CHAPTER ONE

State of the Environment Reporting: Basic Questions and a Framework for Assessment

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1. Introduction

With the publication of *The State of New Zealand's Environment 1997* (MfE 1997a), New Zealand has joined the ranks of a number of countries, such as the Netherlands, Canada, Australia and other OECD countries that have produced state of the environment reports.

What is the significance of these environmental reports? What purpose(s) do they serve? How should they be judged? Many of the issues surrounding environmental reporting can be related to some simple but fundamental questions, such as: *Why* does environmental reporting take place? *What purpose(s)* does it serve, can it serve, or should it serve? *Who* reports *to whom*? *How* should reporting be done, what form(s) can or should it take? And *how often* should reporting occur?

How all these questions are answered has a bearing on the more fundamental question: How meaningful are state of the environment reports? Ultimately, this is a question of assessment and evaluation. But *how should environmental reports be assessed?* What criteria should be used when evaluating a particular environmental report to identify its strengths, weaknesses, and scope for improvement? As our purpose is to assess the New Zealand report *critically and constructively*, we must have some yardsticks to go by. These will be formulated in the form of questions at the end of this chapter.

It is important to stress that what we have set out to do here is more than write a book review. Although the New Zealand environmental report has the form of a book, it is the outcome of, and part of, a *process* of *environmental reporting*. The questions raised above refer foremost to that process, and by implication much of the assessment of the report is based on what we see as the qualities of the report in the broader context in which it has been produced and received. As much of that process is not made apparent in the report itself, our analysis and assessment necessarily goes beyond an assessment of what has been written in the report. Sometimes, it is more important to discuss what has *not* been written, or to note *by whom* and *how* something has been written instead of focusing on the text itself. Also, as will be elaborated upon later in this chapter, there are many different forms environmental reporting can take other than a 650 page book published every four or five years.

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First, we will discuss the question regarding the reasons for environmental reporting in association with the question *to whom* it should be reported. Second, the questions *what* should be reported, and *how* reporting is or can be done will be discussed. Third, *who* reports (or should report), and issues regarding the form and frequency of environmental reporting are raised together. Finally, the grounds on which we will use to assess New Zealand's first environmental report are presented.

2. Why does environmental reporting take place? For what purpose(s) and for whom is it done?

When addressing the question: why does environmental reporting take place? a distinction must be drawn between immediate goals or objectives, and underlying reasons. The immediate goals or objectives of environmental reporting are often to assess the "health" of the environment, and of the trends therein, so that problems can be uncovered and addressed, and the effectiveness of measures to mitigate or eliminate such problems can be determined. The underlying reasons for environmental reporting relate to when and where the idea of environmental reporting comes from, who promotes it, and why.

The immediate reasons for environmental reporting are so plausible that there seems hardly any need to discuss or analyse, let alone question them. Most people would agree that it is desirable to identify environmental problems early on, preferably before they arise, and that better information is likely to lead to sounder and more effective decision making. Although in many countries environmental data have been gathered for some length of time, these efforts often have not been comprehensive nor coordinated. The systematic compilation of environmental statistics is a much more recent phenomenon and the same is true of environmental reporting based on such information.

Private organisations, such as the World Resources Institute and the World Watch Institute have been involved in environmental reporting since the 1980s. The scope of their reporting has been wide, covering a broad range of environmental developments in many countries, or even globally. The main reason for these activities, as for the environmental monitoring efforts of many other non-governmental organisations (NGOs) is to assess whether the problems that have given rise to environmental concern during the last three decades, are diminishing or not. Reporting *to the public* on these developments, which in many cases do not give much reason for complacency or optimism, is an inherent part of the role these groups play in raising the level of public awareness and concern regarding the state of the environment (World Resources Institute; World Watch Institute: *State of the World* and *Vital Signs*, annual publications).

International organisations have also been involved in the collection of environmental information and environmental reporting since the 1980s. Within the United Nations, a framework for environmental reporting and the compilation of environmental statistics was developed in 1984 (Ministry for the Environment & Department of Statistics, 1991:78-80). But the most active and important international organisation in this area has been the OECD, which pioneered the

development of environmental indicators since the 1970s (OECD 1978), and still plays a major role in this area today (OECD 1991b; 1994).

