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**ENVIRONMENTAL ASSESSMENT:
THE EVOLUTION OF POLICY AND PRACTICE
IN NEW ZEALAND**

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ABSTRACT

Environmental assessment is a policy tool with significant potential for protecting the environment from the harmful effects of human activities. The evolution of the policy and practice of the environmental assessment (EA) process in New Zealand is the focus of this report.

Although EA processes generate information many other important outcomes are identified. Models are presented which highlight these different outcomes including: production and use of environmental information (rational information model); changes outside of organisations (external reform model); modifications within organisations (internal-reform model); no substantive change (token or symbolic model) and multiple outcomes (comprehensive model).

Environmental assessment was introduced to New Zealand in the 1973 Environmental Protection and Enhancement Procedures as a method for providing impact information to decision makers but with few provisions for internal and external reform. Successive modifications of the Procedures reflected strong desires by some within government to render the Procedures totally symbolic. In spite of those blocking efforts, the Procedures have resulted in improved environmental outcomes although implementation has at times been less than optimal.

The Resource Management Bill has the potential to improve significantly the policy and practice of environmental assessment in New Zealand. Requirements for information on environmental implications of private proposals, mandatory environmental assessment and public review of local authorities' policies and plans, and the acknowledgement of the importance of values all represent potential improvements to the existing situation.

The effect of the Resource Management Bill is difficult to predict at this time in part because of the extensive implementation discretion provided. However, changes that would facilitate the realisation of the EA provisions of the Bill are identified. These include the provision, by central government, of resources and guidance to local authorities to assist them with their new environmental assessment responsibilities and the strengthening of requirements for early public involvement.

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CHAPTER 1: INTRODUCTION

Environmental issues are receiving ever increasing attention as people become aware of the local and global impacts of human activities. Over the past twenty years, environmental assessment¹ processes have been adopted by New Zealand, Australia, Canada, the United States and many other countries in response to increasing concern regarding environmental quality. The aim of environmental assessment processes is to protect the environment from the potentially harmful effects of human actions. These processes attempt to minimise negative environmental effects by requiring governments, and at times, the private sector, to incorporate environmental factors into planning, design and decision making. Environmental assessment is thus much more than the production of a document-it is an ongoing process and a significant policy tool.

In 1973, an environmental assessment (EA) process was introduced in New Zealand. Since that time, the EA process has been the focus of criticism from many varied interests. Research into the practice of EA in New Zealand has been relatively limited but some problems have been identified including: the narrow scope of the assessments; the use of assessments very late in the process; lack of public involvement opportunities; non-supportive government attitudes; and lack of monitoring and feedback (Speden et al. 1983 and Wells & Fookes 1988). In the past, the implementation of the environmental assessment process in New Zealand has been less than optimal, however the recent Resource Management Bill provides opportunities for improvement.

This report will examine the policy and practice of environmental assessment in New Zealand. To facilitate this, a conceptual framework of different models of EA processes will be developed. These models focus on the various outcomes of the environmental assessment process including information provision and changes within and outside of organisations. The situation in New Zealand

¹ I have chosen to use the term environmental assessment throughout this report however other terms commonly used include environmental impact assessment (EIA), environmental impact analysis, environmental assessment and review, impact assessment.

since 1973 will be examined, with a discussion of government policy, the actual practice of environmental assessment and the problems with this past experience. Different models of EA processes will be used to interpret and analyse this history. Currently, attempts are being made in New Zealand to revise the environmental assessment process as part of the Resource Management Law Reform (RMLR) process. The new Resource Management Bill, the product of RMLR, suggests fundamental changes to the process of environmental assessment in New Zealand. This report will examine the EA process proposed by the Resource Management Bill with respect to different EA models, and speculate whether the new process will avoid some of the old problems.

As background for the rest of the report, the next chapter will provide a general description of the environmental assessment process and identify the types of actors commonly involved in it. The third chapter develops a conceptual framework based on several models of the environmental assessment process. These models will be used in Chapter 4 to interpret the history of the policy and practice of environmental assessment in New Zealand. Chapter 5 will examine the changes to the environmental assessment process proposed in the Resource Management Bill with respect to the various models and will identify several implementation issues. A summary and conclusions are provided in the final chapter.

CHAPTER 2: INTRODUCTION TO ENVIRONMENTAL ASSESSMENT PROCESSES

This chapter provides information regarding the general process of environmental assessment. The first section presents a brief history of environmental assessment and some reasons for its inception. A description of the major components of a generic environmental assessment process is provided in the second section. The many different actors that can be involved in environmental assessment are identified in section three. The material in this chapter is not specific to any country but represents a general description of some of the key concepts and terms that will be used in the subsequent chapters.

2.1 BACKGROUND

The roots of most environmental assessment (EA) processes trace back to the United States National Environmental Policy Act (NEPA) which was enacted on 1 January 1970. The legal requirement to produce and publish environmental impact statements (EIS) has become the most prominent and well known section of the Act, which introduced the first formal environmental assessment process. NEPA also declared a national environmental policy, established a Council on Environmental Quality and required the review of the compliance of all federal regulations and procedures with the new environmental policy (Jain et al. 1981:8,9).

Several other countries adopted environmental assessment processes, based to varying degrees on the American model and experience, not long after the United States. New Zealand and Canada introduced environmental assessment policies in 1973 (Gilbert 1986:89, FEARO 1987:1) and Australia followed in 1974 (Formby 1987:4).

There are many reasons why environmental assessment processes were introduced into several countries around the early 1970s. The lobbies for improved environmental protection and increased public participation in decision making were gaining strength in the late 1960s and early 1970s. The scale and impact of resource development schemes were expanding. Furthermore, the inadequacy of existing government organisations and prevailing assessment techniques to deal

with environmental issues was becoming increasingly recognised (Caldwell 1988:76,77; O'Riordan and Sewell 1981:10).

2.2 A GENERIC ENVIRONMENTAL ASSESSMENT PROCESS

Although many significant variations exist, the general environmental assessment process can be depicted as a series of steps as shown in Figure 1. The following description (adapted from Wathern 1988) is meant to give an overview of the process and does not define exactly what is required, by whom or when, since that varies with the jurisdiction and the specific EA process. First, proposals are screened to identify those that require an environmental impact assessment. Generally, if an undertaking has potentially significant environmental impacts, unknown environmental impacts, or a high degree of public controversy it is subjected to the full environmental assessment process.² Second, in the identification and scoping stage, the range of alternatives for carrying out the proposal and the potential impacts are identified and the scope of the subsequent study is clarified. Third, the actual prediction and assessment of relevant impacts for a feasible range of alternatives are made and mitigation measures are identified. A wide variety of assessment techniques can be used including simple checklists of potential impacts, matrices of development activities and environmental conditions, networks and overlays (see Wathern 1988:9-17 for a brief overview of these various methods). The assessment information is documented and reported, usually in the form of a draft or final environmental impact statement (EIS) or report (EIR). The EIS is usually then reviewed by one, several or all of the following; government officials, the decision maker, an independent review board, affected interests, or the general public. The document and study may be revised and redone through several iterations. Recommendations from the review of the environmental assessment are often provided to the decision maker

² Some jurisdictions produce inclusion or exemption lists to clarify the types of proposals that are automatically subject to, or excluded from, environmental assessment requirements.

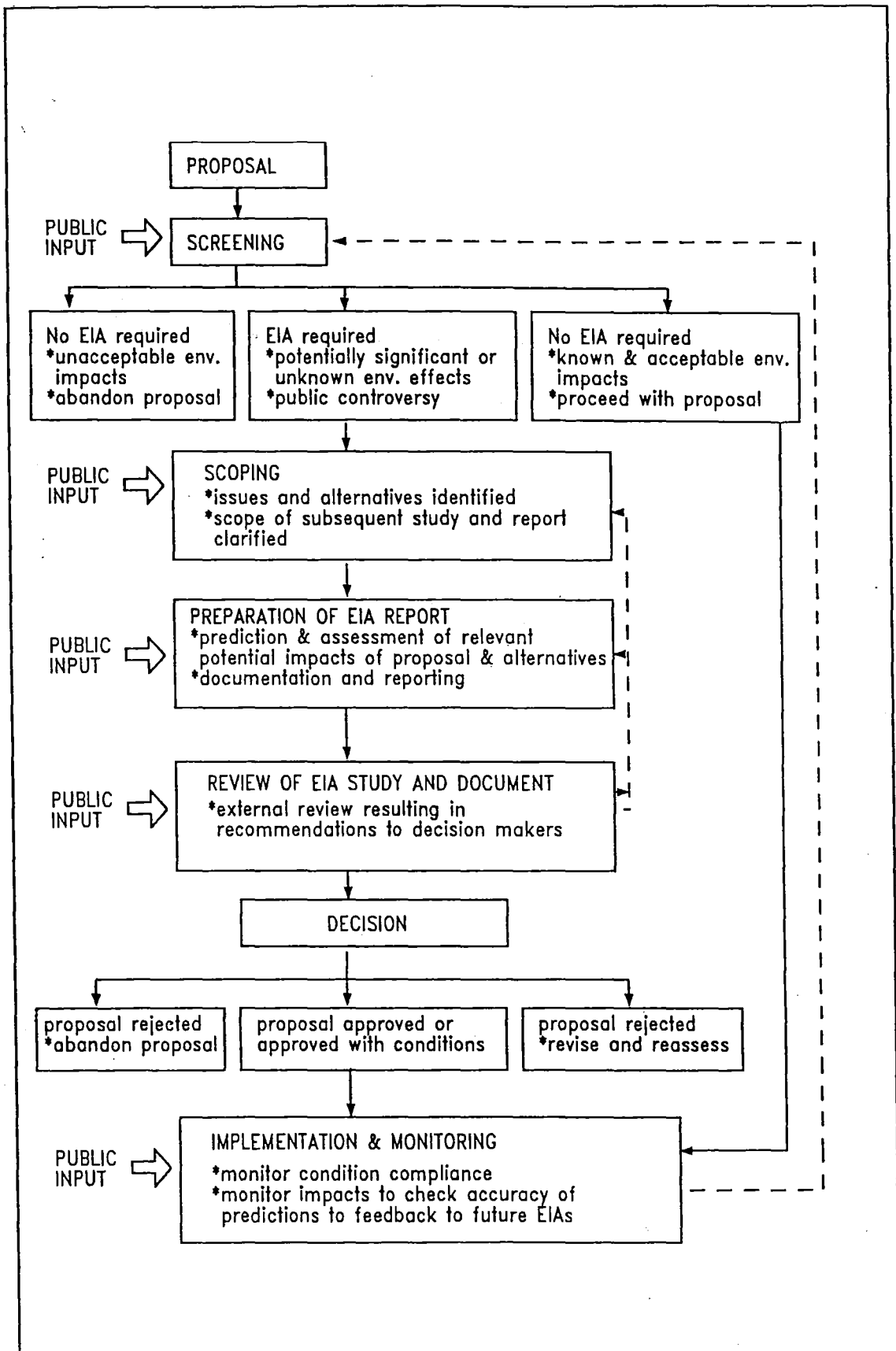


Figure 1: A Generic Environmental Assessment Process

who decides whether the proposal should be allowed to proceed and under what conditions. If approved, the proposal is **implemented** and the environmental impacts and compliance with conditions are often subject to **monitoring**. Theoretically, the results of the monitoring are fed back into the process to improve the accuracy of screening and prediction. **Public participation** can be required at any or all stages of the process. The process, although presented somewhat linearly, usually consists of multiple feedback loops where the proposal can be continually modified and reassessed.

The practice of environmental assessment has evolved and changed over the years since its inception. Differences in the political, cultural and legislative structures of the countries in which it has been adopted have resulted in a wide variety of environmental assessment processes.³

2.3 ACTORS INVOLVED IN ENVIRONMENTAL ASSESSMENT PROCESSES

The individuals and groups involved in the environmental assessment process will differ for each proposal, be it a policy, plan or project. The actors, however, generally can be grouped into four categories: proponents of a proposal; bureaucrats and politicians involved in decision making and the administration of the EA process; the public; and, in some situations, the judiciary.

The **proponent** is the government agency, private company or individual that proposes an action that is subjected to the EA process. In some countries, the government department that has the discretion regarding approvals for certain private proposals becomes the proponent or "promoter" of such proposals. The assessors predict and assess the environmental impacts of the undertaking and its alternatives. The assessors may be independently appointed but it is more common for the assessment to be carried out by the proponent or by someone hired by the proponent.

³ For discussions of environmental assessment procedures in different jurisdictions see for example O'Riordan and Sewell (1981) and Wathern (1988).

The category for administrators and decision makers involved in the environmental assessment process encompasses several roles. These different roles may be carried out by one or several different individuals or groups depending on the design of the EA process. Guidance, assistance and interpretation regarding the requirements of the EA process are often provided to proponents and assessors through a government agency. In many cases, the assessment document is reviewed, either by a panel, committee, board or an independent government official. Recommendations are often provided by the reviewer to the decision makers who are involved in approving the proposal or providing consents for various aspects of it. Depending on the scale and scope of the proposal, decisions may be required by one or several of the following: a Minister; Cabinet; Parliament or Legislature; chief executives; central government bureaucrats; local government politicians and bureaucrats.

The public can be categorised as another significant actor in the EA process and can be considered at three different levels. First, there is the general public, that is the public at large or the population of the country. Second, there are public interest groups and they are often used as indicators of the views of the general public. Thirdly, there are the individuals who are potentially directly affected by the proposal. Depending on the type and scope of the proposals and the assessment process used these three levels may be less distinct. For example, individuals potentially affected by a proposal will often form together in a public interest group. On all three levels there are likely to be divergent and contrasting views of the proposal including those in favour, those opposed and those who do not care.

The judiciary may be involved in the EA process, especially if the process is based in law such as the United States' National Environmental Policy Act. In New Zealand, the courts have rarely been involved in environmental assessment but some cases may be expected if the new Resource Management Bill becomes law.

This provides a basic indication of actors involved in, and the general components of, any environmental assessment process. The next chapter will build on this information and present a conceptual framework which outlines several models of environmental assessment.

