Sustainable Development in New Zealand:

Here Today, Where Tomorrow?

a discussion paper
prepared by
Pacific Rim Institute of Sustainable Management
and Stephen Knight
for Sustainable New Zealand

Authors
Dorothy Wilson, Director, Pacific Rim Insitute of Sustainable Management, Auckland
Catherine Syme, Director, Pacific Rim Insitute of Sustainable Management, Auckland
Stephen Knight, Environmental Consultant and Lecturer, Planning Department, University of Auckland

Maori sections
Author: Gael Ferguson, in association with Pacific Rim Insitute of Sustainable Management
Peer Reviewers: Hirini Matunga, Warahi Paki, Te Warena Taua

Cartoons
David Fletcher

Editing/Design
Jeanne M Boland, Capstone Consultants, Wellington

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Preface

The collective of New Zealanders who have convened three times under the banner 'Sustainable New Zealand' had its origins at the 'Pathways to Sustainability Local Initiatives for Cities and Towns' International Conference held in Newcastle, Australia, June 1997. On return to New Zealand after the conference a number of attendees felt that a national association was needed to promote the principles of 'Agenda 21', particularly the concept of 'sustainable development'.

The association was not formed in 1997 for several reasons. A prime one was that there was a perception that New Zealand as a nation was not ready for the paradigm shift required to enable a sustained move towards sustainable development. Now, nearly three years on, there is increasing evidence that the interest in the concept of 'sustainable development' is growing. A number of organisations with 'sustainable development' as their central focus have been formed.

An inaugural meeting of those interested in a 'Sustainable New Zealand' organisation was held on 14th February 2000 and a subsequent meeting on 10th April. At the April meeting it was resolved that, despite the growing interest in sustainable development, there was a need to draw together information on what it means, and what is actually happening internationally and locally. Therefore an overview of sustainable development was commissioned. The reviewers were asked to take a *snapshot* of what major stakeholders are doing in the area of 'sustainable development' and to use that snapshot to determine whether or not there is a role for an organisation such as the proposed 'Sustainable New Zealand', and whether other actions might be appropriate.

The primary authors of this report, Dorothy Wilson and Catherine Syme of the Pacific Rim Institute of Sustainable Management, and Stephen Knight of Auckland University, talked widely to individuals and organisations grappling with what sustainable development means to them or in their patch. They also sifted through some of the vast collection of international writings.

Their report, *Here Today, Where Tomorrow?*, was presented at the third meeting of the Sustainable New Zealand group on October 16th. The group subsequently resolved that this discussion document was of such importance that it should be reproduced for wider circulation.

This is an historic initiative. It is the first time such an overview has been prepared on the New Zealand position, and with conclusions to influence the future. Thus it is provided to stimulate thought and discussion about how New Zealand can truly embrace the wider concepts of 'sustainable development' and embed it into our social, environmental and economic futures.

The group agreed the first step would be a peer review process involving a small selection of key interests in the business/economic, local government and social sectors. Comments would also be sought on the tangata whenua references.

The creation of this discussion piece has been made possible thanks to the passion of some individuals, notably Margaret Evans, World Executive member of ICLEI, and Doug Gartner, Finance Manager of Taupo District Council. Developing the working brief for the study and getting it to this stage has been guided by a working group with Waikato and Wellington nodes; the former represented by Barry Harris, CEO, Environment Waikato, and the latter by Morgan Williams, Parliamentary Commissioner for the Environment.

Financial support for the research has been provided by the following organisations:

- Tindall Foundation
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We trust you will examine this collection of views and perspectives thoroughly. There is much wisdom emanating from the voices represented. This snapshot of facts and trends puts a spotlight on the continuing failure in New Zealand to adequately integrate social, economic and environmental matters. We can do better, we must. Some suggestions for moving forward are made by the authors. We would like feedback on these. If you feel moved to do so please write, or email or phone –

Barry Harris
Chief Executive
Environment Waikato
Box 4010
Hamilton East
Phone: 07 856 7184
Email: barry.harris@ew.govt.nz

Morgan Williams
Parliamentary Commissioner for the Environment
PO Box 10-241
Wellington
Phone: 04 471 1669
Email: morganw@pce.govt.nz

Margaret Evans
4 Findlay Street
Hamilton
Phone: 07 858 4467
Email: margaret@wave.co.nz

Doug Gartner
Finance Manager
Taupo District Council
Private Bag 2005
Taupo
Phone: 07 377 9863
Email: dgartner@taupodc.govt.nz

For the Working Group of ‘Sustainable New Zealand’.

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Executive Summary:
Sustainable New Zealand – to be or not to be?

In 1997 an influential international report noted that globally the planet's productivity continued to be eroded. It was very critical of continued government failure to act on this threat to economic and social health.

Meanwhile, another major player in global finance was working on ways to measure human welfare to provide a picture of the social effects of economic development.

These two bodies – the Organisation for Economic Co-operation and Development (OECD) and the World Bank – aren't generally seen as radical. Yet the language used was strong. As the 1997 OECD report put it, "*government policies dealing with the economy, the environment and equity are badly disconnected and often in direct conflict*".

The message was – and remains – clear. There are serious issues facing the world today. Current practices are making matters worse. The key problem worldwide is not adequately linking economic performance, the capacity of natural resources, and the well-being of communities. Put bluntly, failure to act on these linkages will likely result in a continuing worsening of the environment, and a decrease in social well-being. As well as deep concern about social and environmental damage, there is a strong message that ultimately this will increase business risk.

Sustainable Development Internationally

The enclosed report, *Here Today, Where Tomorrow*?, reviews international facts and trends (Section 4, Appendices C and D). It indicates the seriousness with which sustainable development is being viewed and acted on in a large number of countries. In some, whole new sections of universities are being created (e.g. Sweden), policies have been drawn up at a national level and implementation plans are being actively pursued (e.g. The Netherlands), and national structures such as commissions have been set up (e.g. Britain). It shows widespread support for integrated planning on ecological, economic and social issues among a wide range of governments and international organisations. It notes the key roles being played by:

- countries such as Germany, the United Kingdom, The Netherlands, Sweden and Australia (Section 4.4); and

- organisations in addition to the OECD and World Bank, including the United Nations, the World Business Council for Sustainable Development, APEC (Asia Pacific Economic Co-operation), and the International Chamber of Commerce (Section 4.2).

The report notes the extensive work internationally on such issues as broadening the way of measuring 'progress'. This includes moving away from narrowly-focused economic indicators to include social well-being and environmental progress (Appendices C and D.)

Definitions of Sustainable Development

Definitions of sustainable development worldwide tend to focus on three concepts: future generations, harmonising goals, (social, economic and environmental), and the carrying capacity of the earth. International experience shows that many people share the same concerns and goals but approach the goals in a range of different ways. Sustainable development might best be described, therefore, as a **process** (Sections 2 and 6). As Dr John Peet notes in the report, "*sustainable development is like justice: you know when you're moving towards it, but it's difficult to define*" (p4).

There is, therefore, not one definition of 'sustainable development'. It allows for a whole range of different approaches, but containing the key concepts of integrating social, environmental and economic elements, and ensuring the well-being of future generations (Section 2).

Snapshot of New Zealand

In a New Zealand context, the report:

- shows that New Zealand also continues to degrade its ecosystems and has its own social challenges;
- canvasses opinion on what people are doing about it (Section 5);
- suggests ways of building on, or underpinning, these efforts (Section 7); and
- highlights the need to incorporate the variety of opinions and actions on how to move towards sustainability (Sections 2.2, 2.3 and 2.5 and Appendix B).

The snapshot of facts and trends produced in this report demonstrates the effect of a continuing failure in New Zealand to integrate social, economic and ecological planning.

Although some health and education statistics are improving, performance on well-being issues are average or lower than other OECD countries. Particular areas of concern are the very high suicide rates, infant mortality and disparity between Maori and non-Maori (Section 3.2).

New Zealand's economic growth rates have been sluggish over the last 20 years. Investment in 'Research and Development' is low. For example, New Zealand businesses spend less than 0.3% of GDP on Research and Development compared to the OECD average of 1% (p 24). Lack of innovation and slowness to respond to the clear signals of the changing demands of the international market, for example, may well lead to a significant loss of global markets for a wide range of produce (Section 5.3).

