is to review policies, programs and projects that may have an effect on movement toward sustainable development, before Cabinet considers these.

Ontario's Environmental Assessment Act defines "undertaking" quite broadly to include "(i) an enterprise or activity or a proposal, plan or program in respect of an enterprise or activity...", and appears to be the only province that has ever undertaken a formal policy EIA. The Ontario Hydro Demand/Supply Plan was subject to the environmental assessment process[2]. While this suggests a movement toward a broader application of the process, most assessments have been at the project level (EAPIP, 1990).

Ontario recently undertook a review of its EA process, examining issues of effectiveness, fairness and efficiency. The Environmental Program Improvement Project (EAPIP) Task Force report, Toward Improving the Environmental Assessment Program in Ontario, included a specific discussion of the policy assessment question. The review recognized the emphasis that many forums (international and national) have placed on the need to have environmental considerations taken into account in policy making (EAPIP, 1990). It identified three routes that could be used to approach this task: a continuation of the status quo, where Ministries are given the discretion as to how they choose to include environmental concerns in policy development; a government policy that required that these-issues be considered in the development of policies and programs; or the full application of the Environmental Assessment Act to policies and programs.

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[2]. *For a review of this Ontario Hydro assessment see Nicholson, 1990.*

The Task Force rejected the first option as inadequate given new public pressures and values, and the last option as taking executive responsibility for policy decisions away from Cabinet. The conclusion was that they should proceed outside the EA Act, through a government policy approach (much like the federal government decided). Cabinet would retain the option of applying EIA to a policy if they so chose, and in other instances, government agencies would be responsible for incorporating environmental considerations into policy development.

While the task force made no specific recommendations with regard to policy assessment, it did suggest that the government further study the recommended approach and develop some more firm guidelines on issues such as criteria to determine "applicable" policies, principles to be addressed, implementation mechanisms etc. (EAPIP, 1990).

In Saskatchewan, the Environmental Assessment Act of 1980 applies only to physical works and not to policies, plans or programs. Policy and program assessment has been left up to the individual departments to include if and when they see it as appropriate. However, as in Ontario, Saskatchewan is in the midst of a process of reviewing and reforming the EIA program.   In February of 1991, the Saskatchewan Environmental Assessment Review Commission (SEARC) presented its report and recommendations to the government. This review addressed the question of policy assessment in very specific terms..

In summary form, what the Commission proposed was an environmental assessment process that started with a Conceptual Stage of policy assessment. It was felt that while policy development would continue to be the responsibility of government, policies need to be clearly articulated and accompanied by a careful description of just how environmental considerations have been addressed. An independent body, referred to as the Environmental Assessment Commission (EAC) would be established and part of its responsibility would be to assure that there is an open opportunity for the public to

review policies. Departments would prepare written assessments of their policies, these would be made public and be reviewed either by the EAC or in some cases a special Policy Review Committee. The EAC would report on the review and make recommendations to Cabinet before any decisions were taken. These recommendations would not to be binding, but it was felt that they would play an important role in helping Cabinet to make more informed and explicit decisions.

The report of the review commission in Saskatchewan makes the point of mentioning that the commission was "bombarded with the demand for open and public assessment of policy" (SEARC, 1991, p. 22). The sense was that the public wanted to ensure that decision makers were aware of both the environmental implications of their policy choices, as well as the public's view about these choices. The level of detail with which policy assessment is discussed in the SEARC review suggests it has been carefully considered. In addition, it appears as an integral part of the whole reformed process which they recommend. It remains to be seen what the government of Saskatchewan will do with this recommendation.

2.2   United States
Federal Government

The U.S. National Environmental Protection Act (NEPA) of 1969 began the movement toward environmental assessment legislation which has grown steadily in the last decades. Under S 102 (2)c, agencies of the Federal Government are required to prepare and submit environmental impact statements with recommendations or reports "on proposals for legislation and *other major Federal actions* significantly affecting the quality of the human environment...".

The question of just what constitutes "other major Federal actions" was clarified in 1978 through the Council on Environmental Quality (CEQ) Regulations. S.1508.18 states that "actions include new and continuing activities, including projects and programs..., new or revised agency rules, regulations, plans, policies, or procedures; and

legislative proposals".

The intent of the NEPA legislation was to reform federal policy making procedures by forcing the consideration of environmental consequences at both early stages in decision making and at the highest levels of decision making (Caldwell, 1989; Sigal and Webb, 1989). A recent study of EIA at these higher levels of decision making (known as Programmatic EISs (PEIS), Regional EISs, Cumulative EISs or Generic EISs) by Sigal and Webb (1989) estimates that some 175 policy and program assessments were carried out between 1979 and 1987, and another 135 regulatory reviews. Most of these, it is believed, were program assessments or narrow policy assessments. According to Sigal and Webb NEPA "has seldom, if at all, been applied to the development of broad national policy by any federal agency" (Sigal and Webb, 1989, p. 15).

Preparation of PEISs must be completed before formal proposals by agencies, in an effort to integrate these into the decision making process. While PEISs are often prepared with less detail and less quantitative analysis, Sigal and Webb believe this is reasonable, arguing that broad policy or program statements are not suited to quantitative analysis since assumptions would have to be made that would ultimately reduce the accuracy of predictions. They conclude that the more general comparative analysis of alternatives can highlight many important environmental considerations for decision makers.

The 1978 CEQ Regulations made specific reference to "tiering" of policy and program assessments in an effort to reduce paperwork. Agencies, the regulations suggest, "shall reduce excessive paperwork by using program, policy, or plan EISs and tiering from statements of broad scope to those of narrower scope to eliminate repetitive discussions of the same issues". The essence of the tiered approach is to enable EIAs to focus on the issues that are appropriate to each level of decision making.

Sigal and Webb (1989) concluded that "a well-prepared timely PEIS can highlight

and anticipate potential environmental problems, prevent future delays, (and) assist in long-range planning..." (p.23). The experience with these higher order assessments is however, obviously considerably more limited than at the project level. Experience does not appear to have been well documented, or evaluated.

State Governments

Some state-level EIA legislation also requires the preparation of policy and program level assessments. The California Environmental Quality Act (CEQA), for example, requires Environmental Impact Reports to be prepared on projects and programs, plans and policies (these latter are referred to as Program EIRs) (Bass, **1990).**

Program EIRs in California are to be prepared when an agency proposes a series of related actions including:

-activities that are linked geographically;

-activities that are logical parts in a chain of contemplated actions;

-rules, regulations or plans that govern the conduct of a continuing program; and

-individual activities carried out under the same authorising statutory or regulatory authority and having generally similar environmental effects that can be mitigated in similar ways.

A number of advantages to preparing PEIRs have been defined. PEIRs:

-provide occasion for more exhaustive consideration of impacts and alternatives than is practical for an individual EIA;

-can focus on cumulative impacts that are not well considered on a case by case basis;

-allow a public agency to avoid continual reconsideration of basic policy issues;

-allow an agency to consider broad policy alternatives and programmatic mitigation measures at an early time when they have greater flexibility to deal with basic problems and cumulative impacts; and

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-can reduce paperwork because it encourages the re-use of data (Bass, 1990, p.4).