CHAPTER 3: A CONCEPTUAL FRAMEWORK FOR ENVIRONMENTAL ASSESSMENT PROCESSES

The overall aim of any environmental assessment process can be broadly defined as the protection of the environment from the potentially harmful effects of human activities. The introduction of environmental assessment processes can lead to many different outcomes. These outcomes can be more or less helpful in achieving the stated goal. The several models of environmental assessment processes presented in this chapter each focus on different outcomes of the EA process. These different models stem, in part, from varying theories of government policy making and the actual or appropriate role of environmental assessment in policy making. As well, variations in the nature, intentions and perceptions of environmental assessment are reflected in the models. For example, perceptions of what environmental assessment is and should do depends on the viewpoint and perspective of the actor. A proponent of a project will view EA differently from an environmental protection agency official or a potentially affected individual.

The rational information model presented in the next section (3.1) focuses on the provision of environmental information to the decision maker as the major outcome of the EA process. The external reform model, discussed in section 3.2, highlights changes to the planning and decision making processes outside of organisations as the significant outcome of the EA process. In section 3.3, modifications within organisations are identified as the major outcome. The possibility that some actors might view the desired outcome of the EA process as no substantive change to the status quo is presented in the model of EA processes as token or purely symbolic action. Each of these first four models focus on one type of outcome. In the final section of this chapter, a comprehensive model is presented which postulates that there are several types of outcomes of the EA process that are necessary if the main aim of environmental protection is to be achieved. Each of these models is not mutually exclusive of the others; they emphasise different

features of the process.⁴ Table 1 summarises the features of the various models presented in subsequent sections. Taken together these models provide a conceptual framework for the examination of the policy and practice of environmental assessment in New Zealand that will follow in Chapter 4.

3.1 RATIONAL INFORMATION MODEL

The rational information model emphasises information as the major outcome of the environmental assessment process. The view that environmental assessment is a purely neutral and rational information tool is widely held and is the declared basis of much environmental assessment policy and legislation. There are two variations of this model. First, the **rational comprehensive decision making** version postulates that the purpose of environmental assessment is to ensure that the best available information about potential environmental consequences is provided to, and used by, the decision maker. This differs from the **science reform** version wherein the perceived role of the EA process is to force the generation of wholly new scientific knowledge and understanding for use by decision makers.

The definition, purpose and objectives of environmental assessment processes are not always stated explicitly, but where articulated it is the rational information model that is the most frequently and widely presented. For example, the Deputy Secretary of the New Zealand Ministry for the Environment states that the purpose of environmental assessment is to,

...ensure that decision makers and the public have relevant information on the impacts and implications of proposals and that they use that information to assist in the design, development, modification and approval or otherwise of proposals (Gow 1990:1).

Many academics and practitioners in the field of environmental assessment subscribe to the rational information model of EA processes as indicated by the following statements. "The purpose of EIA is to generate and provide information

⁴ This should not be considered an exhaustive list of all the models of EA processes. Others include, for example, the entrepreneurial model (Wandesforde-Smith 1989) which highlights the importance of political entrepreneurs to the outcomes of environmental assessment processes.

Table 1: Conceptual Models of Environmental Assessment Processes

MODEL	OUTCOME
<p>Rational Information</p> <ul style="list-style-type: none"> *rational comprehensive decision making *science reform 	<p>*information</p> <ul style="list-style-type: none"> *ensure best available information regarding environmental impacts is provided to decision makers *generate wholly new environmental information for use by decision makers
<p>External Reform</p> <ul style="list-style-type: none"> *public involvement *government coordination *judiciary, executive, legislative, etc. involvement 	<p>*changes outside of organisations</p> <ul style="list-style-type: none"> *change to participation, notification and procedural rules outside of organisations
<p>Internal Reform</p> <ul style="list-style-type: none"> *personnel *procedures, mandates *ecological rationality 	<p>*changes within organisations</p> <ul style="list-style-type: none"> *development agencies retrain existing staff and/or hire new environmental analysts; change their operating procedures, missions, mandates; and perhaps adopt ecologically rational organizational structures and decision making
<p>Token or Symbolic Action</p>	<p>*no substantial change</p> <ul style="list-style-type: none"> *proponents appear to be doing something to take environmental information and values into account but decision making is minimally changed

on the environmental consequences of a proposal" (Clark 1983:8). "The main aim of EIA is to improve decisions on development by increasing the quality and scope of information on likely impacts..." (Bisset 1983:131).

The rational information model of the environmental assessment process is based on the theory of rational comprehensive decision making. Fully rational comprehensive decision making was first described (and criticised) by Herbert Simon in his book Administrative Behaviour, originally published in 1945. The process of rational comprehensive decision making begins with the assumption that decision makers agree on goals. Then, all alternative courses of action are inventoried and all relevant consequences of each alternative are identified. Through comparing the consequences of each option, decision makers subsequently decide on the optimal alternative (Simon 1957:67).

The rational comprehensive theory of decision making has been criticised for failing to explain how decisions are actually made. As Ham and Hill (1984:78) explain, "...in practice decision-making rarely proceeds in such a logical, comprehensive and purposive manner." As well, the theory is considered to be of limited value as a prescriptive model since it is an unattainable ideal. Critics note that in reality decision makers have limited intellectual capabilities (they cannot know and understand everything), incomplete information, limited time and money to search for information and are often lacking agreement on the goals or values to be achieved (Lindblom 1959:203-205). For these reasons decision makers cannot hope to be rationally comprehensive.

The information model of environmental assessment processes clearly stems from a desire to make decision making more rationally comprehensive through the inclusion of environmental information that had previously been ignored. Within this model, the task of decision making, based on values, is considered to be separate and distinct from the information collection and dissemination task. The belief that neutral, unbiased, value-free information can be provided to the decision maker is also fundamental to this model. Yet, as Lindblom (1959:204) explains, it is often difficult, if not impossible, to distinguish between facts and values. A

major problem with this information model is that it does not acknowledge the trans-scientific nature of environmental information. Weinberg (1972:209) states that trans-scientific questions are "...questions of fact and can be stated in the language of science, (but) they are unanswerable by science." Scientific answers cannot be provided to questions that are beyond experimentation, where experimentation is impractically expensive, timing is prohibitive, if the subject matter is too variable or if the issues involve moral and aesthetic judgements. Much of the information presented in environmental impact statements is not actually scientific fact but predictions or best guesses of potential future impacts. The prediction of a proposal's potential environmental impacts rarely result from experimentation and the assessment of the significance of potential impacts is often based on value judgements.

If the environmental assessment process is indeed a rational comprehensive decision technique or process, then it is vulnerable to all of the criticisms of rational comprehensive decision making. Moreover, by focusing on the information produced by the environmental assessment process, especially the content and role of the impact statement, the rational information model ignores the more subtle but very significant products of the adoption and implementation of an EA process. The following models focus on these other outcomes.

3.2 EXTERNAL REFORM MODEL

The external reform model identifies the changes that occur outside of organisations as the major outcome of the environmental assessment process. This model contrasts with the information model in emphasising the fundamentally political nature of EA processes. It acknowledges that information is not always neutral and that values held by individuals and groups are important. The implementation of an EA process often changes the rules regarding who can and must be involved, and by what process. One version of this model emphasises the change caused by empowering the public through opportunities and requirements for their involvement. For example, many EA processes require that the

environmental impact statement be circulated for comment by the public. As Frie sema and Culhane (1976:349) note, "The EIS review process gives increased access to environmental, ad hoc community and public interest groups, particularly those groups that might not otherwise have close informal access to decision makers." This version of the external reform model is summarised by Culhane et al. (1987:247) who state that the environmental assessment process,

...provided several avenues for public participation in previously closed agency decision making, and that shift in interest group access enhanced environmentalist influence on resources decisions.

A second version of this model highlights government co-ordination as the significant consequence of the EA process. By changing participation, notification, secrecy and procedural rules, the tensions and conflicts among government agencies can be addressed. The pressure on government agencies to present a unified public stance is a common source of such tension. EA processes often provide new mechanisms through which agencies can question the activities of their colleagues and object to their proposals (Culhane et al. 1987:17). Dreyfus and Ingram (1976:255) also note that the requirement for interagency review provides guarantees against excessive agency bias.

In jurisdictions, such as the United States, where the EA process has a legislative base and is thus legally binding, the judiciary can be involved in external reform. "NEPA (law)suits were a major source of external pressure on agencies as well as a threat that made agencies respect routine public and interagency comments on EISs" (Culhane et al. 1987:17).

External reform may also occur involve the actions of executives, legislatures (through new laws, budgets, etc.), cabinets, "coordinative bureaucracies" (e.g. Parliamentary Commissioner for the Environment), referenda, international relations, or merely the mutual adjustment of agencies.

3.3 INTERNAL REFORM MODEL

Environmental assessment processes can also bring about significant change **within** organisations that have the potential to harm the environment through their

actions (or inactions). EA requirements to consider the environmental consequences of proposed actions has forced many development agencies⁵ to retrain some of their existing staff or to hire environmental analysts. These analysts often hold strong personal environmental values. Environmental values are "precarious" in development agencies--they tend to go against the natural bias of those agencies. Their institutionalisation requires several conditions including having a group of people committed to the values working inside the organisation. As Taylor (1984:252) points out, there were probably between 2,300 and 3,300 environmental analysts working in American federal agencies in the early 1980s, a definite increase over the numbers prior to EA legislation. For example, in 1966 the U.S. Forest Service employed 286 environmental specialists (excluding general foresters). By 1983 this number had risen to 1,776, an over fivefold increase (Taylor 1984:348). Having personnel with environmental training and values working within an organisation, causing change from within, is one version of the internal reform model.

The linking of these insiders to external forces may enhance their effectiveness. Taylor (1984:252) postulates that **insiders** must be supported by **outsiders** if they are to be effective at institutionalising precarious environmental values. For example, the requirement for public review of environmental documentation enhances the clout of the inside environmental analysts since development agency decision makers must show the public that they have taken the environmental analysts' information and views into account. Most advocates of both the internal reform model and the external reform model "...see the two types of changes as complementary and reinforcing" (Culhane et al. 1987:18).

Another version of the internal reform model emphasises the changes to **procedures, mandates, and missions of the development agencies** as a major outcome of EA processes. Environmental assessment requirements can alter fundamentally the processes and information used to make decisions and change the behaviour of

⁵ Development agencies is used here to refer to both private and public proponents.

organisations. This view is supported by many analysts including Friesema (1978:55) and Caldwell (1989:9) who both conclude that, where seriously applied, environmental assessment has reformed administrative behaviour. At a minimum, decision makers are required to appear to take environmental information and values into account.

Taken even further, environmental assessment processes can cause change by requiring a new form of rationality--an **ecological rationality**--to be used in administrative decision making (Bartlett 1990:10). The possibility of several forms of rationality was identified by Diesing (1962). Bartlett (1986a:227) summarised Diesing's five types of rationality as discussed below. The type of rationality apparent in the rational information model of EA (discussed previously in Section 3.1) is, according to Diesing, **technical rationality**, "...the efficient achievement of a single goal." This is closely linked to **economic rationality** which is "...the maximum achievement of a plurality of goals." To these Diesing added three other forms: **social**, "...the rationality of interpersonal relations and social action", **legal**, "...the kind of rationality appropriate to the fundamental rules of a society" and **political**, "the rationality of decision making structures--an order of discussion and decision".

The concept of multiple forms of rationality has recently been expanded by Bartlett (1986a, 1986b) and Dryzek (1987) who discuss **ecological rationality** which "...may be thought of as the rationality of living systems, an order of relationships among living systems and their environments" (Bartlett 1986a:229). A social institution can be considered ecologically rational if it has the capacity to solve ecological problems (Dryzek 1987:25). Two forms of ecological rationality can be discussed. **Functional ecological rationality** relates to how organisations are structured and **substantial ecological rationality** relates to the actual decisions taken. According to Bartlett (1986a:234) an organisation arranged to protect or improve the life-enhancing interactions between humans and the environment is considered functionally ecologically rational. A decision is substantially ecologically rational if it takes account of the problems and opportunities of a

situation and responds so as to preserve or enhance the long-term life support capability of the biotic community. Bartlett (1986b, 1990) proposes that environmental assessment processes may be a vehicle for instilling ecological rationality into institutions. Although different terminology is used, Gibson (1990:14) alludes to the same concept, "...the longer-term objective (of environmental assessment) is proponents who automatically think, plan and act with sustainability imperatives in mind." The ecological rationality model thus postulates that the outcome of an EA process can be a significant improvement in the reasoning of individuals and the internal structure and function of organisations so that their actions will protect and enhance the earth's ecological life support system.

3.4 TOKEN OR SYMBOLIC ACTION MODEL

In some situations governments can adopt and implement an environmental assessment process so they appear to be doing something to take environmental information and values into account while the actual decision making is changed minimally. Such token or symbolic policy is meant to act as a placebo to pacify the public or specific interest groups and is unaccompanied by substantive action. Token or purely symbolic environmental assessment processes are often characterised by vague guidelines, limited or non-existent enforcement, no legislative base and public comment received only to placate concerned individuals while their involvement makes no impact on the decision process. Consequently, the environmental assessment process and document can be used to defend a choice that was made entirely on other grounds instead of EA forming an integral part of the planning process.

Edelman (1971, 1987) discusses the idea that politics can be used as symbolic action noting that governments do not necessarily respond to individuals' stated demands and values but often work to change those values and to influence peoples' perceptions of what is being done. Since shared social objectives, such as environmental quality, have goals that are difficult or impossible to measure empirically they are especially subject to token action by governments. This token

action not only legitimises the regime and helps stifle potential dissenters, it influences "...how people view leaders, themselves, what they will accept, what they want and what they demand" (Edelman 1971:175).

Several authors note the potential for environmental assessment to be used only symbolically yet few have attempted to research this.⁶ Caldwell (1988:75) explains that without the court-enforceable requirement for an environmental impact statement that must be circulated, the American National Environmental Policy Act "...would have been no more than a symbolic statement of good intentions." Bartlett (1990:90) notes that EIA can be "intendedly ineffectual" and "merely symbolic window dressing" depending on how it is implemented. An extension of this possibility is highlighted by Clark and Herington (1988:4) who suggest that EA could be used "...as a vehicle for reducing the power and influence of political groups intent on objecting to any new action which will bring about change in the environment."