Despite the 'clean, green' image, New Zealand's environmental record is not impressive. Energy statistics show an increasing use of energy per capita, and an increase in use of fossil fuels. We have one of the worst records of indigenous species loss in the world and, although there have been efforts to protect and reinvigorate biodiversity, the future is not encouraging. Current actions are not taking us on a path to achieving Kyoto climate change commitments (Section 3.4).

Positive Actions

Having said that, although these trends and facts demonstrate serious concerns and a need for concerted action in New Zealand, there are quite a number of positive actions being taken. This became apparent while talking to a wide range of individuals and groups throughout New Zealand for this report (Section 5.0). For example:

- Central government ministries and agencies are starting to explore the concept of sustainable development. Politically there also appears to be some interest.

- There are some exciting regional initiatives. In Christchurch, for example, an intersectoral approach sees key business, local government and NGO groups meeting and working together. In Auckland, the 'Growth Forum' has been looking at issues such as transport, growth and environmental impacts in an integrated way.

- A Business Council for Sustainable Development has been set up and members have already engaged in several leading edge projects. Several high profile leaders within the business sector are willing to champion the notion of sustainable development, and are active in encouraging business to work on different management approaches, minimising the use of resources (such as water and energy), trying out programmes such as Zero Waste, and taking a more holistic view of their operations, such as 'triple bottom line accounting'.

- A number of research institutions are actively contributing to applied research on sustainable development. Rural-based research appears to be further advanced, but not often applied. There are some good examples of urban-based research, although more is required.

- Tertiary education institutes are incorporating sustainable development into their teaching and there is some cross-disciplinary work being carried out. The extent of this is uncertain, but appears to be growing.

- Some local authorities are actively pursuing sustainable development and/or Agenda 21. Some did not use the term, but were trying to work in a more integrated way. A third group considers sustainable development to be outside their mandate. This group, in particular, will be challenged if local government review delivers a requirement to take sustainable development on board.

While positive, these are isolated, unconnected pieces of action. Unless the approach to sustainable development is fully co-ordinated, it will fall short of what is required. For example, business initiatives need community reinforcement, as sustainable development is not the common language of business.

Barriers to Sustainable Development

There remain significant barriers in New Zealand to moving towards a more enduring form of sustainable development (Section 6). The critical barriers seem to be a fundamental lack of understanding within communities of the seriousness and urgency of the issues. Positive initiatives that are taking place are often being done in isolation and information on aspects of sustainable development is scattered and inaccessible. There is a lack of co-ordination at all levels of government. Between the sectors there is a lack of leadership and a scarcity of good models of co-operation between government, business and the community. Maori express the feeling of being marginalised and disempowered. Regrettably, also, there is often a dismissiveness of the attempts of others, rather than welcoming a diversity of approach.

Where Tomorrow?

The report then describes how best to move forward (Section 7). The possibilities and a four- pronged approach is suggested for further discussion. The first element would involve political leadership. The second element would be the establishment of a small unit within government with a specific focus on sustainable development. It is also suggested that a Commission for Sustainable Development be created, either as a new entity or by expanding the role of the Parliamentary Commissioner for the Environment. Finally, a cross-sectoral organisation could be established for debate, information sharing, networking and advocacy.

SECTION 1: INTRODUCTION

Sustainable development promotes the need for improvements in ecological, social and economic health. *Here today, Where tomorrow?* provides a snapshot of New Zealand's progress towards implementing sustainable development. It includes:

- A statement on sustainable development – what is understood by the term 'sustainable development';
- Facts and trends about New Zealand – its society, economy and environment;
- A review of international experience in implementing sustainable development;
- A snapshot of the contribution to sustainable development in New Zealand by key stakeholders in all sectors – central government, business, research and education institutions, NGOs and local government;
- Identification of gaps and barriers – the factors preventing New Zealand from advancing sustainable development;
- Moving on – what is needed to progress sustainable development in New Zealand.

The report was commissioned by a multi-sectoral group with an interest in forming a national organisation that would be a vehicle for promoting sustainable development. The purpose of the report is to assist the group to decide whether such an organisation would be useful – and if so, what role it might play.

Research was conducted through literature reviews, website review, interviews with major stakeholders in each of the above sectors, and interviews with other people who were known to have particular interest and expertise in this area. A list of all organisations/people interviewed is attached as Appendix E.[1]

1 Many others who also have expertise in this area were not interviewed. The number of people interviewed had to be limited because of time constraints.

SECTION 2:
STATEMENT ON SUSTAINABLE DEVELOPMENT

2.1 Introduction

The first full development of a policy option given the term 'sustainable development' was in the report of the World Commission on Environment and Development (1987), known as *Our Common Future* or *The Brundtland Report.*

The definition of 'sustainable development' was:

> *…Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

Further detail is provided as follows:

> *It contains within it two key concepts: the concept of 'needs', in particular the essential needs of the world's poor, to which the overriding priority should be given; and the idea of limitations imposed by the state of technology and social organisation on the environment's ability to meet present and future needs.*

Five years later the United Nations Conference on Environment and Development (the Earth Summit) was held at Rio de Janeiro in 1992. At this conference there was international acknowledgement of poverty and serious environmental degradation. One outcome was a voluntary agreement undertaken by New Zealand and the majority of the 180 countries attending Rio to establish community-led sustainable development initiatives using a process called Agenda 21. This blueprint was based on the 27 Rio Principles, which covered a range of interrelated political, social, economic and ecological issues.

Section 2.2 provides a brief discussion of the Brundtland and other common definitions of sustainable development. Section 2.3 summarises the different ways in which sustainable development tends to be interpreted. Section 2.4 discusses the Wuppertal's 'prism of sustainability', which highlights the institutional component lacking in other interpretations. Finally, a Treaty of Waitangi perspective is provided in Section 2.5. Overall Section 2 shows that:

- Definitions tend to be general, partly in order to be acceptable to most people, but also because sustainable development is as much a process as a goal.

- There is little to be gained from trying to pin the concept down beyond these broad definitions, but it is necessary to understand the tensions that exist within and between these definitions.

- For New Zealand the definition of sustainable development needs to be understood and applied in the context of the Treaty of Waitangi.

For a fuller discussion of points underlying 2.2 and 2.3 see Appendix B: Statement on Sustainable Development.

2.2 Discussion of Definitions of Sustainable Development

Definitions of sustainable development tend to focus on one of the three areas in Table 1. These definitions do not necessarily conflict – in fact they may be quite compatible with one another – but tend to reflect different angles or approaches.

Table 1: Focus of Sustainable Development Definitions

Core idea reflected in the definition	Comment	Examples of related concepts
Meeting the needs of present generations without compromising the needs of the future generations to do the same	The Brundtland Report Can be thought of as an over-riding definition – if this is satisfied then other conditions of sustainability will also be met.	Incorporates intergenerational discount rates, ecological limits and intragenerational equity assessments.
Harmonising or integrating social, economic and environmental objectives	Can tend towards 'weak sustainability' [2] which assumes assets or capacity in one sector can be traded off for improvements in another.	Triple bottom line – for example businesses may produce social and environmental accounts alongside statements of environmental performance.
Living within the world's carrying capacity	Has an ecological focus. Tends to be associated with 'strong sustainability' where assets or capacity in the ecological sector cannot, beyond a certain point, be traded off.	The ecological footprint. This suggests that most countries are in 'ecological deficit', that is, they are using more resources than they can produce in order to maintain the lifestyle of their citizens. Summing these deficits results in a net global deficit.

Another point that is often emphasised in discussing what sustainable development actually means is that it is a ***process of change*** rather than a ***goal***. Sustainability or sustainable development is not a particular 'state' that we will arrive at one day. It involves a new way of doing things, a way that recognises linkages and reflects a set of values that are participatory and inclusive.

Definitions of sustainability reflecting the three core areas in the table above are all open to interpretation. Because of their generality, it is difficult to disagree with them. In the words of one of the people whose opinions were sought:

> *It's not that the concept is invalid, it's just that approaching it in this way is like asking couch potatoes if they think they should be healthy. They will always say 'yes', until it comes time to lace up the running shoes and get out onto the track. It's the same with sustainable development – of course we want it, unless it means changing anything about our current lives* (Dr Robert Guild August 2000: pers. comm.).