In California, most PEIRs are prepared for city and county general plans and community plans. The guidelines encourage the integration of planning procedures and preparation of PEIRs as long as all obligations are met. As at the federal level, the content of PEIRs is similar in scope to project EIRs, but of a more general nature.

Before preparing a project EIR, an Initial Study is carried out to determine if the environmental effects were adequately addressed in the PEIR. If they were and the mitigation methods or alternatives described are being adopted by the project, then there may be no need for a project EIR. If one is required, it is often much shorter because it can be tiered to the program EIR.

2.3 Other Initiatives

The 1985 Council Directive on environmental assessment in the European Economic Community (85/337/EEC), clearly states that it applies only to projects, not programs or policies. This in no way prohibits individual countries from adopting some further measures of their own initiative, but sets only a minimum requirement. Some countries likely already have some form of policy assessment in place.

In Germany, for example, an official guideline for the Strategic Environmental Assessment (SEA) of federal programs, plans and policies has existed since 1975, though in practice it has infrequently been applied (Kleinschmidt, 1991). A new research initiative was launched in 1990 in Germany to study the possible role of SEA in technology development projects, whereby technology would be assessed during its earliest stages of research and development (Kleinschmidt, 1991).

In Britain, the Department of the Environment has prepared a guide to policy appraisal and the environment (U.K., 1991). The guide, while not outlining any formal

procedures, offers advice on how to include environmental concerns in a policy appraisal undertaken within a cost benefit analysis framework.

New Zealand has been described as "clearly a world leader in environmental assessment legislation" (Douglas, 1991, p. 23). New Zealand's Environment Act of 1986 applies among other things to "all government departments' works and policies which may affect the environment". In addition to this broad scope of application, the Act also provides for an independent Parliamentary Commissioner for the Environment. The significance of the Parliamentary Commissioner is its independent status - it acts in effect like an ombudsmen, reporting the results of its investigations directly to parliament. This kind of independent reporting mechanism is an essential component of any environmental assessment system which relies on self assessment (Rawson Academy, 1990?).

2.4   Lessons from Experience

It would seem reasonable to conclude that there is relatively little experience with formalized policy EIA. There is certainly more experience in the U.S., given that such assessments have long been required under NEPA, though there is little in the way of good reporting on and/or analysis of these higher level EISs.

The different approaches which have been taken to the idea of policy assessment suggest, broadly 'Speaking, five basic options. The first, and the option being pursued by a number of provinces, is the continuation of the status quo. This leaves it up to Ministers and ministries to decide how they choose to consider the environment in policy and program development. These provinces all have assessment at the project level, but don't see expanding this to the policy and program level.

The second option is to have a government policy which requires the consideration of environmental effects in the development of programs and policies. This can be done with few if any guidelines (as the Federal Government in Canada

seems to be proceeding), or alternatively (and the third option), it could be done with more firmly developed guidelines, as Ontario has proposed.

The fourth option would be the straight application of project environmental assessment legislation to policies and programs, without distinguishing requirements from one level to the other. This is what has been done in the U.S. under **NEPA.**

The final option would be to include policy and program assessment in existing environmental assessment legislation, but modifying the requirements in some way to accommodate the special features of policy decisions. This is, for example, what the Saskatchewan Review Commission was recommending - revised environmental assessment legislation which would provide not just for project assessment, but for special assessment procedures at the "conceptual" stage (SEARC, 1991).

A number of provinces have accommodations for policy **EIA** in their legislation, but have never applied it. Similarly, in the U.S. far fewer policy and program EIS have been done than project **EISs.** While this is likely related to decision makers desires to retain their authority over policy decisions, a lack of public pressure at the policy level, or a lack of public awareness that EIA could be applied at the policy level, must also be responsible. This may well change in the coming years.

Efforts to address the issue. of policy assessment are increasing. In both Saskatchewan and Ontario, recent reviews of **EIA** processes dealt extensively with this question. The Federal government in Canada is actively trying to promote policy assessment. There are in the meantime, few lessons to be drawn from experience with policy assessment, since such experience is limited. There does seem to be some consensus that the movement should be toward a broader application of EIA. What isn't clear yet is just how this should be **done.**

3.   DEVELOPING AN APPROACH **TO POLICY EIA IN CANADA**

3.1   Why Policy Assessment?

The essential rationale behind the application of EIA at the policy level is that decision making at a number of different levels can have repercussions for the quality of the environment, getting decision makers to change the way they have traditionally made decisions to include environmental considerations more fully will likely require an action forcing mechanism, and EIA has been **recognized** as an excellent action forcing tool. The fundamental goal of EIA is to "protect the environment from damage which might result from decisions" **(Hollick,** 1987, **p.159).** Since policy decisions can have serious environmental impacts, these should be subject to EIA.

A more detailed justification or rationale for policy assessment which summarizes well the important points, has been developed by FEAR0 (1992).

o   Policy and program assessment helps to determine the fundamental feasibility and overall acceptability of a public initiative.

o   Policy and program assessment presents the best opportunity to anticipate problems and **capitalize** on opportunities.

o   Some environmental impacts can only be assessed at the policy or program stage since there are no projects following directly from these.

o   Cumulative effects are often best assessed at the program or policy stage.

o   Policy and program assessment can help to define what needs to be addressed at the project level, thereby making project assessments more efficient.

o   Policy assessment helps to position environmental considerations more firmly in the mainstream of planning and decision making.

3.2   **The Importance of Goals**

As said before, the fundamental goal of invoking EIA measures at the policy level is to promote better decisions through the systematic consideration of potential

environmental impacts. This should ultimately lead to better environmental quality.

It is not enough, however, to simply say that the environmental consequences of decisions must be considered. In making policy decisions, trade-offs must always be made - certain gains will be sacrificed in favour of others, and certain negative consequences must be accepted. If there is no clear indication of what the current or desirable level of environmental quality is, or there are no specific environmental quality goals identified, then there is little likelihood that the environment will be well represented in the decision making process where other goals (namely economic goals) have been clearly articulated and accepted by society.

While EIA procedures can force the consideration of alternatives and identify likely environmental impacts, it can not (at least not successfully) be used to define our society's environmental quality goals. These are needed if the EIA tool is to be really effective. EIA can not provide an objective answer as to whether a policy is acceptable or which policy is best. It can only force a moment's pause to compare the impacts of the different options, and then society must select what it believes to be acceptable, based preferably on previously established and agreed upon environmental quality goals.

The Federal Government's Green Plan (Environment Canada, 1990) has gone some way in establishing a set of environmental goals (Appendix 1). One of the problems with these goals in many cases is their lack of specificity. Efforts must be made to develop implementation strategies which would allow sector specific goals to be established. If for example the goal is to stabilize national emissions of CO_2 and other greenhouse gases at 1990 levels by the year 2000, a strategy is needed to show how this could be achieved in the most efficient and equitable way. This may involve more reduction by certain sectors or certain regions, thereby providing more specific goals with which to work (i.e. in assessing policy, program and project proposals).

If these kinds of goals existed, then when the time came to decide upon, for

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example, a new transportation policy (something which we might expect soon after the Royal Commission on National Passenger Transportation completes its work), there would be some firm **sectoral** and regional guidelines against which to assess the alternatives being presented.