3.5 COMPREHENSIVE MODEL

All the previously mentioned models focus on different specific outcomes likely to result from the implementation of an environmental assessment process. An ideal model of the environmental assessment process would be comprehensive and incorporate all the desirable outcomes of the various models. In so doing a comprehensive model would acknowledge and incorporate the internal and external reforms caused by an EA process, with its information provisions, into a more realistic and holistic view.

The comprehensive model of an EA process would incorporate parts of the rational information model. The assessment of all feasible alternatives to the proposal and alternative methods of carrying out the proposal would be required. As well, a broad definition of the environment to include not only biophysical but

⁶ Kellow (1983) provides an examination of the symbolic uses of environmental policy in New Zealand however his report focuses on air and water pollution control and does not deal with environmental assessment per se.

also social, cultural and economic aspects would be used. Provisions for the use of feedback from the monitoring of the implementation of previous proposals would improve the quality of the environmental information.

External reforms incorporated into the comprehensive model include the requirement for early and genuine public participation especially in scoping and issue identification. As well, monitoring of proponents' condition compliance and accuracy of impact predictions should be required.

The comprehensive model of an EA process would encompass internal changes to organisations. Such changes include requirements for environmental assessment activities to be undertaken at the earliest possible stages and include an evaluation of the potential impacts of the proposal and alternatives to the proposal including the "do-nothing" option. Assessments undertaken by proponents should be based on a broad definition of the environment (as noted above), and should incorporate public involvement from the earliest possible stages thus facilitating early dispute resolution. These reforms could help instil ecological rationality in governments and private proponents.

The comprehensive model acknowledges that EA processes can cause changes in the production and use of environmental information, the actors involved and the rules for planning and decision making. These reforms are all mechanisms that could be harnessed to achieve the goal of environmental protection and enhancement. Thus, an ideal EA process would produce not only high quality environmental impact assessments but would alter, from inside and outside organisations, the way decisions affecting the environment are made.

CHAPTER 4: HISTORY OF ENVIRONMENTAL ASSESSMENT IN NEW ZEALAND: AN ANALYSIS

The policy and practice of environmental assessment in New Zealand since its introduction in 1973 will be addressed in this chapter. In the next section (4.1), the evolution of government policy, guidelines, and legislation related to environmental assessment will be presented with an emphasis on the Environmental Protection and Enhancement Procedures. The practice of environmental assessment in the years since 1973 will be examined in the subsequent section (4.2). Since the policy and practice of environmental assessment in any place at any particular time results from the dynamic interaction of various actors striving for different outcomes of the EA process, the models developed in Chapter 3 will be useful in analysing this history.

4.1 EVOLUTION OF ENVIRONMENTAL ASSESSMENT POLICY IN NEW ZEALAND

4.1.1 Origins of New Zealand Environmental Assessment Policy

Environmental awareness was on the increase in New Zealand in the late 1960s, just as it was in other parts of the world. A Conference of the National Development Council held in 1969 examined projected growth scenarios for different sectors of the New Zealand economy. Questions regarding the environmental implications of this growth led to the Physical Environment Conference, held the following year, which explored issues such as land use, pollution and urban development (McMahon 1972). This increase in environmental awareness was accompanied by heightened public concern regarding the Lake Manapouri development controversy.

The Lake Manapouri debate is considered the major development controversy marking the origin of environmental assessment in New Zealand. In the 1960s, at the request of the multi-national company Consolidated Zinc (Con-zinc), the

National Government⁷ considered raising the level of Lake Manapouri in Fiordland National Park to produce electricity for an aluminium smelter. Protesters collected 265,000 signatures on a petition that was presented to Parliament in 1970. The Save Manapouri campaign continued until 1972 when the National Government was defeated. The new Labour Government reversed the decision to raise the water level of the Lake (Gilbert 1986:88,89).

Ironically, the National Prime Minister created the post of Minister for the Environment early in 1972. Later in the same year, the Commission for the Environment was established by Cabinet minute, with no supporting legislation or specific powers. The role of the Commission was to advise the Minister for the Environment on environmental policy and oversee the environmental assessment process. The Environmental Protection and Enhancement Procedures (EP&EP, or the Procedures) were drafted by the new Commission for the Environment to provide a policy for environmental assessment. The Procedures were introduced in 1973 by Cabinet minute and came into force in 1974. Table 2 provides a chronology of the evolution of environmental assessment policy in New Zealand.

4.1.2 Environmental Protection and Enhancement Procedures

The Environmental Protection and Enhancement Procedures established the first official government requirements for the environmental assessment of proposals. Although modified several times since 1973 these Procedures are still in operation today. This section will discuss the EP&EP as prescribed in 1973 and the different modifications will be dealt with in subsequent sections.

The Procedures defined environmental impact assessment as, "...a conscious and systematic assessment of the environmental implications of the choice between options which may be open to the decision-maker" (Commission for the Environment

⁷ New Zealand has unitary system of government based on the Westminster model and the two main political parties are the National Party and the Labour Party. Thus the term "National Government" refers to the political party whereas the terms central, regional and territorial will be used to refer to the level of government.

Table 2: Evolution of Environmental Assessment Policy in New Zealand

1972	Minister for the Environment established Commission for the Environment established
1973	Environmental Protection and Enhancement Procedures (EP&EP) drafted and introduced by Cabinet minute
1974 March	EP&EP came into effect
1978 May	Environmental administration and the operation of the EP&EP modified by Cabinet directive
1978 September	Environmental Protection and Enhancement Operations published to explain changes due to Cabinet directive
1979 April	Commission for the Environment issued guidelines to clarify 1978 changes
1979 November	National Development Act passed
1981	National Development Act amended EP&EP revised and republished
1986	Commission for the Environment disestablished Parliamentary Commissioner and Ministry for the Environment established Environment Act passed National Development Act repealed
1987	EP&EP revised and republished
1988	Draft Guide for Scoping and Public Review Methods in EIA published by Ministry for the Environment

(CFE) 1973:para 3). According to the Procedures, assessment "...must begin at the inception of a proposal, when there is a real choice between various courses of action including the alternative of doing nothing" (CFE 1973:para 3). The Procedures applied to: works and management policies of all Government departments, statutory boards, commissions etc.; actions partially or wholly funded by Government departments; and actions requiring central government permits or licences under any of seventeen listed statutes (CFE 1973:para 2).

The basic process set out by the EP&EP required the proponent to perform an initial environmental impact assessment.⁸ If this assessment indicated that the environment was likely to be affected significantly by the proposal, an environmental impact report (EIR) was required. The environment was defined broadly by the Procedures to include biophysical as well as social aspects such as land use and community patterns. The proponent prepared or contracted the preparation of the EIR, which was forwarded to the Commissioner for the Environment. The Commissioner made the document available to the public and called for submissions on it. In conjunction with any submissions received, the Commissioner prepared an "audit" of the EIR. The purpose of the audit was to insure that the likely environmental implications of the proposal and various alternatives had been evaluated adequately. The audit summarised public submissions, and could present recommendations or suggest conditions (CFE 1973:para 30). Once completed, the audit was sent to the Minister of the Government department responsible for the proposal and was made available to the proponent, and the general public. Figure 2 illustrates the environmental impact reporting and audit procedures set out by the EP&EP.

The models developed in Chapter 3 can be used to analyse the Procedures. The rational information model, which focuses on the provision of information to the decision makers, was clearly reflected in the EP&EP. For example, paragraph 3 defined environmental impact assessment as "...a conscious and systematic assessment of the environmental implications of the choice between options" and paragraph 7 stated that the EIR was "not to be a justification for a proposed action, but...an objective evaluation (of) the environmental consequences." This model of EA as the basis for the Procedures was reiterated by the then Commissioner for the

⁸ The EP&EP use the term "environmental impact assessment" here to refer narrowly to the concept of deciding whether a full environmental impact report (EIR) is required. In New Zealand this caused confusion since the term environmental impact assessment was also commonly used to refer to the entire assessment process. Other countries avoided this problem by referring to this early stage of the process as "initial assessment", "screening" or "initial environmental evaluation".

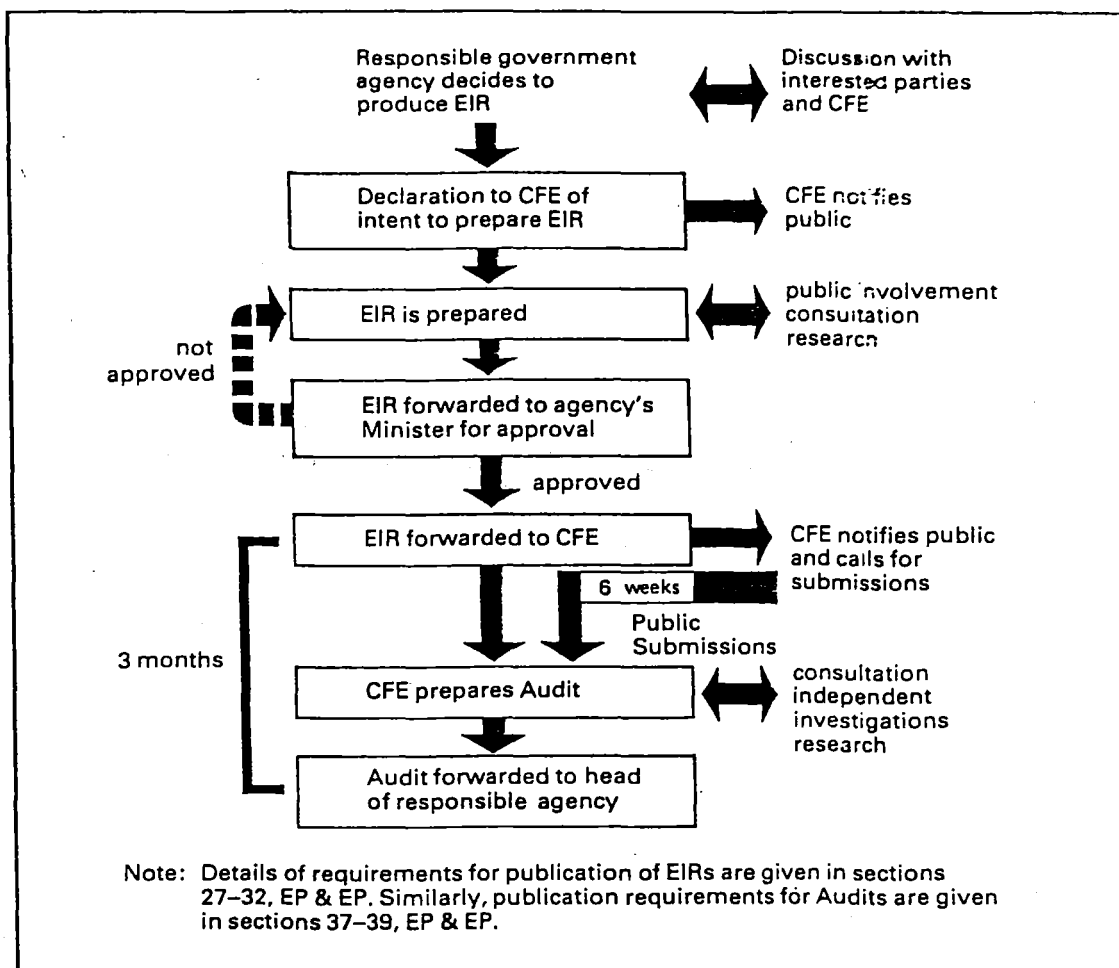


Figure 2: Summary of Environmental Impact Reporting and Audit Procedure

Environment, "The purpose of the process (EP&EP) was to place before the decision-making authority the relevant environmental implications of the proposal" (as quoted in Mills 1979:474). Paddy Gresham (1983:9), an Investigating Officer with the Commission for the Environment over its first ten years, concurs stating that, "The main objective of the EP&EP is to provide environmental information to decision makers and to help choose between options."

Outcomes associated with the external reform model of EA were also an important feature of the EP&EP. Major external changes were prompted by the requirements for publishing the EIR and audit and the provision for public participation in the audit stage (CFE 1973:para 26-33). In this manner, the Procedures provided an important new mechanism for the public, as well as other government departments, to review and comment on proposals. As Gresham (1983:8)

points out, the EIRs "usually comprised the only public document about a project." Early consultation was also encouraged by the EP&EP which stated that, "Informal consultation with interested authorities and organisations should be commenced as soon as possible" (CFE 1973:para 23).

The EP&EP also reflect the internal reform model of the EA which stresses the changes that occur within organisations. The agency promoting a proposal was responsible for the initial screening and preparation of the impact report if required (CFE 1973:para 8). The Procedures promoted a multi-disciplinary approach to EIRs (CFE 1973:Appendix A). As a result of the impact assessment requirements, development agencies were encouraged to hire environmental analysts and significantly alter their planning and decision making procedures. These requirements were reinforced by the public participation provisions; when proponents knew their EIR would be publicly reviewed and audited they were more likely to comply with the EP&EP requirements. However, the Procedures allowed for the Ministry of Works or another Department to provide environmental services including EIR preparation (CFE 1973:para 9) so proponents did not have to change their personnel. As well, the proponent decision on whether an EIR was needed was not subject to public review. This provided a loophole for those development agencies wanting to avoid the public EIR and audit process.

Opponents to the EP&EP subscribed to the model of environmental assessment as purely token or symbolic action. The Ministry of Works and Development (MWD) lead the fight against the Procedures charging that they would duplicate the Town and Country Planning Act and were thus unnecessary. MWD was concerned about the public involvement opportunities, and argued that the EIRs should not be published and should not include impacts on the social environment.⁹ The then Commissioner of Works, Mr. N.C. McLeod, warned publicly that "...the intention to allow environmental impact reports and their subsequent audit to be published will lead to serious problems...It would introduce public participation in the detailed

⁹ Mills (1979) and Gresham (1983) provide interesting accounts of this debate.

planning of a proposal..." (as quoted in Mills 1979:473). This resistance to the Procedures indicated that many people thought the EP&EP should be only token. It also foreshadowed some of the implementation problems and EP&EP modifications that would follow. The Commission for the Environment fought hard and managed to get the Procedures introduced with the public participation provisions intact.