The reasons for the involvement of these international organisations in environmental reporting are open to interpretation. Officially, the rationale put forward for these activities is to assist countries with improving their environmental policy performance, and in particular with the integration of environmental concerns into sectoral policies (OECD 1991b:8). To be able to assess countries' environmental policy performance in a consistent and systematic way requires the development of similar or common indicators and the availability of comparable environmental data and information. Underlying these activities, however, may be other reasons that have much to do with a concern about the uncertainties created by the implications of environmental problems, and the unpredictability, inconsistency and possible incompatibility of environmental policy developments within and between countries for transnational trade and investments, and the overriding priority ("imperative") of economic growth. The development of an internationally agreed system of environmental reporting (based on a commonly agreed core set of environmental indicators) may be an important element in the process of the international "standardisation" or "harmonisation" of environmental policy, in particular among important trading partners.

Environmental reporting by these organisations may therefore be directed primarily at governments and the international business sector. At government levels it aims to assist them in identifying areas and ways in which their environmental performance can be improved; and at the business sector to provide information about present and possibly future environmental (policy) developments that may affect trade and investments. This orientation may explain the emphasis on the linkages (and need for integration) between environmental and economic decision making in the OECD's activities and reports (OECD 1991b, 8-10). However, one of the proclaimed aims of the OECD's programme of environmental performance reviews is also to enhance the accountability of governments to their citizens for their environmental performance, which suggests that their reports are also directed at the wider public (OECD 1996, 3). To what extent these aims co-exist and are achieved is a question that cannot be answered at this stage and requires further research.

Another reason for the rise of environmental reporting is related to the big increase of international agreements regarding environmental issues. Often, countries are obliged to report on their implementation efforts under such agreements, for instance to the Commission for Sustainable Development regarding the implementation *Agenda 21*. The first Australian SER lists more than a dozen international agreements to which Australia is a party and under which it has reporting commitments (State of the Environment Advisory Council 1996, 1.11). New Zealand, being a party to most of these agreements, shares many of these commitments (OECD 1996, 192-197).

A reason often advanced for the emergence of environmental reporting is that the public is demanding greater accountability from their government regarding their environmental performance, associated with the rise in environmental concerns in general (OECD 1991a, 8; Hammond et al 1995, 50). However, this is likely to have been a less important driving force behind the move towards environmental reporting

than the international factors mentioned. Public demand in the environmental area tends to focus on specific problems or issues. There has never been (in New Zealand or elsewhere) a strong public demand for comprehensive or systematic environmental monitoring or reporting.

Nor is it in a government's political interest to promote the systematic monitoring and evaluation of its policies. It is not surprising that the focus of government attention is on the agenda setting and decision making stages of the policy process (where it can be *seen* to be addressing problems and claim credit for doing so), and much less on the implementation and evaluation of policies. Inevitably, focusing on the latter reveals shortcomings that can be exploited by a government's opposition to declare its ineffectiveness and condemn its performance. The monitoring and evaluation of policy performance is politically sensitive and risky, and therefore often rather avoided, or if it occurs, carefully managed.

In New Zealand, the first investigations into the establishment of a state of the environment reporting system and the development of environmental indicators was undertaken during the early 1990s (Ministry for the Environment & Department of Statistics 1990, 1991; Ward 1990, 1992; Ward and Beanland 1992). However, work on the project stagnated and received no priority until the Organisation for Economic Cooperation and Development (OECD) identified the lack of environmental information, and the absence of an integrated system of monitoring and reporting as major weaknesses in New Zealand's environmental policy performance (OECD 1996, 112;175).

Environmental reporting is about assessing the state or health of the environment, the identification of trends therein, and about improving the information basis for decisions. However, it is also about providing a basis for assessing the effectiveness of environmental policies and a government's environmental performance. How that performance is judged depends as much on interpretation based on values and ideology as on information and scientific analysis (which, on its own, cannot resolve what is meaningful or should be done). Environmental reporting, it can therefore be argued, should not be directed only or primarily at governments, scientists, or any group in particular, but at all citizens. Ultimately, the significance of environmental reporting, and its role in the policy process, is determined in the political arena.

3. What should be reported? How should reporting be done?

Again, the immediate answer to the question "what should be reported" seems straightforward: "the state of the environment". But, "what is the environment?" Although the view that "the environment" is synonymous with the bio-physical environment can still be found, it is nowadays more common for people to be included in the definition of the term "environment". Humans, in their interactions with, and dependence on, their surroundings, are now commonly seen as an integral part of the environment. The Brundtland Report, which put people at the heart of the environmental problematique, contributed strongly to the dissemination of this view (World Commission on Environment and Development 1987).