Environmental quality goals can also be further elucidated or reflected in land use plans, or conservation strategies, and indeed in economic development strategies. In contrast to traditional economic goals of employment, growth in GNP, increased income levels etc., environmental quality goals would relate to biodiversity, water quality, air quality, extent of protected areas, renewable resources (fisheries, wildlife, forests), non-renewable resources (oil and gas, minerals), waste generation/reduction etc.

Ultimately it is the trade-off between environmental goals and economic goals which some suggest will be resolved through the establishment of sustainable development goals. At the level of sustainable development, environmental quality goals must be integrated with political, cultural and social goals (CIDA, 1991), including issues of equity, justice, participation (future generations), community, diversity and pluralism among others.

If priorities for resource use, environmental quality goals and social goals have been established, policy EIA is likely to be considerably more straightforward. While the establishment of such goals is not likely to be easy, it is an essential first step. According to one report "the environmental assessment process will be largely ineffective unless environmental quality is defined" (Bregha, 1990).

3.3 **Guiding Principles**

The principles behind a solid EIA system have been clearly articulated on many different occasions (see for example, Beanlands and Duinker, 1983). Recent forums in Canada at both the federal and provincial levels have reiterated these principles with a remarkable degree of consensus (Appendix 2). The need for an open, consultative

process, the need for an effective process that is clear and consistently applied, the need for efficiency in streamlining the process where possible, and the need for fairness and objectivity in application are all important principles which have been recognized at the project level.

These principles, derived from considerable years of experience at the project level, should be used to provide guidance in developing a process of policy assessment. While procedures and methods may well differ between jurisdictions, the overall effectiveness of the process may be jeopardized if these principles are not followed.

3.4   A Range of Approaches to Choose From
Several different basic approaches to policy assessment have been defined, including continuation of the status quo, a commitment by government policy to do policy **EIA** (with or without clear guidelines as to how to proceed), application of existing project assessment legislation to policies, and development of new (though legislated) procedures for policy assessment.

It is this latter option that will be more fully developed in the following section. The reasoning for this is straightforward. The status quo seems to have proved itself unsatisfactory, not to mention that there is recognition on the part of the public and governments that something has to be done about environmental considerations in decision making. ' Leaving decisions about assessment (particularly if and when it shall be done and how to proceed) up to Ministers and Cabinet as the current federal policy and proposed Ontario approach do, does not seem to offer enough assurance that tough environmental issues will be addressed and that necessary principles will be followed[3]. Yet it must be recognized that policy and programs do present special problems, and

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[3].   *The case* for *legislated EIA has been made by a number of different authors, both* **for** *project and policy EIA (Gibson, 1990; Hollick, 1987; Cooper et al., 1991; EAC, 1991).*

should be addressed in newly defined ways (Cooper et al., 1991). The logical conclusion is that policy and program assessment should be a part of environmental assessment legislation, but should be subject to somewhat different procedures.

3.5 **Developing an Approach**

Figure 1 presents a flow diagram of how environmental assessment can be integrated into the policy development process[4]. While policy is not always made in this step-wise fashion, it is a desirable approach, and policy EIA measures may in effect help to ensure that these various stages are more explicitly followed. The steps include: identification of a problem; definition of objectives and goals; development and consideration of different alternatives or means of achieving the desired goal; choice, or decision as to which alternative to adopt; implementation of the selected alternative; and evaluation as to whether the stated objectives were achieved.

The full range of assessment within the policy context includes assessment of objectives/goals (Stage 1), assessment of alternatives (policy instruments chosen) (Stage 2) and the post-implementation evaluation (Stage 3). Perhaps the most important point to highlight is that the report of the first two stages should be prepared before the choice (or proposal) is made. Unlike a project assessment where the proposal is presented and then assessed before approval is granted', environmental assessment at the policy level must begin with the earliest identification of a problem.

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[4]. *The policy development model used is taken from Doern and Phidd (1988), who are careful to caution that it is just a model, and that the actual policy making process frequently diverges from this rational outline.*

[5]. *This is not the case in Ontario, where an environmental assessment must be presented with a proposal, and the EA must discuss the purpose of the undertaking and the rationale for the undertaking and choice of alternatives.*

POLICY DEVELOPMENT

STAGE 3
Post-
Implementation
Evaluation

IDENTIFICATION

EVALUATION

DEFINITION

STAGE 1
Assessment of
Objectives/ Goals

IMPLEMENTATION

ALTERNATIVES

CHOICE

STAGE 2
Assessment of
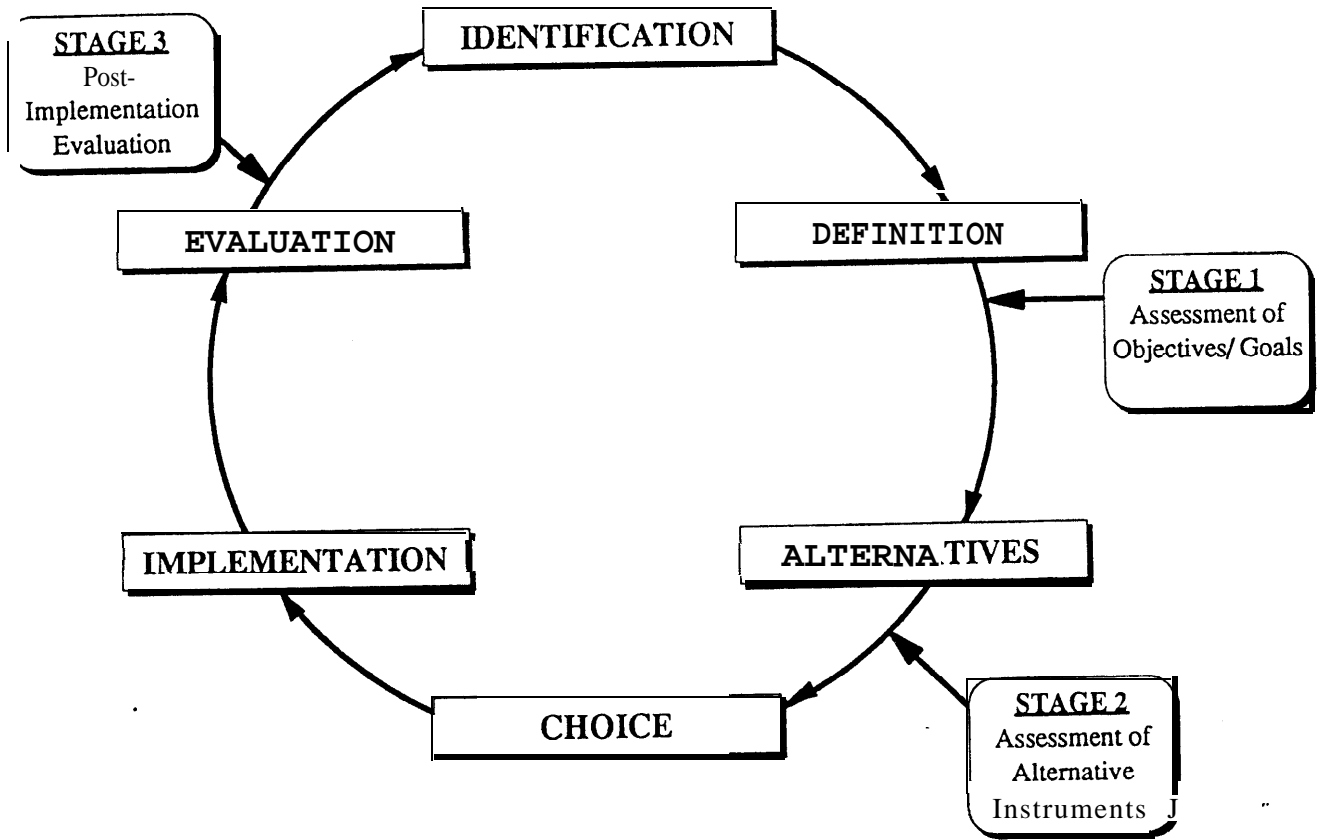Alternative
Instruments