The reluctance of the Government to provide a legal base for the EP&EP was interpreted by some as an indication that the Procedures were intended to be only symbolic and that the operation of development oriented agencies would not change significantly. This criticism may be correct to a certain degree since without a legislative base, compliance with the Procedures could not be enforced in a Court of law and their continued existence rested on Cabinet and interest group support. As well, the recommendations of the environmental impact reports and the audit had no legally binding effect.¹⁰ However, the need for flexibility when introducing a new process and a desire to avoid the massive litigation arising from EA legislation as was then occurring in the United States may have convinced the drafters of the EP&EP that a legal base was undesirable.

4.1.3 1978 Revisions and the Environmental Protection and Enhancement Operations

The role of the Commission for the Environment and the Government's policy on the EP&EP were modified by the Cabinet of the National Government in May 1978. These changes were outlined in a memorandum entitled the Environmental Protection and Enhancement Operations (EP&EO) published in September 1978 by the Commission for the Environment. This new policy provided for a decrease in the emphasis on formal EIRs and allowed the use of impact assessments as documents in their own right rather than solely for screening purposes. This, however, lead to confusion regarding the respective roles of environmental

¹⁰ A legislative base does not necessarily guarantee that the recommendations of an environmental impact assessment or its review are legally binding. Often decision-makers are only required to take such advice into account.

assessments and impact reports. In an attempt to clarify the situation, the Commission for the Environment issued guidelines in April 1979 which outlined four alternative approaches to environmental assessment. The first option represented the status quo where a complete EIR would be prepared subject to all the provisions of the EP&EP including the audit. The second option allowed for the preparation of an environmental assessment within the proponent agency. Since such an assessment was not specifically an EIR, neither public participation nor a Commission for the Environment audit was required. The third alternative enabled procedures specially formulated for the proposal to be used and did not necessarily require public involvement or an audit. Finally, existing statutory procedures, such as in the revised Town and Country Planning Act 1977, could be used if considered more appropriate than any of the other three options (CFE 1979:2).

The 1978-79 changes to the EP&EP decreased its information requirements. These changes acknowledged the costs of information provision and the fact that it was not possible or practical to acquire environmental information on all proposals. The 1978 memorandum stated that varying circumstances required different procedures and acknowledged that, "It is important that the process should be applied to projects for which it is best suited and gives the greatest return in new information" (CFE 1978:4).

All three of the new options provided little or no opportunity for the public and other government agencies to participate in the EA process. As well, the revisions removed the right and requirement for audits by the Commission for the Environment for proposals assessed under the three new options. These changes thus decreased the opportunities for positive external reform.

The modifications also decreased the likelihood of internal reform particularly within reluctant organisations. An agency, using any of the three new options for assessing its proposals could effectively proceed without incorporating environmental considerations into its decision making. They did not have to change their personnel, operating procedures or values. As well, since internal assessments and assessments under special procedures did not have to be published or externally

reviewed there was less compulsion for these studies to be undertaken. Without the threat of public scrutiny and an independent review, development agencies were likely to maintain the status quo and resist the incorporation of environmental values.

The decreased requirements for information, and the reduced likelihood of internal and external reform resulting from the 1978-79 revisions indicate that pressure to render the EP&EP purely symbolic was still being applied. As Morgan (1983:139) points out, "The main pressure for change seems to have come from Government departments, because of concern about public interference in detailed planning."

4.1.4 National Development Act 1979

The controversial National Development Act (NDA) was introduced by the National Government during the "Think Big" era¹¹ as an attempt to circumvent lengthy planning procedures for projects considered to be of "national interest" by creating a "fast track". The NDA enabled the procedures of 22 other Acts to be suspended and gave power to the Governor General in Council,

...to grant all licences, permissions, authorisations, permits, rights and any other approval of any type whatsoever, which normally have to be granted before a large scale industrial development can proceed (Hannan 1980:200).

Developers had as much time as they desired to prepare their applications. Once the application was submitted however, severe time constraints were placed on the process. Six weeks were allowed for submissions on the EIR while the audit had to be completed within three months. Public participation was focused into one

¹¹ During the "Think Big" era the National Government was committed to developing large scale industrial projects as quickly as possible. The Under Secretary for Energy (Mr. Brill) outlined the Government's planned projects in a speech (26 September 1980). The list totalled \$6,280 Million (M) and included: refinery \$400M, synthetic petrol plant \$400 M, methanol plant \$150 M, electrification of North Island rail \$100 M, ammonia-urea plant \$80 M, LPG \$80 M, CNG \$200 M, hydro electric power \$2200 M, gas pipelines \$70 M., ethylene and ethane extraction \$500 M, second Maui platform \$600 M, steel mill expansion \$800 M, aluminium smelter expansion \$150 M, second aluminium smelter \$150 M, Marsden Point pulp mill \$150 M, CSR Baigent pulp mill \$150 M, and cement works \$100 M.

hearing of the Planning Tribunal. The NDA gave the Commissioner for the Environment right of standing before the Planning Tribunal. Previously, the Commissioner could only present evidence as part of the Crown's case usually through the Minister of Works.

The NDA provided the first statutory recognition of the Commission for the Environment and the environmental impact report and auditing system by requiring EIRs to be prepared and audited for all works designated under the Act. Although this provision strengthened the information requirement of the EP&EP, the scope of the required information was reduced since EIRs were not required to discuss site options and alternative strategies.

External reform was constrained by the NDA which limited the time and opportunities for public participation. Severe time limits also undermined the audit capability the Commission for the Environment. As well, there was no provision for the Commission for the Environment to reject or refer inadequate EIRs back to the applicant (Hannan 1980:208).

Although the NDA required proponents to prepare EIRs the procedures were not likely to result in internal organisational change. Since the NDA applied to projects to which the government was publicly committed and which were considered to be of national importance the EIRs would be probably be used as a justification for the proposal. Projects of national significance were unlikely to be abandoned on the basis of the environmental assessment.

It is ironical that the NDA provides the only statutory recognition of the EIR and audit process when the entire purpose of the Act was to minimise public debate over, and expedite approval of, projects which the government declared of "national interest". The inclusion of the EA provisions in the NDA may have been used as a method of legitimising the unpopular Act. This inclusion may have been detrimental to the EP&EP generally since it set reduced standards for EIRs by not requiring the assessment of alternative sites and methods. The EA requirements of the NDA can be considered relatively token since they did not require information on alternatives to the proposal, they constrained public participation and the

Commission's audit function and they did not facilitate change within organisations.

The NDA was applied to the Waitara Petralgas methanol plant, the Motunui synthetic fuels plant and the South Pacific aluminium smelter at Aramoana although the latter was never built (Gilbert 1986:99). The Labour Government repealed the National Development Act in 1986.

4.1.5 1981 Revisions to Environmental Protection and Enhancement Procedures

The National Government revised the EP&EP in 1981, not only to reconcile them with the provisions of the National Development Act, but also to restrict the scope of both the EIR and audit. These changes reduced the comprehensiveness of the EIR information requirements. They removed the need for an examination of secondary impacts and alternatives in cases "Where a specific project proposal has been selected with form, location, scope and operation characteristics clarified" (CFE 1981:para 18). The revised procedures (CFE 1981:para 19) also stated that where the proponent had already chosen the technologies to be used, the EIR did not need to discuss alternatives. These provisions contradicted paragraph 8 of the EP&EP which required the identification of the environmental consequences of alternatives to the proposed action. As Morgan (1983:147) explains,

Therefore, when virtually all of the design and production decisions have been made, an EIR can be produced that only evaluates the direct impacts of the proposed project. It is not required to disclose, for comparative purposes, the environmental impacts of alternative designs, technologies or sites.

The decrease in the breadth of the information requirements provided opportunities for organisations to avoid internal reform and perform environmental assessments to solely as justifications for decisions made on other grounds.

The changes tried to limit the external reform by restricting the scope of the audits. This restriction was partially in response to the fact that the Commission for the Environment commented, in an audit, on wider economic impacts of a proposed pulp mill near Nelson. The revised EP&EP state, "The Commissioner will not concern himself with the economic implications of the proposal including those

relating to alternative resource use" (CFE 1981:para 34). The revisions also tried to curtail the Commission's ability to amplify public concerns regarding policy issues by requiring the Commission to refer public comments related to policy questions to the appropriate government or local bodies (CFE 1981:para 34). As Morgan (1983:148) notes in reference to these changes, "The previous value of audits in placing wider issues and policy considerations before the public has now been seriously diminished."

This continued erosion of the scope and requirements of the EP&EP resulted from attempts by factions within government to make the EA process relatively token. Although changes were made to the Procedures, the Assistant Commissioner for the Environment, John Gilbert (1986:101) stated that, "...in effect the Commission for the Environment's auditing function continued much as it had previously." The practical effect of these modifications to the EP&EP will be discussed further in Section 4.2.

4.1.6 Recent Changes

Major government reorganisation was undertaken by the Labour Government in 1984. Since that time there have been several reviews related to the process of environmental assessment in New Zealand, however no new policy yet been implemented. These reviews are now part of the Resource Management Law Reform process and will be discussed more fully in Chapter 5 as background to the Resource Management Bill. A few changes need to be highlighted in order to complete the chronology of the EP&EP.

In 1985, the Government developed an environmental policy and announced the disestablishment of the Commission for the Environment. The Ministry for the Environment and the position of Parliamentary Commissioner for the Environment were created and became operational in 1986 (Gilbert 1986:104). The EP&EP were revised slightly in 1987 to account for some of these changes, giving the new Ministry for the Environment responsibility for overseeing the Procedures and the Parliamentary Commissioner responsibility for auditing any environmental impact

reports (MFE 1987a:1). The EP&EP are still in operation but are considered interim until the Government decides on the "final form of its policy and procedures for environmental assessment" (MFE 1987a:1).

A Draft Guide for Scoping and Public Review Methods in Environmental Impact Assessment was released by the Ministry for the Environment in 1988. Although the specific EA policy was under review, the Ministry considered it appropriate to develop guidelines for improving the practice of EA generally. This manual of practice emphasised the value of scoping which it defined as "...determining key concerns through open communication at an early enough stage to influence the planning" (MFE 1988:12). The guide also provided information on public consultation methods, negotiation, facilitation, public reviews and documentation. Previous revisions of the EP&EP had generally resulted from political desires to make it more token. In contrast, the draft guide focused on increasing the effectiveness of the EA process by improving the quality and relevance of the information, by emphasising the importance of public participation from the earliest possible stages and by providing guidelines for organisations regarding desired procedures for undertaking environmental assessments. The implementation of these guidelines could significantly improve the practice of environmental assessment in New Zealand. In general, the policy changes discussed above have tended to result in minor modifications to the EP&EP that diminished its information requirements, and its likelihood of internal and external reform. Most of the changes resulted from political pressure to constrain the effect of the EA process. In practice, however, the Commission (and Ministry) for the Environment managed to overcome political barriers and use the EP&EP to improve environmental outcomes of decision making. The next section will discuss this practice more fully.

4.2 ENVIRONMENTAL PROTECTION AND ENHANCEMENT PROCEDURES IN PRACTICE

It is difficult to evaluate the effectiveness of most policy instruments and environmental assessment policies are no different.¹² The expected outcomes of the EA policy, such as changes in values, attitudes and decision making, are difficult if not impossible to measure. Even when outcomes are measurable it is generally difficult to show causality. There are some measurable outputs of the EA process such as the number and types of EIRs, audits and recommendations. Although these are useful in indicating the amount of information generated they do little to identify any internal or external reform caused by the EA process. The problem of evaluating the EP&EP in New Zealand is further complicated by the lack of monitoring of impact prediction accuracy or of compliance with audit recommendations. The bias and values of the evaluator will also influence any analysis.¹³ Although these factors will obviously limit discussion of the practice of environmental assessment, some general trends and problems can be highlighted.

In practice, the EP&EP have improved the quality of planning and decision making with respect to environmental effects. However, the overall operation of environmental assessment in New Zealand has been less than optimal.

Between 1973 and 1986 the Commission for the Environment prepared 93 audits on nearly that many EIRs (Buhrs 1990:18).¹⁴ The preparation of EIRs and audits is an obvious benefit of the EP&EP as they provided information to the public and to decision makers. However, the quality and availability of the information provided by the EA process has been limited by several factors. For

¹² For further discussion of policy evaluation problems see Flynn (1986) regarding performance measurements and differences between quantifiable outputs and non-quantifiable outcomes, Deutscher (1977) regarding goal trap and goal displacement problems for evaluators and Campbell & Ross (1968) regarding inferences in the presence of uncontrolled variables.

¹³ I personally subscribe to the comprehensive model of EA processes which acknowledges that many varied outcomes are necessary if the aim of EA is to be achieved.

¹⁴ Buhrs (1990) provides a thorough discussion of the types of proposals audited, different initiators and the recommendations of the audits.

example, the environmental assessments and their documentation have varied enormously in size, scope and quality. Wells and Fookes (1988:25) in a working paper on impact assessment prepared for resource management law reform concluded that "In 14 years of EP&EP operation a largely non-standard and discretionary assessment process has developed" (Wells & Fookes 1988:25). The number of environmental impact reports prepared has declined noticeably since 1978 and there has been a concurrent increase in the use of informal assessment documents within proponent organisations. This is significant since the requirements for such documents are much less explicit than for EIRs. There is no formal provision for public involvement or review, and often no external check on assessment quality (Wells & Fookes 1988:7). Little is known about this method of assessment since the Ministry for the Environment (and previously the Commission for the Environment) is not necessarily involved. Recent unpublished research found that assessments have been predominantly cursory, focusing on primary effects with little discussion of indirect impacts and examining only a narrow range of issues (Wells & Fookes 1988:25).