Even though the environment is an indivisible and complex whole, for analytical purposes it is often divided into ecological, social, and economic areas or dimensions. As humans cannot comprehend or analyse "everything", such an approach is necessary: humans need systems of classification to understand the environment. As long as it is realised that such interpretative schemes are simplifications, they can be helpful in guiding human action. But to diminish the chances of unpleasant surprises associated with human activities, it is important that actions are based as much as possible on knowledge regarding the multiple connections and interactions between the different categories in which "the environment" has been compartmentalised. Integrated approaches to environmental management are feasible and necessary to prevent environmental problems from simply being displaced or aggravated. Increasingly, this is being recognised by policy analysts and practitioners, although there is still much scope for strengthening the theory and practice of integrated environmental management (Bartlett 1990; Born and Sonzogni 1995; Bührs 1995), including the reporting thereof.

One important means towards improving integrated environmental management is to monitor and analyse the environment in a way, and to an extent, that our understanding of human *interactions* within the environment can be enhanced. Collecting data only on (changes in) the bio-physical dimension of the environment will do little to improve understanding of where these changes come from. Although such changes are often labelled as problems (such as fish stock depletion or the greenhouse effect), it is more appropriate to put such labels on the human activities that are fully or partially responsible for such effects. If environmental data collection and monitoring is to contribute to the prevention, mitigation, or resolution of such problems, it is vital that information is analysed in the context of, and on the basis of information on, the human (social and economic) dimension of the environment.

That environmental reporting, to be policy relevant, should be based on the monitoring of *effects* (environmental changes) **and** *causes* of changes is now commonly recognised. This view also underlies the "Pressure-State-Response" (PSR) framework which has been adopted by the OECD, and which may become the basis for environmental reporting practices in many countries, including Australia and New Zealand, albeit with local adaptations (Hammond et al 1995, 5; OECD 1994, 9-11; State of the Environment Advisory Council 1996, 1-6; Ministry for the Environment 1997a, 1.6).

The PSR framework usually takes the form of a matrix in which environmental issues are listed in the rows, and pressures (causes), state (conditions), and responses (measures from government and non-government actors) are described in the columns. The framework can be based on different spatial scales, such as ecozones or jurisdictional or administrative boundaries. This flexibility is perhaps one of the principal advantages. Another of its strengths is the consistency with which pressures, conditions, and responses are described for all problems identified, which enables overlap between issues with regard to their causes and responses to be identified (Hammond et al 1995, 14; OECD 1994, 12;14-15).

Apart from the PSR framework, various other frameworks have been developed to serve as a basis for environmental reporting, including the more

traditional media-based (air, water, land) framework, an issues framework, a resource sector framework, and combined approaches (Ministry for the Environment & Department of Statistics 1990, 41; 1991, 83). None of these, however, seems to have attracted as big a following as the PSR framework, although it can be argued that various elements have found their way into that framework. Despite its limitations, it appears that the PSR framework is developing into some form of international standard for environmental reporting.

Despite the fact that there is consensus on the importance of monitoring all three (bio-physical, social and economic) dimensions of the environment, there is much less agreement on *how* these developments can or should be monitored and measured. Usually, indicators or indices are used to depict developments in the bio-physical and social dimensions of the environment. Indicators simplify, and usually quantify, aspects of the environment, and are able to demonstrate trends. Sometimes relatively few but highly aggregated *indices* (combined sets of indicators) are used, whereas in other cases preference is given to broader sets of separate and more specific indicators. For scientists and policy makers, a larger number of indicators is likely to be useful, but for the purpose of raising public awareness about the state of the environment, the use of only a single indicator such as an "ecological footprint" may be very useful (Adriaanse 1993, Hammond et al 1995, 2; Ministry for the Environment & Department of Statistics 1991, 36; Wackernagel and Rees 1996).

A range of indicators has been developed, although these are perceived to be rather crude and unsatisfactory. For instance, the area or proportion of land that has been "set aside" for conservation, and the number of endangered species, indicators used by the OECD, are a poor measure of the health or integrity of ecosystems.

Equally complex is the development of indicators for the social dimension of the environment. The OECD has been a pioneer in this area with the development of social and urban environmental quality indicators in the 1970s (OECD 1978). The "Human Development Index" (UNDP 1997) devised by the United Nations Development Programme has been a major step in recognising that development must lead to an improvement in human well-being in order to be worthwhile.