2 The terms 'weak' and 'strong' sustainability are not value judgements and are intended to be descriptive only.

Put another way, the term lends itself to contestability and indeterminacy – but these are also the hallmarks of possibility and choice.

Another insightful comment to come out of interviews for this project was that it is pointless to try to define sustainability or sustainable development, because it is *"an ethical construct similar to **justice**: you know when you're moving towards it but it's difficult to define"* (Dr John Peet: pers. comm.).

It is possible to say what is unsustainable (increasing income inequality, environmental degradation …) just as it is possible to say what is 'unjust'. However, it is no more possible to define 'sustainability' than to define 'justice' – except in the broadest of ways.

It is useful to consider this ethical dimension to sustainable development, alongside the idea that sustainability is a process rather than a goal. It suggests the need to open up a dialogue or discussion around sustainable development (and related ideas) so that New Zealanders can help give expression to it.

Finally, in the New Zealand context there is the added complication of the use of the terms 'sustainable management' (as in the Resource Management Act 1991) and 'sustainable development'. Through the research undertaken for this study there appear to be different ideas about how the concepts relate to each other. Most commonly, sustainable management is seen as a subset of sustainable development, with a focus on minimising 'bads' while ensuring that environmental bottom lines are protected or enhanced where necessary. The underlying premise is that people and communities will provide for their own social and economic well-being – but that they must do so in a way that ensures that the environment is safeguarded.

Sustainable development is usually taken to be a more encompassing concept that recognises the possibility of simultaneously improving social, economic and environmental outcomes.

A different view is that sustainable development has an economic focus and that it excludes environmental conservation. Some see sustainable management, with its biophysical focus, as a more all-encompassing attempt to define sustainability or sustainable development beyond the core ideas that are reflected in Table 1.

Summary

Definitions of sustainable development tend to focus on future generations, harmonising goals and carrying capacity. Rather than pinning down a watertight definition of sustainable development, it needs to be acknowledged as a process. Our understanding and interpretation will develop through this process.

2.3 Interpretations of Sustainable Development

While agreement at a broad level to a definition of sustainable development should not be hard, it must be acknowledged that there are some fundamental differences in views about what sustainable development really entails. Table 2 samples the range of different views on sustainable development; Figures A and B provide diagrammatic representations of these differences.

Table 2: A sample of the spectrum of views on sustainable development

'Weak' sustainability	**'Strong' sustainability**
'Brown' agenda – e.g. pollution	'Green' agenda – e.g. resilience of eco-systems
Environmental	Ecological
Degradation of one group of assets (environmental, social or economic) can be compensated by improvement in another	Not a balancing act but an integrating act
Interlocking circles diagram (see Figure A)	Nested egg diagram used by The Natural Step (see Figure B)
Evolutionary change	Radical change required
Starts with economics	Ecological imperatives are the starting point
Can be accommodated within the traditional economic paradigm – by internalising externalities	Challenges the whole economic paradigm within which we operate
Downplays risk and uncertainty, although consistent with the 'precautionary principle'	Highlights risk and uncertainty. Identifies the need for better modelling of systems while acknowledging that we will never fully understand how they operate
Favours 'pressure-state-response' model (which links cause and effect) for developing indicators	Argues that 'pressure-state-response' model oversimplifies complex ecological (or social) system dynamics

Figure A: A diagrammatic representation of weak sustainability

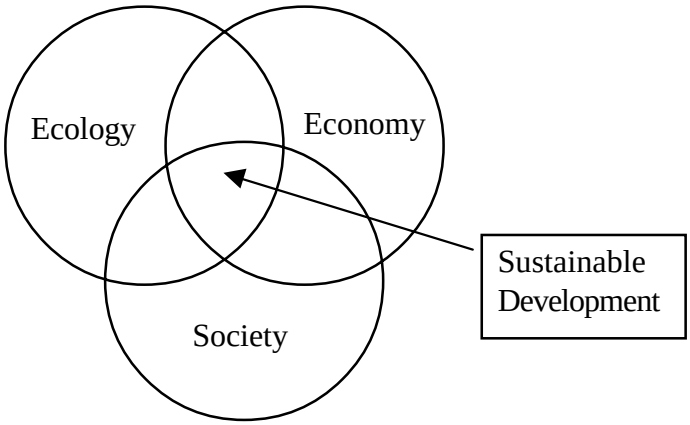
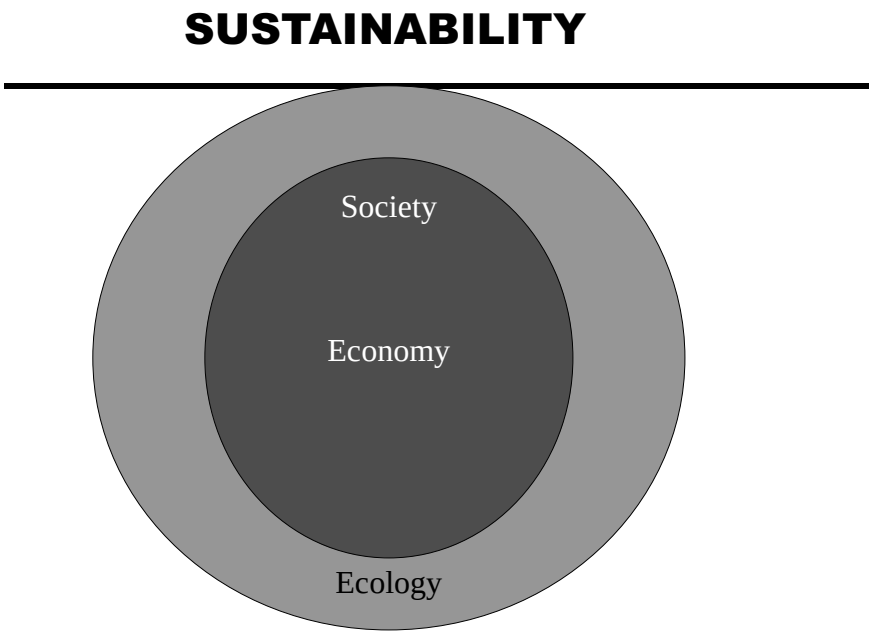


Figure B: A diagrammatic representation of strong sustainability



(Diagram supplied by Prof John Craig, The Natural Step and School of Marine and Environmental Science, University of Auckland.)

Those at the left of the spectrum tend to view sustainability as something that can be incorporated into existing institutions, processes and programmes. Those at the right end of the spectrum fundamentally challenge the status quo and call for radical reform.

Those at the left of the spectrum argue that lack of progress on sustainable development is because the tools (regulation, economic instruments etc) have yet to be used effectively. Those on the right hand argue that using such tools, within the current economic paradigm is, on its own, insufficient. On the other hand, as the tools are more evolved for the left-hand column than for the right, it is argued that such tools need to be used in the meantime even as right-hand methods evolve.

Section 6 of this report highlights one of the barriers to progress as being the lack of debate within New Zealand (outside of universities) about different views of sustainability. However, it would be naïve to believe that debate could resolve these differences. In terms of a practical approach to sustainable development the emphasis will probably always favour the left-hand side. But the right-hand side is critical – to challenge, to ensure that complacency does not take over, and to enable quantum leaps amidst the incremental progress.

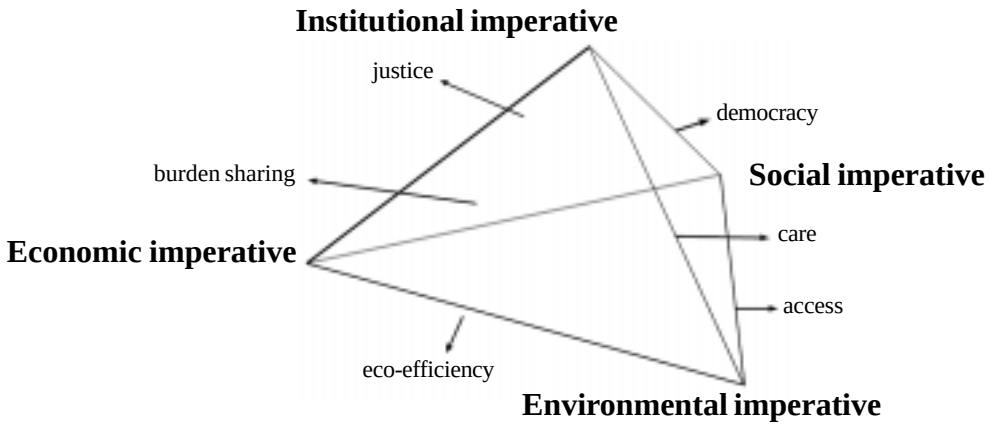
Summary

Even if a definition is agreed on, sustainable development is open to interpretation. For some, sustainable development can be achieved by tweaking current economic systems; for others these systems must be overhauled. Differences must be aired and debated while acknowledging that consensus is unlikely, at least in the short term.