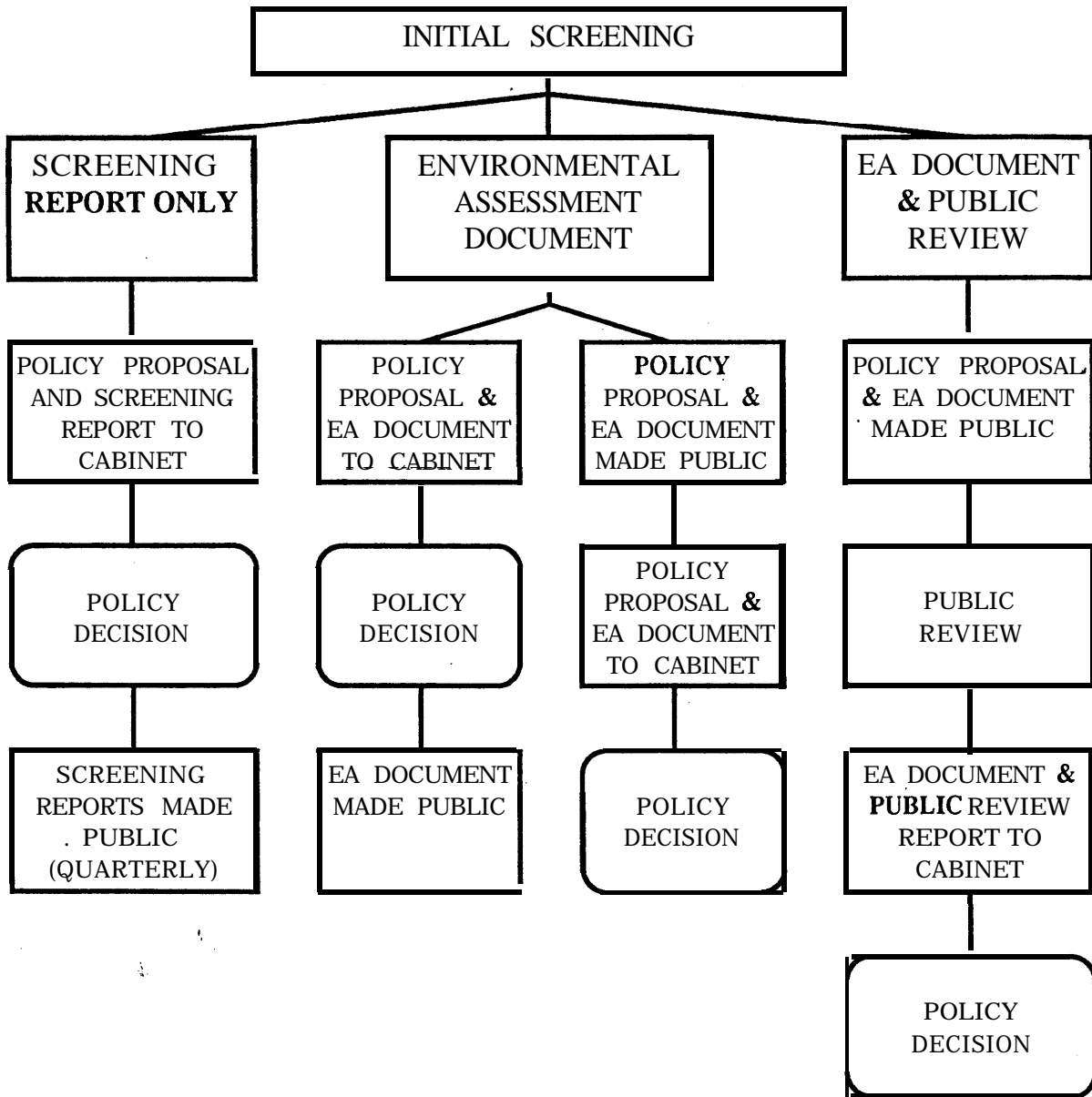Fig. 1. Policy Development and Environmental Impact Assessment

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The steps in the policy assessment process are further outlined in Figure 2, including the screening process for policies, documents to be prepared, public review procedures and submissions to Cabinet. The critical features of this proposed approach to policy assessment are described in the following pages.

Screening Procedures and Criteria

The first question to be addressed is that of defining "policy". Government policy is defined in a myriad of different ways. Most definitions seem to involve two components, namely, the identification of some end goal or value and the means of achieving it. Anthony King has defined policy as "a consciously chosen course of action directed toward some end" (Simeon, 1976, p. 557), William Jenkins sees it as "a set of interrelated decisions...concerning the selection of goals and the means of achieving them" (Doern and Phidd, 1988, p. 33) and Thomas Dye, in one of the most all encompassing definitions describes policy as "what governments choose to do or not to do" (Brooks, 1989, p. 16).

Policy assessment as discussed in this study, applies to policy in this broadest sense. In other words it includes both policy in the sense of ideas, values, principles and goals, and the governing instruments (expenditures, regulation, exhortation) through which governments hope to implement the policy. This broad view of policy is reflected in the stages of policy development in Figure 1.

Brooks (1989) points out that positive measures (like programs) can often be undertaken without any clear articulation of the objectives that are being pursued. The end point or goal is implied and can be inferred from government action, but it is not explicitly stated. In other words, the policy development process may not always begin with the clear articulation of a goal, but may begin with the selection of an activity or instrument. This is what leads to the indiscreteness of policy - it emerges sometimes only after a series of decisions have been taken. What needs to be assessed

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                    │         INITIAL  SCREENING          │
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   │  REPORT ONLY     │   │   ASSESSMENT     │   │   & PUBLIC       │
   │                  │   │    DOCUMENT      │   │    REVIEW        │
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 │ REPORT TO        │ │ EA DOCUMENT  │ │ EA DOCUMENT  │ │  MADE PUBLIC     │
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 │    DECISION      │ │   DECISION   │ │ EA DOCUMENT  │ │    REVIEW        │
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Fig.2. Procedures for Policy Assessment

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are both these levels - policy at the level of a broad statement of goals or objectives (stage 1), and policy at the level of defining the means of achieving that goal (i.e. programs, incentives, regulation, taxation etc.) (stage 2).