With regard to the monitoring of developments in the economic (resource) dimension of the environment, there is possibly even less agreement and common practice. One means by which such developments are monitored is natural resource accounting. One system, based on input-output matrices, also tracks the interaction between resource developments and changes in economic practices that are responsible for these changes (Ministry for the Environment and Department of Statistics 1991, 14-15;18). However, the linkage between resource accounting and macro-economic models and analysis remains problematic (Ibid, 77-78). This is also the case in other approaches, such as those that try to monitor and measure environmentally significant economic developments by developing integrated sets of accounts based on the monetarisation of environmental values (interpreted as services). It seems that international agreement on how economic accounting and reporting should be changed to incorporate environmental considerations is still a long way off (Bartelmus 1995, Hammond et al 1995, 5-6; 23-26; Milon 1995).

More recently, calls have been made for the development of "sustainability" or sustainable development indicators, integrating all three dimensions of the environment, as this concept has become a touchstone for environmental policy world-wide. The development of sustainable development indicators proves to be at least as complex as the work on specific indicators, and is further complicated by the numerous interpretations of the concept of sustainability.

As a result of the many issues and approaches associated with the questions *what should be reported* and *how* it should be reported, environmental reporting in many countries does not yet use a coherent set of indicators. The first state of the environment reports of both Australia and New Zealand have been produced without the benefit of a set of "approved" indicators.

As indicators for measuring environmental conditions are the most complex to develop, often indicators of environmental pressures are used as a substitute, as these are more readily available (Adriaanse 1993, 12; State of the Environment Advisory Council 1996, 1.8). This also makes sense from an anticipatory policy point of view, as changes in pressure indicators are likely to foretell changes in environmental conditions. It can therefore be argued that a shift towards an emphasis on the development of better pressure indicators is not only more practical but also required if monitoring and reporting is to play a role in the prevention or deterioration of environmental problems (Azar et al 1996). This point hints at the need for taking an approach to environmental reporting that is both comprehensive and strategic. For environmental reporting to be meaningful in the policy context, it needs to encompass the monitoring of the social and economic developments ("pressures") from which many environmental problems emerge, sketch a picture of the state of the environment in all its dimensions (ecological, social, and economic), and report on the type and amount of effort directed at addressing conditions and pressures.

But as it is impossible to monitor and report on "everything", environmental reporting needs to focus on **key factors and developments** that are deemed to be the most significant (ecologically, socially, and economically) and the most promising from the point of view of policy effectiveness (the maximisation of environmental outcomes). What this means is that environmental reporting needs to be rooted in a sound theoretical framework that incorporates ecological, social, cultural, economic, and political (policy) interpretations of environmental problems and where these are coming from. Some form of "theory" underlies *all* environmental reporting practices, explicitly or implicitly. On their own, environmental reports have little meaning, and nor can it be expected that they provide an elaborate *analysis* of environmental problems. Environmental reporting is only one tool, and needs to complemented by other tools, including *analysis* and the development of a "theory of environmental performance" to possibly contribute to the achievement of environmental goals and objectives.

At the moment, theories of environmental performance are poorly developed if not virtually non-existent. In part, this reflects the comprehensiveness and complexity of the task, and the need for, and obstacles to, interdisciplinary analysis. But is also reflects the weakness of the institutional and political basis of environmental policy development. By comparison, "theories of economic

performance" are highly developed, and associated with well-established systems of monitoring and reporting, and strongly entrenched in institutional frameworks, nationally and internationally (with financial institutions, such as Reserve Banks, the World Bank and the IMF at their apex). The weakness of environmental reporting systems is a reflection of the relatively low political weight, power, and youth, of the environmental constituency *vis-a-vis* economic powers that operate within, but also underlie and shape, the dominant social paradigm.

With the adoption of comprehensive, integrated, strategic or "green" planning, many countries have made a start in the direction of strengthening their "environmental capacity". However, these initiatives are very young and many questions regarding their effectiveness, and even meaningfulness, still exist. This also applies to New Zealand's venture in this area, the *Environment 2010 Strategy*, which, although referred to as a major advance towards a more comprehensive approach to environmental policy development, and as a basis for environmental reporting, is still weak in a strategic sense, and of ambiguous significance in the broader political (and policy) context (Bührs 1996; Bührs and Bartlett 1997; Dalal-Clayton 1996; Ministry for the Environment 1997b,11-12).