2.4 The prism of sustainability

The Wuppertal Institute's prism of sustainability (Figure C) provides a view of sustainability that is perhaps not adequately represented in the 'weak' versus 'strong' spectrum.

Figure C: The prism of sustainability *(After* Spangenberg and Bonniot 1998*)*



Institutional Imperative: Strengthen participation.
Social Imperative: Safeguard cohesion.
Environmental Imperative: Limit throughput.
Economic Imperative: Improve competitiveness.

As well as the social, economic and environmental dimensions the prism includes a fourth – the institutional dimension. Those that promote the model claim that it encompasses the interlocking circles concept while having the ability to encompass other views.

The institutional dimension is one of the key distinguishing features of this diagram. It relates to an emphasis on participatory decision-making and an inclusive approach towards scientific and practical knowledge.

The other key feature is its use of a space where the four dimensions of sustainable development can interact. It allows for the links between any two imperatives (such as institutional and economic) to be considered without losing the links to other dimensions, which is important for research as well as practice.

Summary

The 'prism of sustainability' provides an alternative perspective (rather than a different interpretation) on sustainability or sustainable development. It highlights a fourth dimension – the institutional dimension, and enables focus on specific aspects of sustainable development within a broader context.

2.5 The Treaty of Waitangi: Sustainable Development in the New Zealand Context *

The Treaty of Waitangi provides an over-arching context for ongoing debate in New Zealand about the nature of sustainable development. Engaging with the concept of sustainable development must include engaging with any relevant Maori concepts.

Maori society articulates a concept of sustainable development. At the very least the Maori approach is integrating and relational, where ecological imperatives are the starting point – although the ecosystems themselves have a spiritual aspect and humans are directly related to non-humans. Central to this approach is the Maori world-view built around a cosmology that links all parts of the earth and nature in a family. Humans exist in an equal relationship to non-humans; indeed, in some interpretations, they exist in a secondary status. All are bound together by whakapapa (geneology, ancestry, identity with place hapu and iwi).

In this view, the world is subject to processes of regeneration and struggle, all of which occur within the family environment, when the sons and daughters of Rangi and Papa (can be humans and non-humans) are produced in their multitudes, creating dynamic ecosystems. Central to these bonds of whakapapa and the idea of constant regeneration is mauri. This is the life force that exists in all things, animate and inanimate, and binds the world together. It is the fundamental life principle, passed into all things through the process of creation.

This life force can be degraded through physical harm, such as felling of bush or pollution, or through failure to observe appropriate ritual. The degradation of mauri in one place can affect the well-being of the overall life force. In its degraded state that life force can be indiscriminate and harm can occur. This life force is but one aspect of a wider spiritual dimension to the world – of wairua (spirit) immanent in nature.

Thus whakapapa, mauri and the understanding that the world has a dynamic and tangible spiritual dimension, binds humanity within the world in a series of familial relationships. Those linkages with the environment are quite specific. A hapu (collective families and associated people linked together via a common ancestor) or whanau (family group) will have links to quite particular parts of the environment. Those places define them and are linked through whakapapa; there are no general claims to linkages to the environment except at the very apex of the cosmology. Linkages to particular rivers, to particular mountains, fisheries, areas of bush where authority was retained through aahi kaa (arising out of conquest, gifting or intermarriage) bring particular responsibilities to those areas.

What does this cosmology and whakapapa mean for Maori in relation to the world? Above all it means that humans exist in a state of obligation and duty built around a family relationship with the natural world. The main moral concepts within this overall obligation to care are: reciprocity, obligation to tupuna including the atua (gods), obligations to coming generations, and responsibility for the protection of mauri and taonga (valued resources, assets, prized possessions).

Taonga include anything that defines the group within the environment, such as waterways and particular trees. It is a deontological system that is driven by a concept of balance and the

* This section is not attempting to report on Maori views on the direction SD should take – this remains to be done. It is intended to raise questions for non-Maori regarding the scope of thinking about SD in New Zealand, and the dangers of taking a limited approach. It was prepared by non-Maori, based on practical experience and thinking about issues raised by Maori for many decades. This approach has been taken because, at this stage of scoping ideas, the onus is on non-Maori to think about issues raised for some time by Maori and respond to them in terms of scope and process. The report is not a substitute for talking with Maori about process and philosophy. A peer review has been undertaken.

idea of expiation and recompense for damage. Mana (status and authority) is dependent on passing on the world in a better condition than it was in, both spiritually and physically.

Each person has the responsibility to discharge duties through prayer and ritual, and through the way they use the world for their purposes. This is embodied in the concept of whanaungatanga (caring for all those linked through family ties), which requires an ethic of care towards the environment and specifically those lands that define whanau, hapu or iwi (tribal group). In a way, the first obligations to love and care exist vertically, cutting down through the supernatural to the natural and on to those parts of humanity lying within the family ties and those parts of the environment to which they are linked through genealogy. In a sense some aspects of the environment have a higher duty of care than others.

This emphasis on the personal linkages with particular lands does not mean that there is no obligation to care for the environment generally. Outside this circle of family obligations lies a further concept of manaakitanga (caring for those who fall within the sphere of jurisdiction and authority but who may not be linked with ties through whakapapa). For example, in the modern context where members of another iwi have settled in urban areas over which a hapu or iwi may have jurisdiction, there is still an obligation to care for these newer arrivals.

Above all, the overriding concept of mauri and the spiritual realm cuts across all more detailed tribal boundaries and requires there be regard whether inside or outside the tribal rohe (area of jurisdiction). The different duty lies in the obligation to observe ritual and requirements laid down by iwi in whose rohe one may be visiting, and the duty to police and impose constraint in one's own tribal lands. And, should one iwi overset the authority of another through conquest, then the obligations to care for the new lands still exist, for they now define the new group.

These general principles are converted into a detailed code by kaitiaki (tribal guardians). They set out tikanga tiaki (guardianship customs), precepts intended to prevent or avoid harm to the environment. Generally they are couched as a series of rituals, proverbs and sayings that are drawn out of observation and first hand knowledge of environmental processes. They have the advantage of being flexible and adaptive to changing circumstances.

There can be kaitiaki for waters, people, a sacred rock, the language, or particular waiata (songs). The kaitiaki mo nga urupa, for example, are kaitiaki for burial grounds and burial caves. There can be kaitiaki for the ceremonial burial of the afterbirth and there can be kaitiaki for the marae and all its needs. Whatever that taonga may be, it is the:

> *mauri of the object that is being protected … By safeguarding the object's 'vitality' a balance is kept between specific natural elements and the union of man, nature and [the] environment remains healthy*
> (V.C. Tomas p17).

The role of the kaitiaki is quite specific to iwi and hapu (where much environmental authority resides in relation to kaitiaki jurisdictions). It is not a generalised role under an ethic of guardianship but a management role that gives effect to a general ethic through specific functions. The kaitiaki system is understood as a structure for protection of mauri that is managed by people within the rohe of the hapu or iwi, people who have been trained and marked out for their abilities by the collective.

The underlying ethic cannot be strictly described as a conservation ethic. Balance and conservation of resources are an outcome of the way in which human action is managed but the imperative is not conservation of the physical environment as an end in itself. In the end, 'conservation' outcomes are very much in the hands of the kaitiaki as interpreters of the health of the mauri.

There are ongoing debates within Maori about a number of these concepts and, in particular, the role of kaitiaki. In part this is the result of the translation of the concept in statute to a more generalised concept of kaitiakitanga (guardianship). It is also the result of changing

circumstances where social, economic and 'civic' life and their interrelationship with their natural world no longer sits completely at the hapu level.