Implementation is an important part of the policy cycle. Policy statements may be made, but not acted upon (what has been referred to as "policies without resources") (Doern and Phidd, 1988, p.103), or they may be acted upon, but not effectively implemented. The result is that policy objectives may or may not be achieved. This means that there must be a post-implementation evaluation of the policy as well (stage 3).

The obvious question which arises is which policies should be assessed? Figure 2 describes a process where policies are screened and subjected to one of four possible review procedures. The first requires a simple screening report, while the second, third and fourth require the preparation of an environmental assessment (EA) document. These latter three routes are further distinguished by the degree of public review required - one requires only that the EA document be released after a decision about the policy has been announced, the other requires that the EA document be publicly released before the decision is made, and the final option requires public release of the EA document and full public review (including the report of a review panel) before a decision is made.

A set of specific screening criteria will be needed to determine what level of assessment a proposed policy must undergo. All policies should be subjected to this screening unless specifically exempted. This "all in unless exempted out" approach (EAC, 1991) is more likely to insure that all potentially significant decisions are assessed. The kinds of issues to be considered in the screening exercise would include:

o   whether it is likely to have an affect on the achievement of an identified
        environmental quality goal;

o   whether there are direct or indirect impacts on the use of natural resources;

o   the degree of reversibility or irreversibility of the policy (for example, a decision
        to enter into a free trade agreement is in practice almost irreversible, as could be
        a decision to fund a certain kind of research such as reproductive technologies or
        biotechnology);

o   the scale of the program or policy (its sphere of influence both geographically,
        over time and in terms of how many other decisions it will affect);

o   the degree of controversiality or public concern about the policy;

o   the legitimate need, in certain restricted cases, for a degree of secrecy leading up
        to the announcement of a policy (e.g. a budget - it should be noted that this
        criteria would have to be very carefully defined in order to avoid any misuse);

o   the kinds and severity (significance) of impacts that can be expected (e.g. affecting
        critical ecosystem components);

o   whether new technologies are involved; and

o   the significance of the trade-offs being made in the policy decision.

        The screening criteria and process would have to be very clearly defined to ensure
consistent, fair and effective application of the process. The framework suggests that
policies would either: have insignificant effects (requiring only a screening report); have
potentially significant effects (EA document required and made public before a decision
is made); have potentially significant effects, but have a legitimate need for secrecy (EA
document would be required, but would only have to be released after the decision was
made); have significant effects and cause considerable public concern or considerable
concern on the part of the Minister of Environment (require EA document and full
public review).

The EA Document and Its Preparation

The basic feature of the environmental assessment document is that it is prepared by the initiating department (self assessment). The importance of self assessment is that it integrates the problems of policy making with concerns about environmental quality, rather than having one group make the policies and another assess them. The educational value of self assessment within each department will be very important in the long term. At the same time, it is critically important that from the earliest stages of problem identification and definition, the public be consulted. Recognizing that a certain interested public is often consulted as a matter of course, what is important is that the range of interests consulted be enlarged. This includes broadening the range of government departments consulted in these early stages as well.

Perhaps one of the most important changes needed if we are to move toward more sustainable or environmentally responsible policy decisions is an expanded view of the kinds of alternatives that can and indeed should be considered. Simeon (1976) suggests that decision making goes on "within a framework of assumptions, norms, and values concerning both the procedure and the substance of policies", and these dominant "ideas" permit only a limited set of alternatives to be considered. This set of alternatives has to be expanded, and this is only likely to happen if the decision making process is opened up in a conscious effort to include more views and more options.

The preparation of the EA document should be based on the information, views and inputs gathered in these early stages, and should also, as Zukowsky (1991) suggests involve experts from other departments. The EIA Document should include a discussion of four principle questions which follow quite closely the stages of policy development: problem identification; definition of objectives; alternatives to be considered; and predicted environmental impacts of the different policy alternatives.

The first three questions are at least as important as the predictions about impacts. With policies, if the problem is well defined and the objectives are sound (from

an environmental point of view), and if many alternative approaches have been considered, then the likelihood of negative environmental consequences is already diminished. The regulations under NEPA in the U.S. state that the analysis of alternatives should be the heart of the environmental impact statement (Hollick, 1987). Forcing a discussion of an innovative range of alternatives may do more in the long term to address problems of sustainability than will accurate prediction of impacts.

With regard to predicting impacts, Nicholson (1990) suggests policy assessment must address impacts in much broader terms, both geographically (including perhaps global impacts) and over time (inter-generational considerations), than would a project assessment. This broader perspective in considering impacts should also be comprehensive, in the sense of including not just ecological, but social, culture and political impacts in "environmental" assessment. At this higher, more abstract level, the interrelatedness issues become even more important and there should be opportunities to address a large scope of issues in an assessment.

This inclusive approach could render the whole system ineffective, by trying to address too many issues. However, if an effective scoping process is undertaken, then this wide range of issues identified can be narrowed down to a few key issues (Tomlinson, 1984). It is better to consider all issues and then identify the critical ones than to limit the consideration of issues from the beginning and thereby perhaps overlook one of the most important issues. It will be important in scoping to ensure that all significant impacts are identified (i.e. even global impacts or inter-generational impacts, which may not always have a clear voice in the process).

The EA document should review the problem that has been identified, the objectives that have been defined, the alternatives that have been considered, and the impacts of each of these alternatives. Some of the questions to be addressed in the EA document can be seen in Table 1. With this kind of concise analytical document detailing options, the trade-offs made by decision makers will be more easily identified

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1. Problem Identification
-What is the problem/issue that has been identified?
-Why is it considered to be a problem, or to need addressing?
-How was this problem identified? (i.e. by whom?)
-Who is being affected by this problem?
-Is the problem or need as identified an environmentally acceptable need?
-How was the public consulted in all of these matters?

2. Definition of Objectives
-What are the objectives to be met?
-How were these defined?
-Are there objectives which specifically address issues of environmental quality or sustainable development?
-Are there objectives which appear in conflict with sustainable development? with Green Plan goals? With land use planning policies? With other environmental policies?
-Are the objectives in conflict with those of any other policies or programs which may serve to inhibit the achievement of these objectives? If so, list these other policies or programs
-What are the important consequences (of any kind) to be avoided? Why?
-What are the likely environmental consequences which should be avoided?
-How was the public consulted in all of these matters?

3. Consideration of Alternatives
-What are the alternatives that were considered?
-Were there any alternatives suggested which were discounted for some reason? If so, what were they and why were they discounted?
-How was the public consulted in developing alternative options?

4. Environmental Impacts of Alternatives
-For each (alternative:
-what are the potential direct impacts?
-what are the potential indirect impacts?
-what are potential long term impacts?
-will impacts vary from one region to another?
-will global environmental problems be contributed to?
-are sustainability goals/environmental goals and policies respected?
-is it in conflict with other initiatives, or would it complement other initiatives?
-what are the likely cumulative impacts?
-Which alternative is the most environmentally responsible?

Table 1. Some questions a policy EA document should address.

by the public.

At each stage in this assessment process, decisions will be made easier if environmental quality goals or criteria exist. Without such goals, each policy assessment will require a new debate about priorities and what is an "acceptable" policy or practice. While some judgement will of course be involved in all cases, the process will be much more efficient when environmental quality goals can be agreed upon in advance.