4. Who should report? How often? In what form?

Who should be responsible for environmental reporting is a question closely associated with the other questions raised above, and relates to issues of objectives, costs and benefits, capacity, and credibility. It can be argued that environmental reporting is an activity undertaken to protect or enhance the public or collective (environmental) interest, nationally, or even globally. In that context, it seems plausible to assign the prime responsibility for environmental monitoring and reporting to central government agencies, even though not all information gathering may occur on that level.

But whether responsibility for environmental reporting, or its co-ordination, should rest with the principal environmental policy agency in a country (such as the Ministry for the Environment in New Zealand) is debatable. Given the involvement of such agencies in policy development, and the fact that they operate under political directives from the government of the day, they are not the most suitable agency to report in a disinterested manner on environmental policy performance. As environmental reports provide an important basis for environmental policy *evaluation*, there is a strong case for granting the responsibility for this to an agency independent from the executive power.

What form environmental reporting should take is, of course, highly dependent on the purpose(s) that it serves, and *at whom* it is directed. Whether a "fat book" is the most appropriate form to report on environmental development to the public at large is open to debate. It is also doubtful whether that is the most useful form of reporting for decision makers, scientists or environmental professionals, who might be better served with more succinct or more detailed reports on specific areas or topics.

Related to this is also the issue of the frequency with which environmental reports should be produced. If the role of environmental reports is to provide input

into the policy process (notably as a basis for policy evaluation), then there is a strong case for arguing that they should be produced annually, and become part of a government's budget cycle (as the findings of a report may have policy and financial implications). This is indeed the practice in the Netherlands, a situation that has been referred to by the Ministry for the Environment in New Zealand as "a sublime form of the use of environmental information" (Ministry for the Environment & Department of Statistics 1991, 49). For scientists and policy analysts even more frequent or continuously updated forms of environmental data provision may be desirable. Also to keep their value for educational purposes, state of the environment reports may need updating more frequently then every four or five years, particularly if the emphasis in reports lies on providing factual information that dates rather quickly.

5. Assessing State of the Environment Reports

There is no generally agreed formula for producing state of the environment reports. The many questions associated with these reports, and with the broader *process* of environmental reporting, can be, and have been, answered in a variety of ways, reflecting differences in national contexts (environmental; socio-cultural; political-ideological and economic), and deliberate choices made within these contexts. Environmental reporting practices, and their underlying rationales, vary almost from country to country, and there is, as yet, no widespread, let alone international, agreement on "how it must be done".

Increasingly, however, policy developments on the national level are tied in with international and global issues and developments. This is particularly the case with regard to economic and environmental matters, many of which require co-operation among countries to be addressed effectively, as reflected in an sharp increase in the number of international treaties and agreements since the 1970s (Worldwatch Institute 1995). As mentioned above, the demand for the development of common yardsticks by which the environmental performance of nations can be assessed, may also be inspired by a concern about the (potential) effects of differences in environment standards on trade. Anyway, the search for *core sets* of internationally agreed indicators, and for standardised forms of environmental reporting has become a significant issue on the international political agenda.

How to assess state of the environment reports is a question that cannot be answered, as yet, on the basis of sharp criteria. If the assessment depends on one's personal values, views or interests, and is very much a matter of political preference, is it useful, or even possible, to undertake an evaluation that is of interest or value to anyone other than the evaluator(s)?

The answer to this is that the (perceived) value of an evaluation exercise is very much determined by the extent to which a diversity of views, values, and interests is included in that exercise. The broader the range of perspectives represented or incorporated in the evaluation, the more likely it is that the exercise is meaningful to a wide range of people. Although it is impossible to include **all** views

or interests, this is a matter of degree. Alternatively, the issue can be formulated as one of revealing and avoiding blatant bias: in assessing the report, an important question is whether the picture sketched is deliberately or inadvertently construed to serve some view(s) or interests more than others, and the chances of uncovering that are greater the more (an) evaluator(s) is/are prepared and able to look at the report from a diversity of perspectives.

Science and scientific perspectives can make an important contribution in this respect, not because science and scientists are "value-free", but because the scientific approach provides a rigorous means of testing the strength and plausibility of arguments once their underlying assumptions have been made explicit. However, knowledge and interpretations from other knowledge systems should also be considered when it comes to evaluating the plausibility of the picture of "environmental reality" sketched in the report.