In 1983, a group of government officials undertook a review of the audits and appraisals under the EP&EP. In their report Speden et al. (1983:26) concluded that alternatives generally were discussed inadequately, if at all, in environmental assessment documents. Failure of assessments to consider alternatives adequately was a major issue in many audits, and often lead to increased public controversy. As well, the EP&EP have not been effective at identifying and reconciling potential conflicts between Maori cultural and spiritual values and proposed actions.

Although the EP&EP (MFE 1987a:1) specifically note that all proposed actions, including management policies, should be subjected to the process, in practice this has not been the case. Wells and Fookes (1988:6) point out that in reality, environmental assessment has "rarely been applied explicitly to policy." As well, the impacts of the implementation of proposals are rarely monitored so the accuracy of impact predictions are evaluated infrequently, if at all. Thus, past experience and lessons have not been used to improve the accuracy and quality of impact

predictions and techniques. The information generation and provision as a result of the EP&EP has thus been limited by these factors.

The EP&EP have resulted in external reform by providing increased opportunities for public participation and government co-ordination. As Gilbert (1986:87) explains, "...environmental assessment has filled a gap in participatory planning by providing a means for those most affected by project development to air their views." However, these provisions have been fairly limited. The EP&EP required public participation but only after an EIR had been submitted. Thus, public involvement has traditionally entailed providing information for comment very late in the process. There was no requirement for proponents to take comments into account, indeed, the design of the Procedures made this very difficult. Some early consultation has been undertaken by proponents but such moves are entirely voluntarily (Hutchison, pers. comm.). The increasing use of informal assessments has reduced public involvement opportunities and decreased the involvement of the Commission (or Parliamentary Commissioner) for the Environment in auditing. The decreasing participation of the public and other government departments has reduced the pressure on organisations to change internally. The recent guide for scoping and public review (MFE 1988) represents an improvement in public participation provisions but its status as a draft guideline undermines its potential to promote reform. The guidelines advocate real involvement of the public in decisions regarding the scoping and preparation of an assessment and represent a shift away from viewing public involvement as solely the provision of information to the public for comment.

The EP&EP have no built-in mechanism for monitoring the use of environmental information and the implementation of recommendations stemming from the process. Without the external pressure of monitoring, the proponents are often less inclined to take the audit recommendations into account.

Some degree of internal reform has occurred within organisations, especially government departments, as a result of the Procedures. As Gresham (1983:8) explains "The application of the EP&EP brought major changes to departmental

policies on environmental management and the principles in these procedures were usually incorporated into departmental operations and into legislation." Although generally critical of the EP&EP, Wells and Fookes (1988:25) do acknowledge that "...undoubtedly the Procedures have raised the awareness of project proponents about environmental concerns." However, some organisations, especially government departments during the "Think Big" era, were quite reluctant to change their organisations to reflect environmental principles. The EP&EP were ineffective at forcing change within such organisations.

By allowing several alternatives to the full EIR and audit process the EP&EP provided reluctant organisations with a method for avoiding the information requirements and external pressures of the EA process. This resistance has also been reflected in problems with the timing of the assessment of proposals. Not only has there been some non-compliance with the objective of early notification, "Late notification of projects may even be the rule rather than the exception" (Speden et al. 1983:20). For example, with projects such as the Aramoana aluminium smelter, Clutha Valley development, Kapuni ammonia-urea plant and the Motunui synthetic fuels plant, the Government had committed itself to specific sites and technologies prior to commencing the impact assessments. Many impact assessments were prepared late in the process, after design questions had been settled, and focused on justifying the chosen alternative. In this way, the practice of environmental assessment under the EP&EP has been severely constrained by political and economic decisions. Speden et al. (1983:16,17) note that in practice, "The degree of political commitment (by central government) to a project proposal can affect decisions on the form and scope of an EIR, Audit or Appraisal."

Organisations that were reluctant to change generally had a negative attitude towards environmental assessment. They saw EA as an obstacle to their development proposals. Such proponents have inhibited the Procedures by presenting poorly prepared or biased documents, ignoring information and options, initiating work prior to the completion of the environmental procedures and/or through an unwillingness to communicate information (Speden et al. 1983:35). In

contrast, parties having positive attitudes towards the assessment process have found the process beneficial to the implementation of their proposal (Speden et al. 1983:46).

The organisations that were opposed to internal reform often worked to make the EP&EP only token in practice. Many Government departments and individual officials were actually quite opposed to the EP&EP and worked to undermine them through a process known as "non-decision making." This is defined as

...when A devotes his energies to creating or reinforcing social and political values and institutional practices that limit the scope of the political process to public consideration of only those issues which are innocuous to A (Ham & Hill 1984:63).

The progressive narrowing of the scope of audits and the reduction in minimum requirements for EIRs through gradual changes in the EP&EP are a prime example of non-decision making. Much of the controversy over the EP&EP occurred during the National Government's "Think Big" era. During that time the relatively development oriented National Government was committed to realising large scale industrial projects as quickly as possible. This policy tended to conflict with the EP&EP which tried to make decision makers consider environmental consequences of proposals.

In general, it appears that the process of environmental assessment has resulted in positive outcomes including the provision of information on environmental implications, external reform through increased public participation and auditing of EIRs, and internal reform of some organisations in which environmental principles have influenced attitudes and procedures. However, the full potential of EA as a policy tool has not been realised. As Wells and Fookes (1988:25) conclude, "...the EP&EP have not been as effective as was hoped at ensuring environmental factors influence project selection and design." Some organisations have been reluctant to change their internal operations and have even worked to weaken the requirements of the EP&EP. Recent reforms and reviews indicate a new direction for environmental assessment in New Zealand. The next chapter will discuss the reform process in more detail and highlight the implications of the Resource Management Bill for the process of environmental assessment.

CHAPTER 5: PROPOSALS FOR FUTURE REFORM OF ENVIRONMENTAL ASSESSMENT IN NEW ZEALAND

5.1 BACKGROUND TO RESOURCE MANAGEMENT LAW REFORM

In the years since the Environmental Protection and Enhancement Procedures were introduced to New Zealand the conditions within which they operate have changed considerably. This change has been most rapid and noticeable since 1984 with the Labour Government's massive reorganisation program which has created, "...the largest upheaval in central government administration in the nation's history" (Gilbert 1986:104). Public sector reorganisation and local government reform have influenced, and will continue to influence, the policy and practice of environmental assessment in New Zealand.

The restructuring of central government, initiated in 1984, aimed to deregulate the economy and force State agencies to operate as self sufficient economic entities. It involved the separation of the trading, policy and administration and service delivery functions of government departments. This was accompanied by the corporatisation and in some cases the privatisation of the trading functions. This privatisation has reduced Government involvement in a wide range of trading activities including shipping, airways, steel, electricity, oil and gas (Rudd 1990:97). Of particular importance was the abolition of the Ministry of Works and Development in April 1988 and the incorporation of its commercial activities into the Works and Development Corporation (Williams 1990:143). The increase in the number of trading corporations and the decrease in direct government involvement in development has made the EP&EP less relevant since their provisions apply mostly to government sponsored proposals and not to private sector actions.

In environmental administration the reorganisation involved the abolition of the Commission for the Environment, the New Zealand Forest Service, the Wildlife Service of the Department of Internal Affairs and the Department of Lands and Survey, and the establishment in their place, of several ministries, departments and corporations (see Figure 3). The Ministry for the Environment became a policy unit advocating balance between conservation and development; commercial trading functions were assigned to Land Corporation and Forestry Corporation; and the

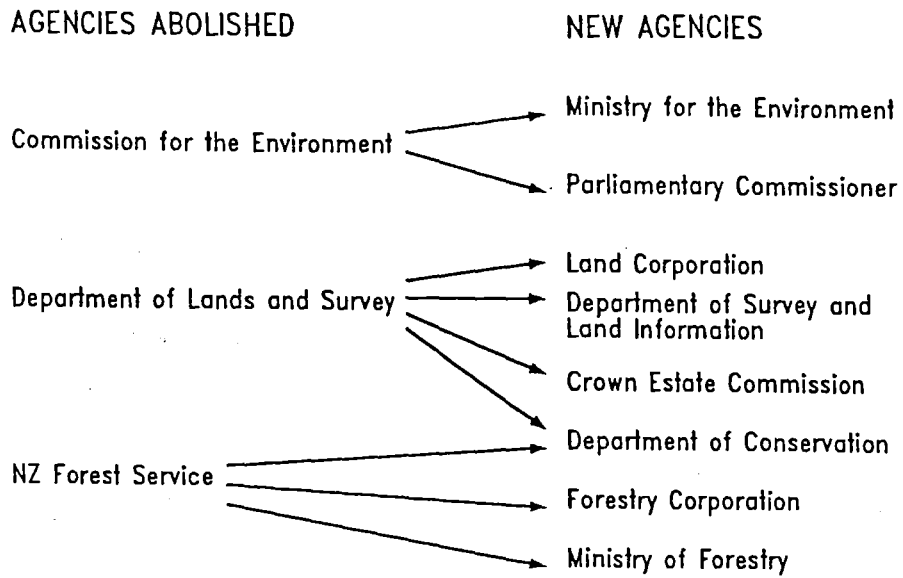
Department of Conservation became the conservation advocate with service delivery, administrative, and some policy responsibilities. The Parliamentary Commissioner for the Environment was established as an ombudsman with independent powers of investigation reporting directly to Parliament on environmental matters.

The recent local government reform, initiated by the Labour Government after 1984, has also fundamentally altered the context of environmental assessment. Through this process, strong regional governments have been instituted, the number of regions has dropped from 22 to 14, the number of territorial authorities has been reduced from over 200 to 74, and about 98% of the special purpose boards (e.g. harbour boards, drainage boards, pest destruction boards and noxious plant authorities) have been abolished (Bush 1990:241).¹⁵ The new regional governments have been given increased responsibilities including natural resource management and environmental planning. The concept of clearly separating the government's commercial, policy and service activities was carried over from the central government reorganisation to the local government reform.

The development of a new policy on environmental assessment procedures was one of the responsibilities of the newly created Ministry for the Environment (MFE). In 1986, a steering group produced a discussion paper for the Ministry for the Environment, setting out proposals for changing the environmental impact assessment procedures (MFE 1986). The discussion paper outlined purposes and objectives of environmental assessment procedures, presented procedural alternatives and identified a preferred policy framework. Key criteria for use when considering alternative EA procedures, were identified by the discussion paper. These included:

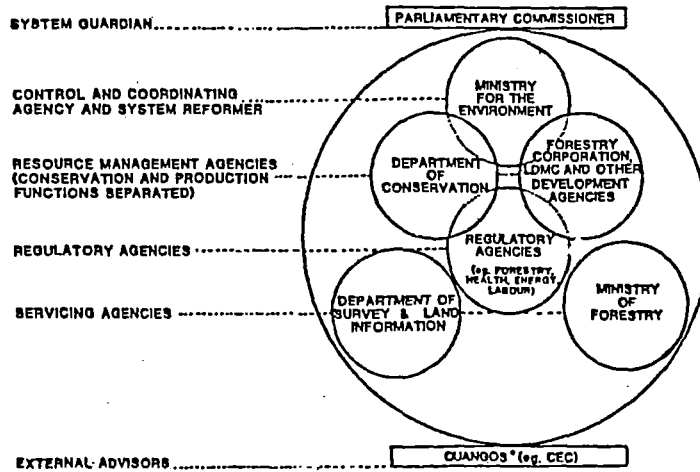
- minimisation** of government intervention...
- devolution** of responsibility to local and regional authorities...
- clarity and efficiency for proposers** (emphasis added, MFE 1986:12).

¹⁵ The term "local authority" is used to refer generally to regional and territorial authorities. "Regions/regional authorities or councils" refer to the second level of government in New Zealand. Territorial authorities are the third tier of government and include district and city councils (see the Local Government Act 1974 for complete definition).



Source: Adapted from Gregory 1987:115.

INSTITUTIONAL ARRANGEMENTS POST REFORM



Source: Gresham 1987:6

Figure 3: Structural Reorganization in the Environmental Area

The use of these criteria precluded the consideration of a significant range of alternative EA procedures. The criteria also suggest that the government's review of environmental assessment was focused on its agenda of devolution and decreased government intervention in the marketplace rather than on an inherent desire to improve environmental outcomes.

Public comment and consultation on the discussion paper was encouraged. The discussion paper and public input influenced the formulation of a proposed, but never enacted, policy on environmental assessment procedures (MFE 1987b). The proposed policy, released in 1987, deemed that an overriding set of procedures was unacceptable and that a policy framework with a variety of procedures for various circumstances was preferable. The policy suggested that local planning and consent authorities should handle proposals of a modest scale while larger development proposals would be "designated" and subjected to a specified procedure. Amendments to legislation were proposed that would require consent authorities to have regard for the Environment Act, allow for joint consent hearings and allow local authorities to require EIRs (MFE 1987b:2,3). The criteria of minimised government intervention and devolution to regional level identified in the earlier discussion paper were clearly incorporated into the proposed policy.

No action was taken to implement the proposed policy and legislation since reviews of major planning and resource management legislation were in progress and their outcomes would influence the proposed EA procedures. Instead the EP&EP were revised slightly in 1987 to account for some of the government reorganisation (see Section 4.1.6).

In January 1988, the Labour Government announced their intention to undertake a comprehensive review of the New Zealand legislation for natural and physical resources, what has become known as Resource Management Law Reform (RMLR). Over fifty statutes were involved including the Town and Country Planning Act 1977, Water and Soil Conservation Act 1967, Mining Act 1971, Clean Air Act 1972, as well as the Environmental Protection and Enhancement Procedures. Previous reviews of the EP&EP, discussed above, and the Hearn review of the Town

and Country Planning Act (1987) were incorporated into the review of resource management procedures. The Coastal Legislation Review, previously coordinated by the Department of Conservation, was merged with RMLR in September 1988. The deliberations and proposals of RMLR were influenced by, and linked to, the concurrent Local Government Reform Process.¹⁶

RMLR has involved several iterations of public consultation on information and proposals. Working papers were prepared on many subjects including impact assessment (Wells and Fookes 1988). This culminated in the Resource Management Bill that was introduced into the House of Representatives in December 1989. The Bill was sent to Select Committee after its first reading. The Select Committee held another round of consultation receiving a total of 1325 oral and written submissions between December 1989 and August 1990 (New Zealand House of Representatives 1990:4). The Bill was revised in light of the Select Committee deliberations and a new version printed. Although the Bill passed its second reading in Parliament on 1 September 1990 it was not enacted due to the dissolution of Parliament.