The key institution that brought together and integrated these concepts can no longer operate in any significant way, except over lands directly managed by iwi groups. This is an important point because it was this structure and institution, which managed action in a holistic way, that enabled economic action and environmental change to occur in a way that embedded choice about action in the structures and processes of the natural system.

A detailed exposition of the Maori approach has been offered here for three reasons. First, it sets out an approach to sustainable development that includes concepts that are largely absent from the debate about sustainable development, except for those interested in concepts of deep ecology. The metaphysical or spiritual domain is an essential and central aspect of the Maori approach.

Second, it highlights an aspect of the debate that, while it is alluded to, is not thoroughly explored in the New Zealand context, and perhaps elsewhere. This is the Maori focus on duty and obligation as the process of decision-making. While people undoubtedly value the environment, it is not the basis for action; duty and obligation are. Much economic theory that underpins 'weak' sustainability is based on the premise of tradeable values. This is the case with the Resource Management Act, which is focused on identifying values at a national and community level and setting up procedures to assess impacts on them. In contrast, debate about sustainable development emphasises relational structures as the basis for decision-making. However, the debate does not really resolve the dilemma, for western society at least, of adherence to a democratic ideal that is based on the premise of individual valuing and subsequent negotiation about those values in the political process. This is seen as the very basis of the open society.

The final reason for the detailed exposition of the broad Maori paradigm is that the language of debate becomes very obviously different from the language generally used in the sustainable development debates. This is obvious even in the difference of voice in this overall section alone. Coming to grips with the concepts means coming to grips with the language and structure of 'other' concepts.

In summary, given the centrality of the Treaty of Waitangi in New Zealand life and given the desire to debate concepts of sustainable development, what is noticeable in the New Zealand context is that engagement with Maori concepts is largely absent from debates. The focus is on Maori access to sustainable management structures instead. This is a strong statement, one which is made in full cognisance of the admirable work done to ensure improved involvement of Maori in environmental decision-making in a number of key statutes adopted since the late 1980s. However, it is argued that this has occurred in a way that has sidelined key structures and concepts that underpin the Maori approach to sustainable development. Concepts that could add to and expand the debate in New Zealand have been assimilated into and largely overwhelmed by a concern for processes relating to sustainable management.

The result has been four-fold. First, there has been little or no focus on the ideas of duty and obligation as a valid approach to decision-making. Given its centrality to Maori social, economic and environmental decision-making, the absence of such debates is disquieting. It is also an issue for wider society as it struggles with the issue of decision-making structured around ever tradeable values.

Second, there has been a neglect of debate about accommodating a particular Maori approach to metaphysical concepts. Even more telling there has been little or no discussion about how a Maori emphasis on metaphysical concerns might modify the direction of debate in New Zealand. Indeed, although debates about metaphysics have been part of the deep ecology approach to strong sustainability for some time, this aspect of sustainable development has not featured strongly in the New Zealand context. Given the centrality of the issue to Maori culture, this is a significant concern.

At present the Resource Management Act takes an approach to sustainable development which contains a metaphysical component and a duty-based decision system and converts then to value statements. Often the concepts are referred to loosely as 'spiritual values'. These then become part of the mix of tradeable values. This is despite section 6 and because of the effects-based process of decision-making that the statute contains.

However, while this might be seen as a criticism of sustainable management and weak sustainability, it is in fact inherent in the debate about sustainable development in New Zealand. The Maori paradigm of sustainable development effectively disappears from view into the legalism of the resource management system. The failure to realise the subsuming of the Maori view into sustainable management means that a whole area of debate is truncated.

Third, there has been little or no scrutiny of the concept of distributive justice that is seen as central to sustainable development. While the concept may be as valid to Maori society as to wider New Zealand, it is simply not known whether this is indeed the case. It is also not known whether such a concept could take a different form in the New Zealand context. The focus on procedural issues relating to Maori access to justice and on fair Maori access to environmental decision-making has taken attention away from this issue.

Finally, the process by which key systems such as kaitiaki have been inserted as considerations in a sustainable management system focused on the idea of effects of action on value has meant a distortion of key concepts. The effect is to reduce their potential power in the ongoing debate and engagement with the idea of sustainable development. It has also meant a lost opportunity to consider how those institutions might inform future models.

The overall effect has been a relatively narrow approach to the exploration of sustainable development. In the New Zealand context, it can be characterised as unconsciously mono-cultural. At the very least, there has been a failure to provide for the expression of key Maori concepts which, while acknowledged as needing protection in statute (e.g. section 6 (d) of the RMA), have not been adequately protected in real terms.

It is not suggested that the integrating structure of kaitiaki can be transferred to the wider context – a difficult task for a society that generally does not engage with metaphysical issues in environmental management. It is suggested that non-Maori can participate in such systems and be included within them. The ideas that underpin these structures can contribute to ongoing debate and the moulding of an approach that fits the unique New Zealand context. At the very least, even if wider New Zealand society does not choose to engage with the various elements of a Maori sustainable development model, the Treaty of Waitangi and the associated principles require its active protection for Maori society.

Summary

The approach taken within Maori society is a holistic one: environmental, social, economic and spiritual fused together inextricably. The spiritual interconnection between people, the land and the history of generations is an essential and central aspect. Statutes such as the RMA attempt to deal with this integrated view but fall short in practice and scope. One result is a narrowing of debates and exploration of the sustainable development concept in the New Zealand context. The ideas that underpin the various elements of a Maori approach need to be on an equal footing when considering ways to progress sustainable development in New Zealand.

SECTION 3: NEW ZEALAND FACTS AND TRENDS

3.1 Introduction

This section provides an overview of social, economic and environmental facts and trends. Where possible international comparisons are made; however, international data were often not available.

It should be noted that the facts and trends presented in this report cannot be taken as indicators of New Zealand's progress towards or away from sustainability. To assess this would be a much greater task – one that would require developing robust indicators of sustainable development and then collecting data to enable measurement of the indicators. For example, while New Zealand's air quality (excluding greenhouse gases) and coastal water quality are generally quite good, this can probably be attributed more to advantageous circumstances, such as a sparse population, than to a good record in tackling environmental issues.[3]

Readers are also referred to an excellent report prepared by the Government Statistician in May 2000: *Looking Past the 20th Century, a selection of long-term statistical trends that influence and shape public policy in New Zealand.* This report explores circumstances that are driving the future shape of New Zealand society. These include demographic change, social change in areas such as family formation and employment, environmental degradation, the impact of information technology, the global economy, and the interaction of Maori and Pakeha. The document is intended for politicians, policy makers and those interested in the future of New Zealand.

3.2 Social Facts and Trends

Health

- New Zealanders' health has improved markedly over the last fifty years, but health status has not kept pace with that of many other developed nations (Statistics New Zealand 2000: *Looking Past the 20th Century*).

- WHO has ranked the New Zealand health system performance at 41 – below that of the United States, Australia, and the UK (PCE: slides).

- Sedentary lifestyles and the spread of obesity (now apparent in half the population) over the last two generations could be emerging as a public health issue second only to smoking. One-third of New Zealanders are insufficiently active (Ministry of Health 1999: *Our Health, Our Future*; Statistics New Zealand 2000: *Looking Past the 20th Century*).

- Overall New Zealand's mortality indicators are near or below average for OECD countries – they are better than the USA and the UK but not as good as Australia or Canada (Ministry of Health 1999: *Our Health, Our Future*).

- New Zealand ranks 21st out of 22 OECD countries in infant mortality rates.

- However, infant mortality rates have improved significantly since 1950.

3 The approach taken for this report was to pull together information from a range of readily accessible reports and conference papers. In referencing the information the previous source only is noted. Often (for example the Business Council material) the previous source lifted the information from elsewhere. No effort has been made to check the validity of any of these statistics or the assumptions underlying them. For these reasons the information should be taken as indicative only. These pieces of information, put together, start to provide a picture of some of the issues facing New Zealand, while also highlighting some 'good news' stories.