Information Needs and Methodology

There are three features of assessment which need to be considered. These include how to deal with uncertainty, how to identify possible impacts, and methodologies for predicting impacts (quantitatively or qualitatively).

There are many conditions of uncertainty facing an assessor of policy impacts. The first has to do with policy implementation. If you are going to try to predict impacts of a policy, you will have to make some assumptions about how successfully the policy will be implemented. Different implementation scenarios could be developed and the associated environmental consequences estimated, giving some idea of the range between the best case scenario and the worst case scenario. The use of scenarios is very important not just for the officials doing the assessment, but also for the public, who will be better able to participate when concepts are brought closer to reality through such scenario building '(Nicholson, 199Q).

Uncertainty can also be associated with assumptions made about economic conditions, technological change or social conditions. As Nicholson (1990) suggests, when the planning period or projection time is 25 years or more, many of the assumptions made can become false assumptions. There is a need for some flexibility in the process of assessment, and there is a need to review the assessment at fairly regular intervals to consider any unpredicted changes in circumstance.

In spite of efforts to eliminate uncertainty, it is likely to persist and in many cases increase, the more knowledge that we gain (Gibson, 1991?). "For decision makers in environmental policy and other matters, broad areas of uncertainty and ignorance must be recognized as a persistent and pervasive part of the context for considering problems and seeking solutions" (p.2). Learning to accommodate uncertainty in decision making is perhaps a more realistic goal than hoping it will be eliminated.

In a discussion of the state of social impact assessment (SIA) methodology, Brooks (1989) described it as "one of sensitivity to the chain of socio-economic effects associated with a project or program" (p.75). This is perhaps where policy assessment should also expect to begin. In identifying impacts, the use of some form of flow diagram that traced the paths of consequences of a decision may be most useful. Previous experience (i.e. looking at older policies) may also be helpful in identifying possible impacts.

Indirect impacts are likely to be even more complex at the policy than at project levels. Not only can policy impacts be indirect in the sense of causing a chain of reactions within the ecosystem, they can also be indirect in the sense of affecting a second policy which could in turn have an effect on the environment. This could be considered cumulative policy impacts.

Prediction of impacts raises the question of quantitative versus qualitative analysis. Obtaining quantifiable data about impacts at the policy level will inevitably be more difficult than at the project level. Not only are policies generally much less focused than projects, they also often have broader regional, national or even international effects. But difficulties with quantification should not be allowed to get in the way of good assessments. In fact, attempts to develop highly quantified analyses are not likely to be worth the effort when dealing with policies that may change or be modified etc. Far more useful, as Nicholson (1990) suggests, would be an effort to identify the general scale, nature and location of effects. While some of the more immediate impacts may be

more quantifiable, the more remote, complex or cumulative impacts will be more difficult (Rawson, 1990).

What is needed is a combination of quantitative and qualitative analysis and good judgement. "Judgement, accompanied by written explanation is not necessarily an invalid method of analysis, especially if it is the best available. To create weighed criteria merely for the sake of providing a complicated and quantitative framework of analysis, which may look more authoritative, is misleading" (Nicholson, 1990, p.10).

Some of the gaps in knowledge and data that have been identified include: forecasting techniques, environmental quality indicators, risk assessment methodologies, and more comprehensive systems of national accounts (Rawson, 1990). Research can help to address these, but at the same time concerns about the organization and availability of information (information systems) must also be addressed. Information systems will have to be improved for use by bureaucrats, but also for the public, if they are to participate more effectively and knowledgeably in the policy making process. While more data and information must be collected, efforts must also be made to learn how to use information more wisely (Andrews and Alexander, 1992).

Means of identifying and assessing impacts at the policy level will have to be better developed. And yet, the lack of a clear methodology should not delay the application of the process and principles. The purpose of policy assessment must not be lost sight of in focusing on the science and methods.

Public Review Process

Governments have been, and remain, quite concerned about the idea of subjecting policy making to public assessment processes. Gibson (1990) suggests that this is because of the secrecy that has traditionally surrounded government decision making and a resistance to allowing any greater role for environmental considerations in decision making.

Despite this reluctance, an independent public review is an essential component of EIA (EAC, 1991). While not all policies will require a full public review before decisions are taken, in all cases where there may be a significant impact on the environment EA documents should be prepared and made public. In all but a very few cases where the absolute need for secrecy can be justified, these EA documents should be made public before a decision has been reached. These document should be available in accessible locations. The screening reports for those activities which are judged to have no or insignificant impacts on the environment should be published in quarterly reports by each department.

The public review process should be a flexible process that could be accommodated to different cases. Different forums are likely needed to accommodate different "publics". One of the obvious challenges will be to determine just who the "public" is that needs to be a part of the review. In some cases written comments or comments by phone (by using 800 numbers) may be appropriate, and in other cases workshops, public meetings or full fledged public hearings may be appropriate. Some kind of appointed panel, or permanent review body will of course be needed to organize the review and to report on findings and make recommendations.

Post Implementation Evaluation

Given the nature of policy and the distinction between formulating policy and implementing it, a full understanding of the impacts of a policy will not be had until a post implementation evaluation or what Wathern et al. (1987) call a "substantive" assessment is done (Figure 1, Stage 3).

This post-implementation evaluation should attempt to determine how effectively the policy was implemented (were the objectives met?), what the environmental impacts of the policy were, and from this, how well the policy assessments were done.

The first step is really one of policy evaluation, which should be part of the policy process. This kind of monitoring of implementation is particularly important in the case of environmental policies, to ensure that objectives are in fact being met.

Determining what the impacts of the policy were is, according to Wathern et al. (1987), a two step process requiring first that environmental quality before and after implementation of a policy be determined, and second, that the effect of the policy in question on this change be isolated. As they suggest, this will probably be the most expensive and time consuming part of policy assessment. This assessment of substantive impacts could make use of State of Environment reporting by comparing trends in environmental quality with policy trends.

After the impacts of the policy have been isolated, these can be compared to the predictions made in the EA document (at the end of stage 2, Figure 1) to determine how accurate predictions were and where errors were made. This will then provide useful information for subsequent policy analyses.

The question of when to do post-implementation evaluations is difficult, since different stages of implementation will be passed through, and policies may be amended over time. What is needed is some kind of annual reporting mechanism. An annual report on the environmental aspects of departmental activities would highlight what environmental objectives have been established, what environmental concerns have been identified through policy assessments, and what steps have been taken to avoid environmental impacts, or to monitor for environmental impacts. This kind of annual report on environmental issues/activities should be seen as a companion to the annual departmental Estimates which detail the departments expenditure plans, and could provide an accessible avenue through which the public could monitor departments' and governments' environmental performances.

Tiering Policy with Project EIAs

In an ideal policy development process, policy assessment would include assessment of the problem and the policy objectives, as well as the choice of alternatives. If these alternatives are discussed in specific terms (e.g. one program versus another program), then the policy assessment is all that will be needed until the project level assessment. If the policy in question, however, is only a vague statement of goals, then there might have to be a further assessment at the program development stage when more specific options are being considered. In cases such as these, the program assessment (and subsequent project assessments) would then be tiered to the policy assessment so that it would not have to repeat a discussing of the issues visited at this higher level. Such tiering, according to the NEPA Regulations, is designed to "eliminate repetitive discussions of the same issues and to focus (effort) on the actual issues ripe for decision at each level of environmental review" (S.1502.20).