If re-elected, Labour had intended to pass the Bill as quickly as possible. Given that the National Party won the election on 28 October 1990, the Resource Management Bill will probably be enacted after a period of review with the expected implementation date of July 1991. According to Rob Storey, the Opposition Spokesperson for the Environment prior to the election, the National Party might amend the Resource Management Bill, however, the EA provisions are not likely to be changed substantially (Storey 1990:2). As it is not worth speculating further and given National's comments (above), the rest of this chapter will focus on the Resource Management Bill (as outlined in the second reading version 14 August 1990) and the likely results of its implementation.

¹⁶ The draft guidelines for scoping and public participation released by MFE in 1988 (see Section 4.1.6) were not part of RMLR. They were provided as guidance for EA regardless of the outcome the RMLR process.

5.2 GENERAL PROVISIONS OF THE RESOURCE MANAGEMENT BILL

The purpose of the Resource Management Bill (RM Bill or the Bill) is to provide for the sustainable management of New Zealand's natural and physical resources. This purpose is supported by principles which outline factors that must be considered under the Bill including the actual or potential effects of an activity on the environment; maintenance and enhancement of natural features; effective and efficient management of resources; and the Treaty of Waitangi. The purpose and principles must be reflected in all policy statements, management plans and resource consent decisions taken under the Bill.

The Bill defines general limitations on the use of specific resources usually by prohibiting a use unless expressly allowed by a plan or resource consent (Section 7-12). Duties and functions of governments and individuals are also outlined.

The purpose and principles of the Bill are to be implemented through a hierarchy of policies and plans. The central government may prepare "statements of government policy"¹⁷ on what they deem to be matters of national significance. These policy statements are optional except in the case of the coastal policy which is mandatory. Regional governments are required to prepare regional policy statements to achieve the purpose of the Bill by providing "policies to achieve the integrated management of the natural and physical resources of the whole region" (Section 49). The role of regional government is significant in that these regional policy statements form the foundation of the entire resource policy and consents system. Regional policy statements must not be inconsistent with any existing statement of government policy. Regional management plans and district management plans must be consistent with both regional policy statement and statements of government policy (where these exist). Regional coastal management plans and district management plans are mandatory but any other regional management plans are optional.

¹⁷ In the first printing of the Bill the term "national policy statements" was used. The Select Committee recommended that be changed to "statements of government policy" presumably to remove any confusion with the policies of the National political party.

Several types of resource consents are provided for by the Bill including controlled consents, land use consents, subdivision consents, water permits, coastal permits and discharge permits. A resource consent generally is required for any use not allowed in the Bill or in a plan. Consent applications are made to the regional or territorial authorities for hearing and the decision can be appealed to the Planning Tribunal. Similar procedures apply to all types of resource consents except controlled consents which do not require a local authority hearing.

Under the Bill, the central government retains the right to "call in" any resource use consent applications considered to be of national significance. Such applications would then be considered by a Board of Inquiry that would, after public input, make recommendations to the Minister for the Environment who would then decide on the application for resource consent(s). The Minister is not bound by the recommendations of the Board of Inquiry and is only required to "have regard to" them when making a decision (Section 121-129).

Central government has regulation making powers which enable the specification of national standards. The Hazards Control Commission, to be established by the Bill, can advise on content of regulations regarding hazardous substances and new organisms (Section 387F).

Responsibility for monitoring the overall effectiveness of the Bill rests with the central government (Section 22). However, local authorities are required to monitor the effects of their policies and plans as well as resource consent condition compliance.

A process for the allocation of Crown owned minerals is established by the Bill. This part also clarifies the rights and limitations regarding access to land for mining purposes (Part IX).

5.3 ENVIRONMENTAL ASSESSMENT PROVISIONS OF THE RESOURCE MANAGEMENT BILL

Procedures for environmental assessment are integrated into many different sections of the Resource Management Bill. The Bill does not present a distinct environmental impact assessment process, the term is never even used. Instead, the

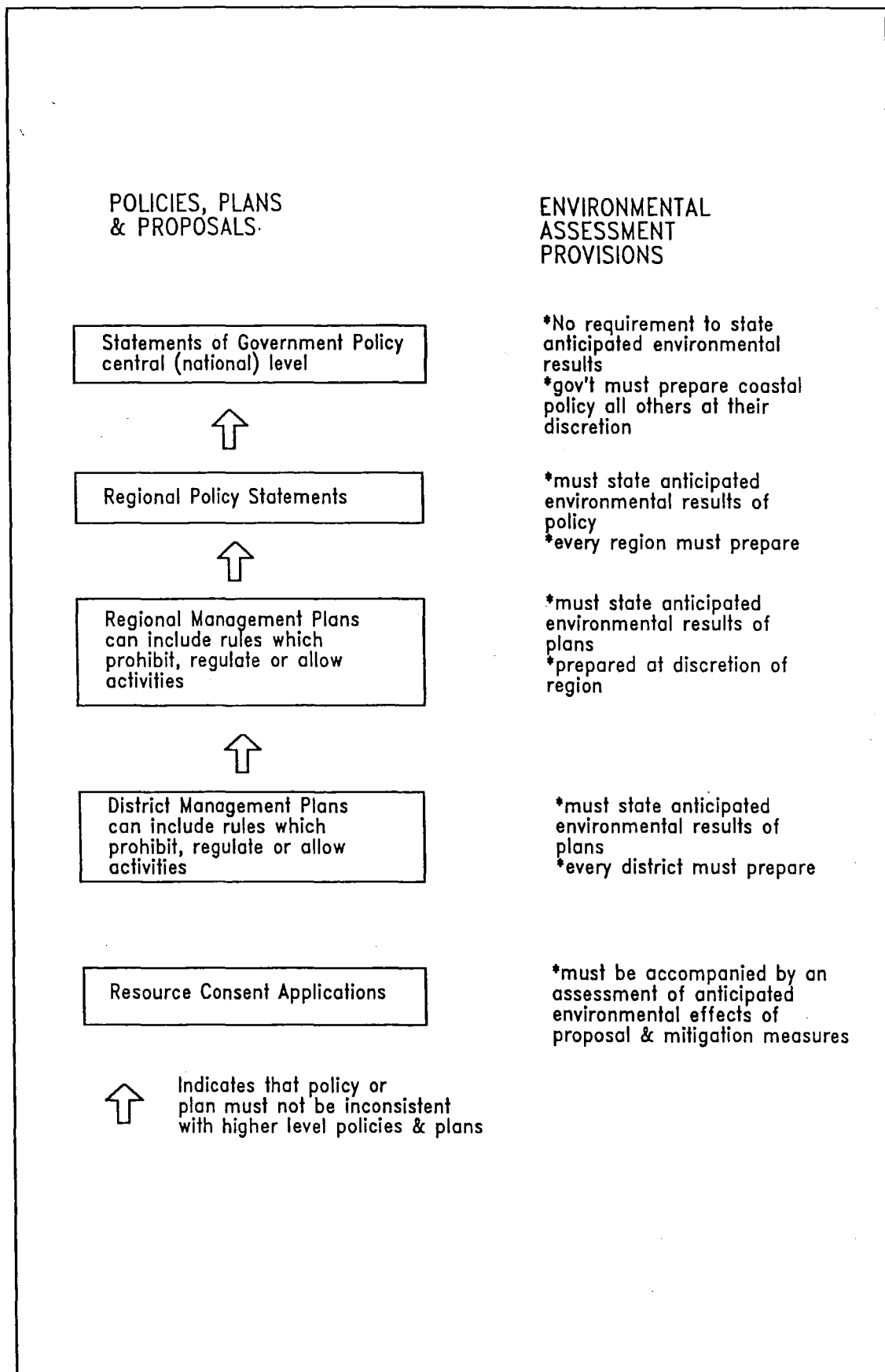


Figure 4: Environmental Assessment Provisions of Resource Management Bill

implicit and explicit provision for the evaluation of the effects on the environment of policies, plans and proposals are included throughout the Bill. Figure 4 provides an illustrative summary of the EA provisions of the Resource Management Bill.

The requirement for some form of environmental assessment is inherent in one of the fundamental principles of the Bill which requires all persons acting under the legislation to have regard to the importance of "the actual or potential effect of an activity or natural process on the whole of the environment..." (Section 5 (1) (b)). The magnitude of this requirement is significant given the broad definition of the terms "environment" and "effects". In the Bill, "environment" includes not only ecosystems, and natural and physical resources but also peoples, communities and related social, economic, aesthetic and cultural conditions (Section 2 (1)). Likewise, the term "effect" is virtually all-encompassing as it includes not only positive or negative, short term or long term, temporary or permanent effects but it also mentions cumulative, high probability and low probability-high potential impact effects. There remains little that could be overlooked under the requirement to consider "effects on the environment". Since the principles underlie all actions taken with respect to the Bill, this implicitly requires a form of environmental assessment for every such action. Such a requirement is likely to be difficult to enforce.

Regional policy statements, regional plans and district plans are all required to state the "environmental results anticipated from the implementation of these policies and methods" (Section 52, 57 and 65). This forms a de facto requirement for an environmental assessment of policies and plans. Central government statements of policies and minerals programmes (which provide for the management and allocation of Crown owned minerals) are not required to include the same information so in effect no environmental assessment of national level policies is required.

Regional and district plans are required to state procedures for reviewing the contents of the plan and monitoring its effectiveness (Section 57, 65). The Bill also allows for regional and district plans to include rules which prohibit, regulate, or

allow activities but requires that in making such a rule the regional and territorial authorities,

...shall have regard to the actual or potential effect on the environment of activities including, in particular, any adverse effects; and rules may accordingly specify permitted activities, controlled activities, discretionary activities, non-complying activities, prohibited activities (Sections 57 (2) and Section 66 (2)).

The plans are also required to specify the information that must accompany a resource consent application and under what circumstances more information can be required (Section 57; 65). This enables the local authorities to state what type of information would be required for differing levels of potential impacts or different types of proposals.

Any application for a resource consent must include an assessment of the actual or potential effects of that activity on the environment, mitigation measures and is to correspond to the scale and potential environmental impact of the activity (Section 75). As a result of the Select Committee deliberations, the Bill now includes a schedule that outlines the matters to be considered and included in an environmental assessment (see Table 3). Resource consent applications must also include any information specifically required by the plans.

Under Section 78 of the Bill, authorities are able to request further information. If they are concerned about significant adverse environmental effects of a resource consent activity they may require an explanation of alternative locations, methods considered and any consultation that had been undertaken by the proponent. As well, the authorities may commission an independent environmental report or a review of the environmental information submitted with the consent application.

As noted earlier, the call-in provision allows for proposals of national significance to be dealt with by central government and a Board of Inquiry. National significance can be based on several factors including, "widespread public concern" regarding a proposal's potential environmental effects (Section 121 (2)).

Public participation is provided for during the preparation and revision of policy statements and management plans. Public involvement in resource consent

SCHEDULE 3A

Section 75 (5) (b)

ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

1. Matters that should be included in an assessment of effects on the environment—Subject to the provisions of any policy statement or plan, an assessment of effects on the environment for the purposes of section 75 (5) (b) should include—

- (a) A description of the proposal:
- (b) Where it is likely that an activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:
- (c) Where an application is made for a discharge permit, a demonstration of how the proposed option is the best practicable option:
- (d) An assessment of the actual or potential effect on the environment of the proposed activity:
- (e) Where the activity includes the use of hazardous substances and installations, an assessment of any risks to the environment which are likely to arise from such use:
- (f) A description of the mitigation measures (safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect:
- (g) An identification of those persons interested in or affected by the proposal, the consultation undertaken, and any response to the views of those consulted:
- (h) Where the scale or significance of the activity's effect are such that monitoring is required, a description of how, once the proposal is approved, effects will be monitored and by whom.

2. Matters that should be considered when preparing an assessment of effects on the environment—Subject to the provisions of any policy statement or plan, any person preparing an assessment of the effects on the environment should consider the following matters:

- (a) Any effect on those in the neighbourhood and where relevant the wider community including any socio-economic and cultural effects:
- (b) Any physical effect on the locality, including any landscape and visual effects:
- (c) Any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:
- (d) Any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural, or other special value for present or future generations:
- (e) Any discharge of contaminants into the environment, including any unreasonable emission of noise and options for the treatment and disposal of contaminants:
- (f) Any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations.

applications is required but not until after the application has been lodged.

Environmental assessment¹⁸ is thus required of policies, plans and activities requiring resource consents under the Resource Management Bill. No explicit environmental impact assessment process is contained in the Bill instead the EA requirements are interspersed throughout various sections. Schedule 3A of the Bill does identify matters that should be considered and included in an assessment of effects on the environment. The Resource Management Bill provides some guidance on expected outcomes and operating principles for resource management generally, yet it has been left to the regional and territorial authorities to decide on the form of environmental assessment procedures and acceptable methods and techniques for environmental assessment studies.

5.4 ANALYSIS OF THE ENVIRONMENTAL ASSESSMENT PROVISIONS OF THE RESOURCE MANAGEMENT BILL

An analysis of the effect of the Resource Management Bill on the process of environmental assessment in New Zealand is difficult to undertake at this stage since the legislation has yet to be implemented. The outcomes of the new provisions are difficult to predict especially since regional and territorial authorities, who have shown widely differing responses to the Bill, are given significant discretion regarding the methods and mechanisms for instituting the Bill. However, it is still valuable to analyse the EA provisions of the Bill. This section will discuss the provisions with respect to the conceptual models outlined in Chapter 3 to identify how the new process will differ from past policy and practice. In the next section (5.5), issues regarding the implementation of the environmental assessment provisions of the Resource Management Bill will be highlighted.