Infant death rates in New Zealand declined from 28 per 1000 births to 6 per 1000 between 1950 and 1998. Death rates for Maori fell dramatically over this time from 70 to 8 per 1000. Recent reductions in the Maori rate are due mainly to the drop in deaths from Sudden Infant Death Syndrome (SIDS) (Statistics New Zealand 2000: *Looking Past the 20th Century*).

- Life expectancy is increasing. But life expectancy for Maori and Pacific Island people is lower than average.

  In 1999, life expectancy for women was 79.6 years and for men it was 74.3 years. This is a significant increase over 1950 levels of 71.3 for women and 67.2 for men.

  Maori women live, on average, 9 years less than non-Maori and Maori men live 8.1 years less. Maori not only live shorter lives, they also spend relatively more years disabled (Ministry of Health 1999: *Our Health, Our Future*).

  Life expectancy at birth of New Zealand Pacific Island people is lower than average but higher than for Maori (Ministry of Pacific Island Affairs1998).

- Maori health statistics tend to be worse than non-Maori.

  Maori have higher rates than non-Maori of SIDS, youth injury, breast cancer, lung and heart disease, mental disorders and asthma. They also have higher rates of smoking, obesity and diabetes. These differences are reduced if adjusted for socio-economic status, but not eliminated (Ministry of Health 1999: *Our Health, Our Future*).

- Pacific Island people continue to suffer the highest incidence of rheumatic fever and rheumatic heart disease, obesity and related dietary conditions (Ministry of Pacific Island Affairs 1998).

- While death from injuries is decreasing, suicides are increasing. Suicides now equal or exceed road traffic injury as a cause of injury-related death (Ministry of Health 1999: *Our Health, Our Future*).

- New Zealand road accident rates and vehicle crash fatalities are declining.

  The New Zealand road accident rate per km of road is now similar to the OECD average – but to achieve world 'best practice', levels would still require a significant reduction (Ministry of Transport: pers. comm.).

Education

- More adults are acquiring formal qualifications at both secondary and tertiary levels. Women are more likely to have a formal qualification than men.

  In 1966, 23% of men aged 15-24 and 22% of women had a secondary school qualification as their highest qualification. By 1996 nearly half of men aged 15-24 and half of women had achieved this level. In 1966 only 4.5% of men (in this age group) and 8.5% of women had a tertiary qualification. By 1996 this had increased to 19.5% and 23% respectively (Statistics New Zealand 2000: *Looking Past the 20th Century*).

- More 16 and 17 year olds are staying in secondary school to senior levels. This is true for Maori and non-Maori although Maori retention rates are much lower.

  In 1985 just over 70% of non-Maori 16 year olds, and 33% of 17 year olds were at secondary school. By 1999 nearly 90% of non-Maori 16 year olds and nearly 70% of 17 year olds, were still at school. This compares with 70% of Maori 16 year olds and about 35% of 17 year olds who were still at school in 1999 (Te Puni Kokiri 2000: *Closing the Gaps*).

- Less than half of school leavers enrol in formal tertiary education directly from school.

  In 1997, 45% of non-Maori and 23% of Maori school leavers directly entered formal tertiary education (Te Puni Kokiri 2000: *Closing the Gaps*).

Crime and Violence

- Recorded crime rates remained stable through the first part of the 20th century. Over the past four decades the number of recorded offences has risen markedly. Recorded offences increased by over four times between 1962 and 1995 (Statistics New Zealand 2000: *Looking Past the 20th Century*).

- Unsolved burglaries have also increased; 88% of burglaries recorded by the police in 1998 were not solved (Statistics New Zealand 2000: *Looking Past the 20th Century*).

- Convictions for violent offences have increased. In the period 1992-1997, violent offences rose from 9% to 13% of all non-traffic convictions (Statistics New Zealand 2000: *Looking Past the 20th Century*).

- Maori are just over three times more likely to be apprehended for an offence than non-Maori.

  In 1991 the Maori apprehension rate was 118 per 1000, while the non-Maori rate was 39 per 1000. By 1998 the Maori rate had increased to 145 per 1000 compared to 44 per 1000 for non-Maori (Te Puni Kokiri 2000: *Closing the Gaps*).

Other

- Disparity between Maori and non-Maori is significant.

  Between 1998 and 2000 the *Closing the Gaps* reports found few reductions in disparity. In those areas where Maori rates have been improving, corresponding improvements in the status of non-Maori were also found.

- New Zealand's population is ageing.

  In 1996 one in eight people were over the age of 65. By 2051 one in four people will be over the age of 65 (New Zealand Business Council for Sustainable Development: Leadership Forum slides).

- Most New Zealanders live in the North Island. Over the next 20 years the North Island, especially Auckland, can expect to see more rapid population growth that the rest of the country.

  Three out of four New Zealanders lived in the North Island in 1996 – this is predicted to increase to four out of five by 2021. By 2021 Auckland is expected to accommodate 40% of the country's total population. Auckland is now the fifth largest city in Australasia and is growing faster than Sydney, Melbourne, Brisbane and Perth (New Zealand Business Council for Sustainable Development: Leadership Forum slides).

Summary

While health and education statistics are improving, New Zealand's performance is, at best, average compared to other OECD countries. Particular areas of concern are suicide rates, infant mortality, and disparity between Maori and non-Maori. Crime, particularly violent crime, is another major issue.

3.3 Economic Facts and Trends

General

- New Zealand's recent GNP growth rate has been poor compared to past performance and compared to other countries.

  Real GNP per capita has grown only .2% per annum over fifteen years from 1984 to 1999, compared with .6% in the previous fifteen years (speech by Hugh Fletcher 1999: Foundation for Policy Initiatives seminar). New Zealand's growth rate has been below that of the USA and Australia through the 1990s as has growth in productivity, which has been .5% per annum compared to 2% per annum in the USA.

- Large manufacturing companies have been shifted offshore throughout the 1990s.

  Until 1998, nine major companies had moved production to Australia. Since 1998, 14 have moved all or part of their production to Australia and 13 have moved elsewhere (New Zealand Business Council of Sustainable Development: Leadership Forum slides).

- The private sector undertakes much less research and development (R&D) investment than other OECD countries.

- New Zealand businesses spend less than .3% of GDP on R&D compared to the OECD average of 1%. Sweden spends 3.3% and Australia 1.7% (New Zealand Business Council of Sustainable Development: Leadership Forum slides).

The New Economy

- There are concerns that New Zealand is not well positioned for the 'new (technology-based) economy' despite being relatively computer literate.

  The positive signs are:
  - Although high income households are more likely than low income households to have computer access, access has increased over all income quartiles over the past decade in New Zealand. Also by 1998, 94% of secondary schools had internet access (Statistics New Zealand 2000: *Looking Past the 20th Century*).

- In terms of connections to the internet, New Zealand ranks 10th out of OECD countries (New Zealand Business Council of Sustainable Development: Leadership Forum slides).

- The New Zealand computer market has increased by 53% from 1994 to 1998 (Statistics New Zealand 2000: *Looking Past the 20th Century*).

However:

- New Zealand is still very dependent on the 'old economy'. Agriculture and manufacturing still account for 23% of the economy compared to 15% in the USA (ASB June 2000: *Quarterly Economic Review*).

- New Zealand's R&D levels are low and a large share of the R&D that does occur is in low technology areas (New Zealand Business Council of Sustainable Development: Leadership Forum slides).

- New Zealand has relatively low numbers of science and technology graduates (New Zealand Business Council of Sustainable Development: Leadership Forum slides).

- Although New Zealand is considered one of the most 'networked' countries in the world, businesses are not taking advantage of e-commerce in terms of business to business (B2B) relations. For example a Deloitte's survey has found that while 65% of businesses have a website and 97% have email, only 18% have on-line sales, and 21% conduct on-line purchases. A significant driver of high USA growth rates is put down to productivity gains from e-commerce. It appears that New Zealand businesses are less advanced in this area (ASB June 2000: *Quarterly Economic Review*).

Trade and Global Relations

- New Zealand's two main disadvantages in world markets are its geographic remoteness and its small size. E-commerce has the potential to reduce both these disadvantages, assuming that New Zealand businesses take advantage of this (ASB June 2000: *Quarterly Economic Review*).

- New Zealand's share of global trade has been falling; however, many commentators are picking export-led growth as a result of a declining dollar.