Given our interest in the cognitive as well as the normative aspects of environmental reporting, and its place in the national and international context, the following sets of questions have been formulated to evaluate New Zealand's first state of the environment report, as a whole and on a chapter-by-chapter basis:

(1) What is the picture? How complete is it? How much information is provided on environmental pressures (proximate and distal), the state ("health") of the environment, and New Zealand's responses (on the various levels of government and from other groups/people) to both the "state" and "pressures"? Are there important gaps in each category?

These questions refer to the amount, type and quality of data and information provided, regarding the ecological, social, and the resource dimensions of the issue/area at hand, the extent of the problems and trends therein, but also the underlying causes (direct and indirect) of these problems, and the level and type of actions towards addressing the problems and/or their underlying factors (such as social and economic practices and institutions). The purpose is to determine the extent to which the report provides adequate information on all elements of the PSR framework described above. In other words, how well does the report answer: What is happening in New Zealand's environment?; Why is it happening?; and, What are New Zealanders doing about it?

(2) How plausible or convincing is the picture that has been sketched? Consideration will be given to how recent the information provided is, the methods by which the information has been obtained, how data have been interpreted and whether the information is verifiable or comes from trustworthy sources.

Whether the New Zealand environment is in good or bad shape, "clean and green" or degraded, depends on interpretation and the extent to which data and information have been "selectively" managed. Judgements depend on (implicit or explicit) views as to what is important. The *sources* of information, the *processes* by which information is obtained, the *criteria* for classifying information, and the *basis* for characterising the overall picture are all important elements in this assessment.

(3) How useful is the information provided? To whom? Which purpose(s) does it (seem to) serve? More specifically, how does the information provided shed light on the Government's environmental policy performance?

These questions build upon the previous two sets of questions and look at the extent to which the report explicitly connects the information provided with the government's policies (goals and implementation), and whether and how the information can be used by other people or groups to address environmental issues. In other words, these questions assess the relevance of the report to efforts (governmental and non-governmental) towards resolving environmental issues. That there can be (and are) different points of view on how useful the information provided is, and what (political and other) purposes it might serve, are important considerations.

(4) In which way(s) could environmental reporting be improved? Consideration is given to the whole spectrum of questions discussed in this chapter, and the three previous questions for evaluation.

Taking such an approach to evaluation is highly demanding and has no well-established body of theory or practice to rely on. It can be referred to as an element of an integrated approach to environmental management (IEM: Integrated Environmental Management) that aspires to mirror the holistic (interconnected) nature of "the environment" into management thinking and practice. But the state of theory underlying this approach, and its practices, are still in an early stage of development, although growing in recognition and importance (Bührs 1995; Born & Sonzogni 1995). We do not pretend to hold the key to a promised land called Integrated Environmental Management, but the assessment in this publication is inspired by a belief that it is crucial to develop this line of thinking and practice further if environmental problems are to be dealt with more effectively, and in socially desirable ways.

An important element of the approach is the recognition that, to achieve that goal, the diversity of interpretations of "the environment" and environmental issues (including those based on a range of disciplines), and of environmental aspirations, needs to be recognised and incorporated into the policy process. As there is much talk about "public participation" and "community driven environmental management", this may seem an open door. But despite all rhetoric and legislation, there is still a long way to go before such an inclusive or integrated approach to environmental management is normal practice. In many ways, prevailing political, economic, social, and scientific thinking, institutions, and practices still make it difficult to take an integrated approach to environmental management. How environmental reporting can be improved or shaped as an element towards that approach is a question to which we will return in the last chapter of this publication.

Conclusions

State of the Environment Reporting is in its infancy in New Zealand (and in much of the world). There is much to learn in developing and improving

environmental reporting. There are some important issues/questions raised by the growing SER practice. We have therefore adopted a three stage approach in responding to New Zealand's first State of the Environment Report (MfE 1997a). Firstly, in this chapter, we have considered some of the questions associated with the whole issue of environmental reporting. Then, in chapters two to nine, contributors coming from a variety of perspectives consider the four evaluation questions posed in section five of this chapter. Finally, these critiques and their associated suggestions are considered in detail in chapter 10, within a broader and more integrated framework for environmental reporting. It is this integrated framework which Ministry for the Environment and others need to consider carefully if improved state of the environment reporting is to occur in New Zealand.

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