Although the EA provisions of the RM Bill are different in many ways to the Environmental Protection and Enhancement Procedures, the Bill is similar in that it implies that the goal of EA is the provision of information to decision makers.

¹⁸ Although the term environmental impact assessment is not used in the Bill I will use the term to refer to the various provisions and requirements described above.

By requiring regional policy statements and regional and district plans to identify the anticipated environmental results, the Bill promotes the provision of information on potential environmental impacts. The Bill also requires that environmental information accompany resource consent applications and allows local authorities to request further information or environmental reports. Once again, this illustrates the use of environmental assessment as an information provision process. The Bill, however, shifts away from the technocratic view of the environment and decision making by acknowledging the importance of values (such as Maori, intrinsic, community values) a trend that was started several years ago with the Environment Act 1986.

The external reform model of EA processes focuses on the changes that occur outside of organisations. The Resource Management Bill will change the rules for public participation in environmental assessment and decision making, a form of external reform. The public will have opportunities to review, prior to their finalisation, local authorities' policies and plans which will now include a form of environmental assessment. Previously, public participation in policy formulation as a result of the EP&EP was rare, although public comment on district and water management plans prepared under other legislation was allowed.

The RM Bill may provide for some increase in public involvement in project level assessments over the existing process since more projects will be subject to the Bill. However, there is no requirement in the Bill for the public to be involved in project specific environmental assessment until after a resource consent application has been submitted. As well, there is no requirement that proponents take account of public concerns when designing their proposal. Therefore, the current concept of public participation as the provision of information for public comment is unlikely to be extended to include real public involvement in decision making. This contrasts with the Ministry for the Environment guidelines for scoping and public review (MFE 1988) which promote public involvement from the earliest possible stages to assist in the scoping of the actual environmental impact assessment. This may not be a significant problem if proponents voluntarily undertake consultation

with interested parties prior to, and during, the preparation of the environmental component of their consent application. According to a Ministry for the Environment official, such voluntary consultation commonly occurs at present (Hutchison, pers. comm.).

The Bill will also expand the right of standing before the Planning Tribunal. Previously, standing was relatively limited but varied depending on the statute in question. For example, the Mining Act had very strict limitations on who could be heard before the Planning Tribunal whereas the Water and Soil Conservation Act was more open. Under the new Bill, "any person having interest...greater than the public generally" may appear before the Tribunal (Sec 321 (1)). As well, any person may make submissions, within 20 days of public notification, to local authorities regarding resource consent applications (Sec 82). Despite the apparent opportunities to be heard, the time limit may be a significant constraint on groups that rely on volunteers to prepare their submissions.

By including requirements for environmental assessment in the proposed legislation, the potential for external reform in the form of judicial involvement in the EA process has increased. For example, individuals who have made submissions on proposed policy statements or plans may refer decisions to the Planning Tribunal (First schedule, part 1, Sec 14). As well, individuals who have requested the preparation of, or changes to, policy statements or plans may appeal to the Planning Tribunal if their requests are refused or deferred (First schedule, part 1, Sec 26). Section 101 and 102 of the Bill also allow for appeals to the Planning Tribunal against decisions on applications for resource consents.

The Resource Management Bill has the potential to cause local authorities to undergo significant internal reform in their roles as both consent authority and proponent. Local authorities will need to gain expertise in environmental assessment so as to be able to guide resource consent applicants in the preparation of their applications. The local authorities will also need expertise to enable them to evaluate the adequacy of the environmental information they receive and any reports they commission. The current lack of finances, personnel and perhaps

commitment may prove an impediment to the successful implementation of the EA provisions of the Bill in some regions (see Section 5.5 for more details on implementation issues).

By requiring local authorities to document the environmental results of proposed policies and plans, the RM Bill will probably result in internal reform of local authorities as proponents. Changes may include supplementary training for current employees or the hiring of individuals with environmental expertise and commitment. As well, the use of the tiered cascade approach to policy and plan making advocated by the Bill will encourage local authorities to reform their policy and plan making process to better account for potential environmental effects. Regional policies are meant to identify resource management issues and policies and methods for implementing them. Regional and district plans would represent a form of EA screening since they would identify the level of assessment required for various types of proposals. For example, plans could identify resource uses that have known and acceptable environmental impacts (allowed as of right), those with unacceptable environmental impacts (to be prohibited) and those that would require further assessment (requiring a resource consent).

The Resource Management Bill, by requiring public and private proponents to assess the environmental effects of their proposals, will encourage more proponents to consider the environmental impacts of their decision making. The breadth of application contrasts with the EP&EP which focused on government sponsored projects and applied only to a limited number of private proposals. Some private proponents may even hire new employees with environmental expertise to work within their organisations although for a once only proposal they are more likely to use consultants to gather the environmental information.

The changes to the operations of proponents, administrators, regulators and decision makers suggested by the Bill have the potential to assist in instilling an ecological rationality in these organisations. All actions taken under the Bill are to have regard to the actual or potential effects of the activities on the environment. In effect this requires that all individuals exercising functions or powers under the

Bill supplement their existing rationalities by adopting a form of ecological rationality. When acting in an ecologically rational way, organisations and individuals will make decisions that do not harm the life support capabilities of the environment. The success of the Bill in this regard will depend on the attitudes of the individuals involved in its implementation.

The Resource Management Bill may decrease the chance of the new EA process being purely symbolic and unaccompanied by substantive action by providing a legislative base for environmental assessment and by expanding the rules regarding who may appeal to the Planning Tribunal regarding policies, plans and project decisions. However, the design of the Bill to rely on the goodwill and discretion of central and local authorities provides opportunities for reluctant organisations to make environmental assessment relatively token. Although government and public commitment to the importance of considering environmental implications of proposals appears to be much greater than when the EP&EP were first introduced, there is no guarantee that such attitudes will continue. The lack of formal, explicit requirements for environmental impact assessment in the RM Bill may prove to be a problem in the future.

The integration of environmental assessment provisions into many different parts of the Bill, and the avoidance of the term "environmental impact assessment" has made them much less obvious and apparent. This means that some of the positive symbolism of having a distinct, visual EA process to focus attention on has been lost. It may be more difficult to get individuals to participate when the EA process is so obscured.

In summary, the EA provisions of the RM Bill incorporates parts of several of the conceptual models and goes some way towards meeting the standards of the comprehensive model. Information requirements have been improved over the EP&EP since the environmental effects of policies and plans must now be assessed and environmental information accompanying consent applications can be specified, reviewed and more information requested. The EA provisions of the Bill are likely to do more than generate information. They provide increased opportunities for

public consultation regarding environmental impacts of policies and plans although provisions for public participation in project specific EA remains minimal. The Bill's EA provisions are apt to improve the planning and decision making processes within organisations. Local authorities will have to be more aware of environmental issues in their multiple roles as regulators, administrators and proponents. Since private proponents would be required to examine the environmental impacts of their proposals, some improvement in their environmental awareness can be expected. The Bill also renders it more difficult for the EA provisions to be used in a purely symbolic manner. In theory, the RM Bill has the potential to improve significantly the policy, practice and outcomes of the environmental assessment process in New Zealand. The realisation of that potential depends to a great extent on the implementation of the Bill.

5.5 IMPLEMENTATION ISSUES

The implementation of the Resource Management Bill raises several issues related to increased responsibilities for local authorities, monitoring, public participation and central government policies. This section will highlight some of the problems and suggest methods of overcoming them.

Under the Resource Management Bill, local authorities are given major new responsibilities and discretion regarding environmental assessment. Although broad guidelines are provided by the Bill, the local authorities will have the burden of deciding on appropriate methods, scope and adequacy of environmental assessments for their own policies and plans as well as for resource consent applications. There are several issues related to this devolution and expansion of responsibility for EA to local authorities.

First, there is concern that the local authorities will not have adequate resources, both in terms of money and appropriately qualified staff, to implement successfully the EA provisions. If current employees lack the necessary knowledge will the councils realise that more expertise is required? Will the councils have enough money to provide training or hire new personnel? Will there be enough

qualified people available in New Zealand? In particular, this will be a problem for small, poorly resourced councils faced with a large, potentially environmentally significant undertaking and for any councils facing numerous proposals.

Second, there is concern that the local authorities might not have the political will to develop and enforce adequate environmental assessment standards. Local authorities, in trying to provide comparative advantage or avoid imposing comparative disadvantage on potential developers, may tend to decrease the quality and stringency of environmental assessment procedures. If one area decreases or sets very low standards for EA requirements, other areas are likely to follow as they compete for development projects. This could lead to widespread regulatory laxity.¹⁹

Third, even if local authorities are not lax in their EA requirements there is potential for significant regional disparity in methods and approaches to EA. Major differences in EA processes by jurisdiction may cause confusion and uncertainty for both proponents and the public.

Fourth, there is no requirement for an independent audit of the environmental assessments received by local authorities. Councils can commission a review of the information but the Bill does not set up a specific body to provide independent audits to the local authorities.²⁰

These problems may be overcome through the provision of financial and training resources, guidelines, standards, and advice to the local authorities by central government. Schedule 3A of the revised Bill provides some guidance regarding matters to be considered and included in environmental assessments but

¹⁹ Rowland and Marz (1982) discuss the concept of regulatory laxity in relation to the devolution of toxic substance regulation from the federal to state governments in the United States. They note that the power and concentration of the regulated group can also influence the laxity of the regulation. In New Zealand, business interests often have significant influence over local authorities (see Buhrs 1987:29).

²⁰ According to Kennedy (1988), EA processes work best when instituted in a "formal-explicit" manner. This approach is one in which: the EA process based in law; specific environmental impact documentation is required; and authorities are accountable for considering environmental assessments. Environmental assessment under the RM Bill is likely to be constrained by its informal-implicit approach.

does not indicate what scale of EA would be appropriate for different projects. National guidelines could be provided by the Ministry for the Environment on topics such as the purpose, process, methods and requirements for preparing an environmental assessment and how to judge the adequacy of environmental assessments and documentation. This guidance could be in the form of national regulation and could be recommended by the Hazards Control Commission.

The Ministry for the Environment is obliged to monitor the effect and implementation of the Resource Management Bill and the local authorities are required to monitor the effectiveness of their policies and plans and compliance with resource consent conditions. Given the discretion inherent in the EA provisions of the Bill it is essential that these monitoring provisions be used.

The Bill also has implementation issues related to its public participation provisions. Since there is no requirement for the public to be involved in project specific EAs until after the consent application has been filed there is little chance for early dispute resolution or issue identification. In this respect, the process will be reactive to public concerns instead of incorporating them into the project design and the preparation of the environmental information. Although some provision for negotiation and mediation are provided for in the Bill it appears that the relatively adversarial format of the Planning Tribunal will be used most commonly instead of the more co-operative methods.

A requirement for proponents to provide a formal notice of intent to submit a consent application could alleviate some of these concerns. This would provide an early warning to local authorities and allow for early public involvement in scoping and issue identification.²¹

The new Bill may pose problems for environmental groups that are currently oriented toward lobbying government ministers at the central level. These groups will have to shift their focus to the regions and this may strain their limited resources. As well, the regional fragmentation of the reporting process may make

²¹ Such a requirement has been suggested by several commentators including Morgan (1990) and the Parliamentary Commissioner for the Environment (1990).

it very difficult for interested parties, who live outside the region, to find out about proposals. These factors may pose restrictions on the opportunities for public involvement.

One way of improving the public participation in environmental assessment under the Bill would be to include a schedule of environmental impact assessment principles as suggested by the Parliamentary Commissioner for the Environment in her submission to the Select Committee on the Resource Management Bill (PCE 1990:8). The procedural principles would include,

- a) early notification of proposal;
- b) early identification of affected parties;
- c) early consultation between proponent, consent authorities and affected parties on appropriate procedures, including the decision on issues to be addressed (scoping) in the environmental impact assessment;
- d) procedure for public comment on environmental assessment;
- e) criteria for deciding whether independent review is required;
- f) public availability of environmental assessment documentation;
- g) proponent response to public input and to any review as part of the consent application (PCE 1990:8).

Another option would be to have early public participation included as a requirement of the Bill. The proponent could be required to include, with the resource consent application, a summary of all consultation undertaken prior to the application and to show how the concerns of the public influenced the proposal.

The tiered cascade approach to the assessment of policies, plans and projects advocated by the Bill is constrained by the lack of environmental assessment for policies made at the national level. These policies often have far reaching implications so their assessment is very important.²² This shortcoming could be rectified by revising the Bill to require statements of government policy to include an examination of the potential environmental effects of the policy options.

In summary, the Resource Management Bill has the potential to improve significantly the policy and practice of environmental assessment in New Zealand.

²² The World Commission on Environment and Development (1987:314) recommends taking environmental policy to the policy sources by requiring major economic and sectoral government agencies to ensure that their policies and programs are ecologically sustainable. The Resource Management Bill makes no progress in this direction.

Whether that potential is realised will depend to a great extent on the commitment of central and local authorities in their implementation of the new legislation and on the public's and environmental groups' ability to participate and monitor the actions of the authorities. Some changes to the Bill prior to its enactment could improve its chances of ensuring successful environmental assessment.

CHAPTER 6: SUMMARY AND CONCLUSIONS

Environmental assessment is a policy tool that has great potential to protect the environment from the potentially harmful effects of human activities that arise from policies, plans and projects. The protection or enhancement of environmental integrity can be considered the overall aim of environmental assessment processes. The various models presented in Chapter 3 focus on different outcomes that result from the adoption of EA processes. Some outcomes may be more helpful than others in achieving the goal of protecting environmental integrity. The models are useful since they encourage people to look more broadly at the effects of EA processes. The production, dissemination and use of information regarding potential environmental effects is considered the major outcome of the EA process under the rational information model. The other models highlight some of the political and perhaps longer term or delayed outcomes of instituting environmental assessment processes. The external reform model focuses on the changes that occur outside of organisations as a result of the EA process. These include outcomes such as changes to the opportunities and requirements for public participation, government input and judicial involvement. In contrast, the internal reform model emphasises the modifications that occur within agencies, both public and private, as a result of EA process requirements. For example, these alterations could include new personnel, different attitudes, and changes to internal procedures and decision making. These internal and external reforms resulting from the EA process influence the eventual environmental impacts of proposals just as much as, or more than, the provision of supposedly neutral information. However, there is also the risk that environmental assessment processes could be only token and not result in substantial modification of standard procedures or improved environmental quality. The symbolic action model focuses on that possibility.