- In 1950 New Zealand accounted for 1% of global trade. This has fallen to .26%. This is partly because exports are still dominated by commodity-based products that continue to experience declining prices (New Zealand Business Council of Sustainable Development: Leadership Forum slides).

- New Zealand's current account deficit has long been considered to be a significant issue for New Zealand.

  In the year to December 1999 the current account deficit was $8.2 billion – or 8% of GDP. While exports have been growing strongly, imports have been growing even faster (ASB March 2000: *Quarterly Economic Review*).

- Tourism is one of New Zealand's biggest foreign exchange earners. Tourism numbers and receipts are at an all time high.

  Tourism numbers have recently increased by 10% per annum, while receipts have increased by 14%. This is attributed to a number of factors including the low New Zealand dollar, special events, and strong global economies (ASB June 2000: *Quarterly Economic Review*).

Transport

- Traffic congestion is imposing significant environmental and social costs on New Zealand; however, there are also significant economic costs associated with lost time.

  Modelling work has shown that if Auckland traffic growth continues as its current pace and if this were all accommodated by new roads, the cost would be $3.5 billion over 20 years. If a toll were put on all entry points to the isthmus and vehicles charged $4, the bill would drop to $.5 million (MOT: pers. comm.).

  Similar circumstances exist in Wellington. It is estimated that if motorists were charged the true cost of their travel (not including the cost imposed by CO_2 emissions), a trip from Paraparaumu into Wellington City would cost $15. Transmission Gully would not be required and passenger transport would be viable without subsidy (MOT: pers. comm.).

Employment, Unemployment and Income Distribution

- Part-time employment and women in employment are both increasing, while male full-time employment is decreasing. However, women are considerably more likely to work in part-time work than men (Statistics New Zealand 2000: *Looking Past the 20th Century*).

- Unemployment peaked in 1992 and has been declining since this time. Maori are almost two and a half times more likely to be unemployed than non-Maori.

  In 1992 unemployment rates (using Household Labour Force Survey definitions) reached a high of about 8% for non-Maori and 29% for Maori. In 1999 the rates were approximately 5% and 12% respectively. The differences in unemployment rates are highlighted as a key concern. Unemployment is thought to be a contributing factor to other disparities. Maori also have higher rates of long-term unemployment, youth unemployment and joblessness (Te Puni Kokiri 2000: *Closing the Gaps*).

- While New Zealand's economy is growing at a modest rate, income inequality is also growing. New Zealand now has one of the highest rates of income inequality in OECD countries.

During the period 1982-1996 income inequality has increased in New Zealand. The conclusion is the same regardless of how it is measured. During this period average real incomes of those in the middle and bottom has actually fallen. Those at the bottom have experienced a fall of 5% (Treasury 2000: *The Changes in New Zealand's Income Distribution*).

Interestingly, the working paper concludes that policies to redistribute income will be needed alongside policies to raise national income per person – suggesting that the 'trickle down' effect has not been as effective as anticipated by the 'pure market' model.

Summary

New Zealand's growth rates have been sluggish over the past two decades. The country has a poor record in R&D and questions are being raised about New Zealand's readiness for the 'new (technology-based) economy'. The high current account deficit is another concern. On the other hand, the low exchange rate will benefit New Zealand's export sector and may be a further boost for tourism, which is already booming. Increasing income inequality and high Maori unemployment rates are significant issues for the country.

3.4 Environmental Facts and Trends

General

- New Zealand has an estimated ecological footprint in the order of five to ten hectares of productive land per person to provide a year's supply of goods and services. The variation in estimate depends on who is doing the number crunching. The higher end of the scale places New Zealand on a par with USA consumption levels.

  If marine fisheries and the extra forest required to absorb CO_2 increases were factored in, the ecological footprint would be higher. The OECD average is 5.7, the USA's is 8.4 and Australia's is 8.1.

  If every country in the world had a footprint the size of New Zealand's, the world would need 28 billion hectares of productive land – more than twice the Earth's land area and five times the area currently used for production (New Zealand Business Council for Sustainable Development: Leadership Forum Slides; Wackernagel and others 1997: *Ecological Footprints of Nations: How Much Nature Do They Use? How Much Nature Do They Have?).*

- Energy use and solid waste production are increasing faster than population growth and GDP.

  During the period 1980-1996 New Zealand's population increased by 15.5%, the number of dwellings increased by 28%, GDP increased by 37%, consumer energy use increased by 44%, the number of cars increased by 31%, and solid waste increased by a massive 95% (PCE 1998: *The Cities and Their People*).

- People are concerned about the environment and many would choose to protect the environment over economic growth. However, most people think that the environment is OK.

In an environmental awareness survey, 59% said that they thought everything was OK although nearly 90% thought that we create too much waste. Over 50% would protect the environment over economic growth and a further 30% were unsure about this (PCE: slides).

- Despite some significant environmental issues facing New Zealand, the picture is not all bad.

  Methane emissions are 5% below 1990 levels, pesticide contamination is low, and most coastal waters are healthy (PCE: slides).

Energy

- New Zealand's energy use per capita is slightly lower than the OECD average – but increasing. Our energy intensity (the energy required to produce a unit of GDP) is high relative to OECD countries but declining.

  During 1975-1995 population increased by 17% but energy consumption increased by 65%. New Zealand ranks 17th out of 23 OECD countries in terms of energy intensity – however, energy intensity has declined since 1993 (PCE 2000: *Getting More for Less*; MFE 1998*: 1998 Stocktake of the Environment 2010 Strategy*).

- Consumption of non-renewable energy is increasing. Energy consumption growth is highest in the transport sector.

  Fossil fuel accounted for 70% of New Zealand's total consumer energy consumption in 1998. Growth in energy consumption in the transport sector is the highest with that sector now accounting for 40% of consumer energy1993 (PCE 2000: *Getting More for Less*).

Greenhouse Gases

- New Zealand accounts for a miniscule share of global CO_2 emissions. Notwithstanding this, New Zealand's CO_2 emissions have increased since 1990, making it more difficult to meet the Kyoto protocol requirements.

  In 1995 New Zealand accounted for .14% of global CO_2 emissions while the USA accounted for 23.4%. Half New Zealand's emissions come from agriculture (New Zealand Business Council for Sustainable Development: Leadership Forum Slides).

  During 1990-96 New Zealand's CO_2 emissions increased by 15%. Without action, the Ministry of Economic Development projects a 68% increase in CO_2 in the year 2020 over 1990 levels (PCE:slides; MFE 1999*: Briefing Paper to the Incoming Government*).

  The Ministry of Transport has also been doing some modelling work. This shows that, given what is known about the New Zealand vehicle fleet plus technological changes that are likely to occur in the next 30 years, New Zealand could meet Kyoto requirements by 2025, "which is more than 15 years too late of course" (MOT: pers. comm.).

- The good news is that non-CO_2 greenhouse gases are declining (except this could easily reverse, if ruminant stock numbers increase as they could with a rural-led economic recovery).

Biodiversity

- Before human settlement New Zealand had approximately 23 million hectares of indigenous forest. Only one quarter is now forested – much of this in exotics (Statistics New Zealand 2000: *Looking Past the 20th Century*).

- For a small country, the uniqueness of New Zealand's biodiversity is notable. However, New Zealand has one of the worst records of indigenous biodiversity loss. Active conservation management has slowed down the rate of decline but not halted it.

  The best estimates of extinction are that New Zealand has lost one-third of indigenous land and freshwater birds, one fish, one bat, three reptiles, and at least eleven plants (Department of Conservation 2000*: The New Zealand Biodiversity Strategy*).

Twelve fish stocks are known to be under the biological maximum sustainable yield, while the status of 58% of fish stock is unknown.

- One of the major issues facing New Zealand is that there is insufficient information about our biodiversity. New Zealand has an estimated 80,000 species, but only 30,000 have been described so far.

Solid Waste

- New Zealanders produce 400 kg solid waste per person per year. One-third of this is packaging (New Zealand Business Council for Sustainable Development: Leadership Forum Slides; Jim Watt: Target Zero presentation).

- Solid waste increases in Auckland have been massive.

  During 1983-1995 total landfill waste (including industrial) doubled in Auckland. This amounted to a 60% increase per capita and was mostly due to economic growth (New Zealand Business Council for Sustainable Development: Leadership Forum Slides).