One difficulty which emerges is what to do if a program or project is being proposed and there is no clear policy assessment to which it can be linked. This situation could arise either because the policy has yet to be subject to an assessment, or because the policy has not in fact ever explicitly been stated. There would appear to be two possible solutions. In the case of projects, as the SEARC report (1991) suggests, project proponents could be required to go to the department in question and get the policy question resolved or addressed before continuing. This could of course cause terribly long delays.

Alternatively, in the case of programs which do not appear to be a part of any explicit policy initiative, the assessment process could be used in effect to force some kind of more explicit statement of goals and objectives, thereby indicating more clearly what policy is behind the program. This will in effect force policy to be made through the assessment process, and will help to eliminate what some have suggested could become a problem with policy assessment - decision makers avoiding explicit policy statements in order to avoid the environmental assessment process (Hollick, 1987).

The issue arises of how to proceed if a policy decision is made which does not reflect the concerns raised in the assessment or which ignores the recommendations of the public review (as is the prerogative of the decision maker). If a policy does not reflect the concerns of the environmental assessment it would make sense that these concerns could be re-addressed through program or project assessments. This would provide additional incentive for decision makers to accept the assessment at the policy stage, so that further assessment stages are efficiently carried out.

The Public, Accountability and Politics

Public participation is very important in decision making, especially at the policy level, where important trade-offs and decisions are being made about values, expectations and visions. Public participation is also understood to be an essential part of environmental assessment procedures.

It has been suggested, however, that there may be problems in getting the public interested in or involved in participation at the policy level given the lack of immediate or recognizable impacts on their lives (Bregha et al., 1990). Nicholson (1990) suggests that if efforts are made to move the policy discussion from the more conceptual to the more real (through simulations, scenario development etc.) then the public may become more involved. One might speculate that as the policy making process opens up over time, people will become more involved and active in it as they come to understand it and think in terms of policy impacts. This potential lack of involvement in the early stages (if it were to happen) should not discourage efforts to broaden the process.

Participation in the process will also help to educate the public and make them more environmentally aware, which will be important if there is to be accountability in the system. Measures to ensure accountability can and should be developed, but if the public is not well informed, than these measures will have little value (Bregha et al., 1990).

What are the accountability measures which should be adopted? The most obvious is ensuring public participation in the process and making sure that policy assessment documents are made public. In addition, Bregha et al. (1990) suggest (as have others) that New Zealand's Parliamentary Commissioner for the Environment is a good example of the kind of independent auditing or investigating authority that is required to monitor a policy assessment process and other activities of governments.

These kinds of public participation and accountability mechanisms in decision making challenge the traditional acceptance of secrecy and confidentiality in Cabinet decision making. Decisions makers are believed to be accountable to the public since they are elected representatives. The argument has been eloquently made, however, that this kind of accountability in Cabinet-parliamentary systems, which derives solely from the fact that governments can be overthrown at election time, may not necessarily lead to governments which act in the public interest on individual policy matters (Schrecker, 1991). The suggestion is that there must be more opportunity for the public to express their view or input on specific policy matters as they arise and as choices are being considered and made. This is, in effect, what policy assessment encourages.

There are at least three problems which should be highlighted. The first is that there is a need for goals and objectives to be very clearly stated if environmental concerns are to be integrated into decision making (both environmental quality goals, and the goals or objectives of the policies in question). Decision makers are often hesitant to make such clear commitments. The second problem has to do with the need to open up the decision making process to more outside input and scrutiny, something also not likely to be easily accepted. And finally, there is a very practical concern about the additional burden on decision makers of considering environmental impacts. Decision makers are faced with an enormous number of policy decisions each year (typically 600 -700 Memoranda to Cabinet are submitted each year) (Doern and Phidd, 1988), and the added complexity of considering the environmental impacts of all of these will undoubtedly require enormous effort.

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3.6 **Key Elements of Policy EIA**

To briefly summarize, the proposed approach to policy assessment suggests that the following are key elements in developing an approach to policy EIA:

o   the emphasis should come during the policy formulation process, and should consider problem identification issues, definition of policy objectives and alternatives to be considered;

o   there is a need for public consultation in these early stages of policy development, in the preparation of the policy EIA document, as well as in reviewing the document;

o   records of decisions at all stages should be available to the public and easily accessible;

o   there is a need for clear and effective screening criteria to determine which policies do not need assessment and which should require a full public review;

o   the approach to screening should be "all in unless exempted out", and every policy will require at minimum a screening report to show that environmental considerations were addressed;

o   post implementation evaluation must be carried out in order to actually determine how successfully the policy was implemented and what impacts this had on the environment;

o   there is a need for annual auditing by an independent environmental auditor;

o   the EIA process should be entrenched in law;

o   a broad definition of "environment" should be adopted, since the interrelatedness of social, political and ecological impacts are even stronger at the policy level;

o   a similarly broad scope in terms of considering long term, inter-generational impacts of policies and programs, and regional or global impacts should be considered;

o   education efforts directed at decision makers, bureaucrats and the general public are needed, in order to make everyone more aware of the environmental impacts of activities; and

o   there should be a more open, accountable system at the highest levels of decision making, reflected in a more explicit process of policy making.

Perhaps most importantly, EIA at the policy level will require the commitment and dedication of decision makers, bureaucrats and the public at large. No fool proof system can be defined, but a sound system can be defined which, given the commitment of individuals as well as political commitment, could be very useful. As Richardson (1989) said with respect to land use planning practices "...it is a truism that the best of systems in any field is not proof against human failings" (p.4), and this applies as well to policy assessment.

4.   **CONCLUSIONS AND RECOMMENDATIONS**

It is difficult to assess the potential value of policy assessment since there is so little experience upon which to base a judgement.   Lessons from project assessment have helped to inform this discussion of how policy assessment should be approached. The only thing that will truly allow policy assessment to be evaluated will be a number of years of experience in trying to make it work. It is important to set off on the right foot, and this report has tried to provide some indication of the kind of principles and practices which should be pursued.

What Could Policy EIA Achieve?

A number of advantages can be defined in using policy **EIA** as a method for integrating environmental considerations into policy level decisions. The first of these is that it provides a good degree of consistency. Unlike other more ad hoc policy assessment forums such as public-inquiries, royal commissions or other consultative mechanisms, there is a guarantee with ETA that certain procedures will be followed.

EIA at any level is an action-forcing planning tool which forces consultation and forces the consideration of environmental consequences.   While recommendations in this regard can ultimately be ignored by decision makers, there is likely to be political pressure to comply if the assessments have been carried out openly and have public support.

Just as project level EIA has brought the questions of environmental impacts into project planning, so too one might expect will policy EIA make questions of environmental impacts much more prominent in the policy planning process.   One might also expect that policy EIA will get more people involved and interested in policy level decisions, just as project EIA increased the level of public involvement and influence in project decisions.