The comprehensive model of environmental assessment processes is more likely to have a positive impact on decision making regarding the design and implementation of proposals, and hence the quality of the environment, since it acknowledges the many interacting factors that influence what gets done, by whom,

where and how. Outcomes that feature as part of the comprehensive model include not only the timely provision of appropriate information but also reform of operations both within and outside of organisations. These changes include early and genuine public participation especially for scoping and issue identification; broad definition of the environment to include not only biophysical but also social and cultural aspects; evaluation of environmental impacts of alternatives to the proposal and alternative methods of carrying out the proposal from the earliest possible stages; and monitoring and feedback regarding predictions and compliance. These reforms can help instil ecological rationality in governments and private proponents.

In New Zealand, the environmental assessment process was introduced as a method for providing information on environmental impacts to decision makers (see Chapter 4). Very few internal and external reform provisions were included in the 1973 Environmental Protection and Enhancement Procedures (EP&EP). Many within Government strongly resisted changing their operational methods to accommodate the Procedures. The successive modifications of the EP&EP reflected this resistance and strong desires by some within government to render the EP&EP totally symbolic with no influence on the design, decision making and implementation of proposals. In spite of those blocking efforts, the Commission for the Environment (and its successor the Ministry for the Environment) through the EP&EP have improved environmental outcomes. Many government departments have been internally reformed and now automatically incorporate environmental implications in their planning and decision making. As well, the Procedures have provided for a certain degree of public participation.

The Resource Management Bill has the potential to alter fundamentally the management of New Zealand's natural resources as well as changing completely the policy and practice of environmental assessment (see Chapter 5). The Bill's provisions for environmental assessment go some way toward the comprehensive model presented in Chapter 3. Requirements for information on environmental implications of private proposals, the mandatory environmental assessment and

public review of the policies and plans of local authorities, and the acknowledgement of the importance of values all represent potential improvements to the existing situation.

The actual effects of implementing the Resource Management Bill are difficult to predict at this time. However, some changes that would facilitate the realisation of the EA provisions of the Bill can be identified. The Bill devolves most of the responsibility for environmental assessment to local authorities who may be lacking the necessary resources. Central government should provide financial and training resources to local authorities where necessary.

Regional disparities and decreasing stringency of environmental assessment standards are other potential implementation concerns. To avoid these problems, central government should provide guidance in the form of either a Schedule to the Resource Management Bill, regulations under the Bill, or a national policy, guideline or standard. Issues to be covered include EA processes and procedures; appropriate scope for proposals of different magnitudes; methods for performing and documenting environmental assessments; and methods for evaluating the adequacy of environmental assessments.

Public participation in environmental assessment is another issue that will influence the implementation of the Resource Management Bill. The Bill's current lack of requirements for early public involvement could be overcome in three ways. First, the Bill could be revised to require proponents to submit a formal notice of intent as soon as they know they will be making a resource consent application. Second, the principles of environmental assessment, especially those relating to public participation, could be included as a Schedule to the Bill. A third option would be to have early public participation included as a requirement of the Bill.

The Resource Management Bill has the potential to improve significantly the policy and practice of environmental assessment in New Zealand. Whether these improvements occur or not will depend a great deal on the attitudes of the people involved in the implementation of the new legislation.

Environmental assessment is a generally accepted policy tool in New Zealand and many other countries around the world and is continually being introduced into new jurisdictions. The importance of environmental assessment as a method for protecting the environment has increased over the past twenty years as the immense destructive capability of humans has become recognised. The acceptance of environmental assessment as much more than an information provision mechanism is important if environmentally acceptable, and ecologically rational, decisions are to be made. The long term goal of environmental assessment will be realised when all people and organisations automatically consider the environmental implications of their decisions.

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REFERENCES CITED

- Bartlett, R. 1986a.
Ecological Rationality: Reason and Environmental Policy. Environmental Ethics 8:221-239.
- Bartlett, R. 1986b.
Rationality and the Logic of the National Environmental Policy Act. The Environment Professional 8:105-111.
- Bartlett, R. 1990.
Ecological Reason in Administration: Environmental Impact Assessment and Administrative Theory. pp. 81-96 in Paehlike, R. and Torgerson D. (eds.), Managing Leviathan: Environmental Politics and the Administrative State. London: Belhaven Press.
- Bisset, R. 1983.
Introduction to Methods for EIA. pp. 131-147 in PADC EIA and Planning Unit (ed.), Environmental Impact Assessment. The Hague: Martinus Nijhoff Publishers.
- Buhrs, T. 1987.
Environmental Policy Development: The Case of New Zealand. Paper presented to the APSA Conference, University of Auckland.
- Buhrs, T. 1990.
Phd Thesis on Environmental Policy in New Zealand, in progress. Auckland: Department of Political Science, University of Auckland.
- Bush, G. 1990.
The Historic Reorganisation of Local Government. pp. 232-250 in Holland, M. and Boston, J. (eds.) The Fourth Labour Government, Second edition. Auckland: Oxford University Press.
- Caldwell, L. 1988.
Environmental Impact Analysis (EIA): Origins, Evolution and Future Directions. Policy Studies Review 8 (1):75-83.
- Caldwell, L. 1989.
Understanding Impact Analysis: Technical Process, Administrative Reform, Policy Principle. pp. 7-16 in Bartlett, R. (ed.), Policy Through Impact Assessment. New York: Greenwood Press.
- Campbell, D. and Ross, H. 1968.
The Connecticut Crackdown on Speeding: Time-Series Data in Quasi-Experimental Analysis. Law in Society Review 3 (1):33-53.
- Clark, B. 1983.
Aims and Objectives of EIA. pp. 3-11 in PADC EIA and Planning Unit (ed.), Environmental Impact Assessment. The Hague: Martinus Nijhoff Publishers.
- Clark, M. and Herington, J. 1988.
Introduction: Environmental Issues, Planning and the Political Process. pp. 1-16 in Clark, M. and Herington, J. (eds.) The Role of Environmental Impact Assessment in the Planning Process. London: Mansell Publishing Limited.
- Commission for the Environment 1973.
Environmental Protection and Enhancement Procedures. Wellington: Commission for the Environment.

- Commission for the Environment 1978.
Environmental Protection and Enhancement Operations. Wellington: Commission for the Environment.
- Commission for the Environment 1979.
Environmental Evaluation: A Note for Ministers. Wellington: Commission for the Environment.
- Commission for the Environment 1981.
Environmental Protection and Enhancement Procedures, Revised edition. Wellington: Commission for the Environment.
- Culhane, P., Friesema, H. and Beecher, J. 1987.
Forecasts and Environmental Decision Making. Boulder, Colorado: Westview Press.
- Deutscher, I. 1977.
Toward Avoiding the Goal Trap in Evaluation Research. pp. 221-238 in Caro, F. (ed.), Readings in Evaluation Research. New York: Russel Sage Foundation.
- Diesing, P. 1962.
Reason in Society: Five Types of Decisions and Their Social Conditions. Urbana: University of Illinois Press.
- Dreyfus, D. and Ingram, H. 1976.
The National Environmental Policy Act: A View of Intent and Practice. Natural Resources Journal 16:243-262.
- Dryzek, J. 1987.
Rational Ecology: The Political Economy of Environmental Choice. Oxford: Basil Blackwell Ltd.
- Edelman, M. 1971.
Politics as Symbolic Action: Mass Arousal and Quiescence. Chicago: Markham Publishing Company.
- Edelman, M. 1987.
Constructing the Political Spectacle. Chicago: University of Chicago Press.
- Federal Environmental Assessment Review Office (FEARO) 1987.
The Federal Environmental Assessment and Review Process. Ottawa: Minister of Supply and Services Canada.
- Flynn, N. 1986.
Performance Measurement in Public Sector Services. Policy and Politics 14 (3):339-404.
- Formby, J. 1987.
The Australian Government's Experience with Environmental Impact Assessment. CRES Working Paper 1987/9. Canberra: Centre for Resource and Environmental Studies, Australia National University.
- Friesema, H. 1978.
Environmental Impact Statements and Long Range Environmental Management. pp. 55-61 in Jain, R. and Hutchings, B. (eds.) Environmental Impact Analysis: Emerging Issues in Planning. Urbana: University of Illinois Press.

- Friesema, H. and Culhane, P. 1976.
Social Impacts, Politics and the Environmental Impact Statement Process. Natural Resources Journal 8:339-356.
- Gibson, R. 1990.
Basic requirements for environmental assessment processes: a framework for evaluating existing and proposed legislation. Unpublished manuscript from the Department of Environment and Resource Studies, University of Waterloo, Canada.
- Gilbert, J. 1986.
Environmental Assessment in New Zealand. Northwest Environmental Journal 2 (2):87-105.
- Gow, L. 1990.
Impact Assessment and Resource Management Law Reform. Paper presented to IAIA Seminar Science, Assessment and Sustainability, Vancouver, BC.
- Gregory, B. 1987.
The Reorganisation of the Public Sector. pp. 111-133 in Boston, J. and Holland, M. (eds.), The Fourth Labour Government. Auckland: Oxford University Press.
- Gresham, P. 1983.
Some Reflections on the Origins, Evolution and Future of the Commission for the Environment. Unpublished manuscript from the Commission for the Environment, Wellington.
- Gresham, P. 1987.
Establishing the Policy Framework for Economic Development and Environmental Management. Paper presented to IAIA Conference, Barbados.
- Ham, C. and Hill, M. 1984.
The Policy Process in the Modern Capitalist State. England: Wheatsheaf Books.
- Hannan, J. 1980.
The National Development Act 1979. New Zealand Universities Law Review 9:200-208.
- Hutchison, A. 1990.
Regional Manager, Ministry for the Environment, Christchurch. Interview 24 August.
- Jain, R., Urban, L. and Stacey, G. 1981.
Environmental Impact Analysis: a New Dimension in Decision Making. New York: Van Nostran Reinhold Company.
- Kellow, A. 1983.
Pollution Control in New Zealand: Making Policies and Prescribing Placebos. Public Sector IV (2):1-76.
- Kennedy, W. 1988.
Environmental Impact Assessment in North America, Western Europe, What Has Worked Where, How and Why. International Environment Reporter 4:257-262.
- Lindblom, C. 1959.
The Science of Muddling Through. Public Administration Review 19:79-88.

- McMahon, C. (ed.) 1972.
Physical Environment Conference 1970: Reports, Papers and Proceedings.
 Wellington: Government Printer.
- Mills, S. 1979.
 Environmental Impact Reporting in New Zealand: A Study of Government Policy in a Period of Transition. New Zealand Law Journal pp. 472-484 (Part I); 494-501 (Part II); 515-524 (Part III).
- Ministry for the Environment 1986.
Environmental Impact Assessment Procedures, A Discussion Paper. Wellington: Ministry for the Environment.
- Ministry for the Environment 1987a.
Environmental Protection and Enhancement Procedures. Revised edition. Wellington: Ministry for the Environment.
- Ministry for the Environment 1987b.
Proposed Policy on Environmental Assessment Procedures. Wellington: Ministry for the Environment.
- Ministry for the Environment 1988.
Draft Guide for Scoping and Public Review Methods in Environmental Impact Assessment. Wellington: Ministry for the Environment.
- Morgan, R. 1983.
 The Evolution of Environmental Impact Assessment in New Zealand. Journal of Environmental Management 16:139-152.
- Morgan, R. 1990.
 Environmental Assessment and the Resource Management Bill. Paper presented to The Changing Role of Government in Resource Management Planning Conference, University of Otago, Dunedin.
- New Zealand House of Representatives 1990.
Report of the Committee on the Resource Management Bill. Wellington: Government Printers.
- O'Riordan, T. and Sewell, W. 1981.
Project Appraisal and Policy Review. Chichester: John Wiley and Sons Ltd.
- Parliamentary Commissioner for the Environment (PCE) 1990.
 Advice from the Parliamentary Commissioner for the Environment to the Select Committee on the Resource Management Bill. Wellington: PCE.
- Rowland, C. and Marz, R. 1982.
 Gresham's Law: The Regulatory Analogy. Policy Studies Review, 1 (3), 572-580.
- Rudd, C. 1990.
 Politics and Markets: The Role of the State in the New Zealand Economy. pp. 83-100 in Holland, M. and Boston, J. (eds.) The Fourth Labour Government, Second edition. Auckland: Oxford University Press.
- Simon, H. 1957.
Administrative Behaviour, Second Edition. New York: The MacMillan Company.
- Speden, I., Robertson, J., Warren, K., and Wilkinson, P. 1983.
Environmental Audits and Appraisals 1976-81. Wellington: Commission for the Environment.

- Storey, R. 1990.
Speech to the Maruia Society, Auckland, 3 Sept.
- Taylor, S. 1984.
Making Bureaucracies Think, The Environmental Impact Statement Strategy of Administrative Reform. Stanford: Stanford University Press.
- Wathern, P. 1988.
An Introductory Guide to EIA. pp.3-30 in Wathern, P. (ed.) Environmental Impact Assessment: Theory and Practice. London: Unwin Hyman.
- Wandesforde-Smith, G. 1989.
Environmental Impact Assessment, Entrepreneurship, and Policy Change. pp. 155-166 in Bartlett, R. (ed.) Policy Through Impact Assessment: Institutionalized Analysis as a Policy Strategy. Westport: Greenwood Press.
- Weinburg, A. 1972.
Science and Trans-Science. Minerva 10 (3):209-222.
- Wells, C. and Fookes, T. 1988.
Impact Assessment in Resource Management. Working Paper No. 20 for RMLR. Wellington: Ministry for the Environment.
- World Commission on Environment and Development 1987.
Our Common Future. Oxford: Oxford University Press.
- Williams, M. 1990.
The Political Economy of Privatisation. pp. 140-164 in Holland, M. and Boston, J. (eds.) The Fourth Labour Government, Second edition. Auckland: Oxford University Press.