It is hoped that policy EIA will force decisions to be made in a more explicit way, and at the same time ensure that more alternatives are considered. These things (particularly a thorough consideration of alternatives) will not, however, come automatically with a policy assessment program.   They will have to be encouraged by a vigilant public.

In addition it is believed policy EIA will: help to address the problem of cumulative effects; make project level assessment more comprehensive and efficient; provide a regular forum for public involvement in the higher levels of decision making; broaden the scope of interests involved in policy decisions; and improve our understanding of the interrelatedness of policy decisions, hopefully helping to eliminate some of the conflicting and counterproductive policies which are often in place now.

Despite the costs and time involved in this kind of policy assessment process, the long term benefits will likely outweigh any costs and inconveniences. As environmental quality deteriorates on an ever increasing scale and global problems such as the depletion of the ozone layer emerge, it becomes increasingly evident that the long term cost of poor policy decisions will soon far outweigh the costs of carrying out an environmental assessment.

Recognizing Limitations

There are some important limitations with the EIA approach which should be pointed out.   Holtz (1990?) suggests that environmental assessment is "basically a process

of analysis and criticism rather than a creative process. It does not generate solutions; it sets limitations or requirements on what can be done" (p. 103). This is a very important point to recognize. EIA will not provide the answers we are looking for in terms of finding sustainable solutions. It will however, help to prevent us from making bad choices along the way. Other initiatives will be needed at the same time.

One of the most pressing needs is for a mechanism for establishing some environmental quality or even sustainability goals. While EIA could be used as a mechanism to help establish these goals, this should not be its prime purpose. Other more effective and efficient means of developing public consensus about environmental policy goals should be found.

The movement toward sustainable development will likely take far more radical changes in current ways of doing business than many would like to admit or believe. A new understanding of environmental features (ecological, social, political) will be required - a new environmental ethic one might say. This movement will most certainly not come about by EIA alone. It will come about likely through concerted efforts to push and pull our society into new ways of doing things - a bit of enlightenment and a bit of enforcement. Policy EIA seems to take the pushing approach, and yet, this kind of systematic consideration of environmental consequences in decision making may also lead to some enlightenment and education.

Recommendations for Further Research

Further research needs include: studies of the experience which does exist with policy assessment (eg. in the U.S.) to learn about methodologies and to identify problems in the process; development of methodologies for identifying and predicting policy consequences; identifying (and reaching consensus on) and prioritizing environmental quality (or sustainability) goals; and development of good environmental quality indicators to measure the state of the environment and impacts on the environment.

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APPENDIX A: GREEN PLAN' GOALS

National Objective:

*TO SECURE FOR CURRENT AND FUTURE GENERATIONS A SAFE AND HEALTHY **ENVIRONMENT AND A SOUND AND PROSPEROUS ECONOMY***

Goals and Targets:

1.   Clean Air, Water and Land

o   *Assurance that citizens today and tomorrow have the clean air, water and land essential to sustaining human and environmental health.*

o   *Protection and enhancement of the quality of our water resources and promotion of the wise and efficient use of our water.*

o   *Virtual elimination of the discharge of persistent toxic substances into the environment.*

o   *Canada-wide reduction of the concentration of ground-level ozone (smog) to below the threshold of health effects in the most susceptible segments of the population.*

o   *A 50-per-cent reduction in Canada's generation of waste by the year 2000.*

2.   **Sustainable Use of Renewable Resources**

o   *The shifting of forest management from sustained yield to sustainable development.*

o   *Maintenance and enhancement of the natural resources that the agri-food sector uses or affects, and integration of environmental, economic and social factors.*

o   *Long-term sustainability of our fisheries resource.*

3.   **Protection of Our Special Spaces and Species**

o   *The setting aside of 12 percent of the country as protected space.*

o   *Completion of the national parks system by the year 2000.*

o   *Maintenance and enhancement of the health and diversity of Canada's wildlife and plants.*

o   *Commemoration and protection of our historical heritage.*

4. Preserving the Integrity of Our North

o   *Preservation and enhancement of the integrity, health, biodiversity and productivity of Canada's Arctic ecosystems.*

5. Global Environmental Security

o   *Stabilisation of carbon dioxide and other greenhouse gas emissions at I990 levels by the year 2000.*

o   *Phasing-out of CFCs by 1997, and of methyl chloroform and other major ozone-depleting substances by the year 2000.*

o   *A JO-per-cent reduction of sulphur dioxide emissions in eastern Canada by 1994. Capping of acid-rain-related emissions in eastern Canada beyond 1994. Establishment of a national emission cap for the year 2000.*

6. Environmentally Responsible Decision-making at all Levels of Society

o   *As a cornerstone of Canada's foreign policy, acceleration of global co-operation., understanding and progress on environmental issues.*

o   *Strengthening of existing environmental partnerships within Canada, while also building new ones.*

o   *Provision of timely, accurate and accessible information to enable Canadians to make environmen tally sensitive decisions.*

o   *Development of an environmentally literate society - one in which citizens **are** equipped with the knowledge, skills and values necessary for action*

o   *Strengthening of Canada's environmental science and technology with a special emphasis on understanding regional ecosystems.*

o   *Balanced use of strong and effective environmental laws with market-based approaches for environmental protection*

o   *Assurance that the operations and procedures of the federal government exceed national targets and schedules for sustaining our environment.*

7. Minimizing the Impacts of Environmental Emergencies

o   *Quick and effective response to threats posed by pollution emergencies due to human activity and naturally occurring environmental emergencies.*

APPENDIX B: PRINCIPLES OF EIA

Ontario Environmental Program Improvement Project Task Force (EAPIP, 1990)

Shared Responsibility: *Government departments, the public and other effected interests all have a role and must be accountable for discharging that role.*

Effective application of Act: *All* *participants must clearly understand the process and their roles and the process and its implementation must be made as clear as possible.*

Consultation: *There is a need for effective consultation throughout the process by all involved.*

Effectiveness and Efficiency: *Legislation and its process should be streamlined wherever possible without sacrificing effectiveness.*

Assured Process: *Decision points should be clear and decisions should be made within stated time frames. There must be consistent application of the rules.*

Saskatchewan Environmental Assessment Review Committee (SEARC, 1991, 69)

Public Consultation: *The public must be consulted and involved throughout the assessment process and must have access to information.*

Fairness: *Environmental assessment must be an objective process - independent and impartial.*

Accountability: *While ultimate decision making rests with elected officials, all reasons for recommendations, and decisions should be in writing and made public immediately.*

Comprehensiveness: *Activities should be assessed from cradle to grave and consideration should be given to short term and cumulative impacts and local and global impacts.*

Rigour: *The assessment process should be rigorously applied and enforced.*

Flexibility: *Information and methodologies should be consistent, but flexible enough to be suited to the nature of a proposal.*

<u>Federal Government</u> (de Cotret, June 1990):

Effectiveness: *The process must be clear, consistent and effective. There should be no uncertainty as to what is involved.*

Open Decision-making: *The process must encourage open decision-making and provide opportunities for the public to influence the final conclusion.*

Efficient and Fair: *The process must be efficient and fair, each project receiving the amount of time and the kind of assessment it requires.*

Anticipate and Prevent: *The principle of anticipate and prevent should always take precedence over the less effective and more expensive approach of react and cure.*