Soil

- Soil erosion is a concern for New Zealand although the last comprehensive soil erosion surveys were undertaken over 30 years ago.

  Surveys undertaken in the 1970s showed 10% of New Zealand's soil was subject to severe erosion and 50% to moderate erosion (PCE: slides).

Summary

Despite the 'clean, green' image, New Zealand's environmental record is not impressive. Energy statistics are mixed; however, energy consumption per capita in increasing – particularly in the transport sector. Of concern is the increase in use of fossil fuels. The uniqueness of New Zealand's biodiversity is notable in the global arena, but we also have one of the worst records of species loss. New Zealand's current actions are not taking it on a path to achieving Kyoto climate change commitments.

SECTION 4: PROMOTING SUSTAINABLE DEVELOPMENT: WHAT THE INTERNATIONAL EXPERIENCE DEMONSTRATES

4.1 Overview

In the past 15 years there has been increasing acceptance of the need to address issues of local and global sustainability. While the range of initiatives is huge, the critical milestones include:

- The publication of *Our Common Future 1987*, which named the huge range of problems internationally, and requirements for sustainable development.

- The 1992 United Nations Conference on Environment and Development (UNCED) on sustainable development held in Rio de Janeiro, which generated Agenda 21; this brought together a plan for targeted community-based approaches to sustainable development.

- The Kyoto accord of 1997, reflecting not only general acceptance of the threat of enhanced human-induced global warming but also that the richer consumer countries would need to set higher greenhouse gases reduction targets.

These three documents share agreed premises:

- there are real problems of global significance;
- changes in production and consumption systems are necessary and possible; and
- initiatives at all scales from global to local are required.

While there are many examples worldwide of extraordinary initiatives and alternative paradigms, evidence of effective action is patchy.

Global Outlook 2000, published by the United Nations Environmental Programme at the end of 1999, finds:

> *Two overriding trends characterise the beginning of the third millennium. First, the global ecosystem is threatened by grave imbalances in productivity and in the distribution of goods and services. A significant proportion of humanity still lives in dire poverty, and projected trends are for an increasing divergence between those that benefit from economic and technological development, and those that do not….*
>
> *Secondly, the world is undergoing accelerating change, with environmental stewardship lagging behind economic and social development. The processes of globalisation that are so strongly influencing social evolution need to be directed towards resolving rather than aggravating the serious imbalances that divide the world today…* (p 2).

Some statistics follow:

> *Average global per capita income has now passed US$5000 a year but more than 1300 million people still live on less than US$1 a day* (p 2).
>
> *A tenfold reduction in resource consumption in the industrialised countries is a necessary long-term target if adequate resources are to be released for the needs of developing countries* (p 2).
>
> *Global emissions of CO_2 reached a new high of nearly 23900 million tonnes in 1996 – nearly four times the 1950 total* (p 4).
>
> *In 1996, 25 per cent of the world's approximately 4630 mammal species and 11 per cent of the 9675 bird species were at significant risk of total extinction* (p 4).

> *If present consumption patterns continue, two out of every three persons on Earth will live in water-stressed conditions by the year 2025* (p 4).

> *Africa lost 39 million hectares of tropical rain forest during the 1980s, and another 10 million hectares by 1995* (p 6).

There are many others.

But the effectiveness of harmonised international commitment and action is also highlighted:

> *Without the Montreal Protocol, levels of ozone depleting substances would have been five times higher by 2050 than they are today* (p 4).

The 'have not' countries believe that approaches to sustainable development should proceed on a tiered basis of most significant actions by rich countries and provision for the less well off to catch up.

The current 'crisis' over rising oil prices demonstrates this issue. In some European countries (including The Netherlands and Germany), despite a decade or more of focus on environmental threats and apparent electoral support for 'green initiatives' and taxes (including taxes on fuel), significant sectors clearly do not yet wish to pay the price. This example not only illustrates the intractability of the tensions between rich and poorer countries (i.e. how difficult it is and will be for rich countries to carry their fair share) but also the impediment to change that arises when communities do not 'buy into' change strategies. It also illustrates what is argued to be an over-dependence of modern economies on a narrow range of exhaustible and politically exposed resources; and that, when transitions occur, the costs fall inequitably on certain social sectors and not others.

There is an enormous amount of information and literature about international initiatives to promote sustainable development. Section 4.2 provides a summary of some of the key international organisations with this purpose. Section 4.3 juxtaposes two views on the business sector. One, that movements such as 'natural capitalism' hold the key to delivering a sustainable future, and the other that such initiatives are mostly a tactical move by big business. Section 4.4 briefly summarises the approaches of those countries acknowledged to be at the forefront of implementation. Finally, Section 4.5 briefly addresses local initiatives arising out of Agenda 21.

Summary

Performance internationally is uneven. The pressure for change derives more from the scale and seriousness of the problems faced than the evidence for any particular approach 'working'. While there has been a reduction in the bureaucratic hurdles to debating sustainable development internationally, the practical application of the concept is limited, as are any ecological and social benefits.

4.2 International Organisations

Readers are also referred to several appendices that provide much more detailed information on international organisations and initiatives:

- Appendix C: Summary of Selected Initiatives on Developing Sustainable Development Indicators

There are many ways to measure the degree of interest and progress in sustainable development internationally. One is the extent of work being done on indicators of sustainable development. In addition, these measures are themselves detailed definitions of how sustainable development might operate in practice. This appendix provides an overview of international organisations producing material on indicators of sustainable development.

- Appendix D: Sustainable Development: International Definitions and Actions

This section provides an overview of sustainable development definitions and actions of:

- selected countries pursuing sustainable development policies;
- key international non-governmental organisations with an interest in sustainable development; and
- one example of an international company (Shell Oil) that has adopted sustainable development as part of its strategic plan.

Some of these organisations have sustainable development (or sustainability) as their 'raison d'être', while others have recognised its importance and have undertaken steps to address what it means for their organisation.

The following is a summary of these international initiatives.

United Nations Environmental Programme (UNEP)

UNEP is a United Nations funded organisation that is involved in advocacy of environmental concerns within the international system. It was the driving force behind the 1987 Montreal Protocol on substances that deplete the ozone layer and it forged the Convention on Biological Diversity.

In 1995 it launched the Global Environmental Outlook (GEO) Project, which is a cross-sectoral and participatory global environmental assessment process. Its GEO report series makes periodic reviews of the state of the world's environment.

United Nations Commission for Sustainable Development (CSD)

The CSD was created in 1992 to ensure effective follow-up of UNCED and to monitor and report on implementation of the Earth Summit agreement at the local, national, regional and international levels.

At Earth Summit + 5, the Special Session of the General Assembly held in 1997, member countries reconfirmed their commitment to Agenda 21. Even though 300 cities have formally adopted Agenda 21, the huge challenges of working at a local level remain and often progress is hard to measure.

The CSD, as part of its work programme, has been developing and testing indicators of sustainable development for several years. Its aim is to have an agreed set of indicators available for all countries to use by the year 2001. The expectation is that countries will select from the list according to local priorities, problems and targets.

World Resources Institute (WRI)

The WRI provides information, ideas and solutions to global environmental programmes. It aims to meet global challenges to catalyse public and private action. It is funded by various corporations, foundations and other NGOs.

The WRI undertakes research on a range of topics including biodiversity and climate change. It is just about to release its ninth World Resources report, which is likely to be the most comprehensive summary of world trends in sustainable development. The report will assess key ecosystem health alongside an overview of trends in population, human well-being, food and water security, consumption and waste, energy use and climate change for more than 150 countries.

World Business Council for Sustainable Development (WBCSD)

The WBCSD was formed in 1995. It is a coalition of 140 international companies united by a shared commitment to sustainable development – environmental protection, social equity and economic growth. Its objectives include:

- business leadership;
- policy development;
- best practice; and
- global outreach.

Members include 3M, Dupont, Ford, Interface, Heineken, Nestle, Shell, and Xerox. Fletcher Challenge is New Zealand's only member.

The WBCSD takes on sector-based projects such as sustainable forestry; mining, minerals and sustainable development; sustainable cement industry; electricity; and transport.

Much of the WBCSD's work has involved dialogue with other stakeholders – for example, it has held cross-sectoral dialogues on 'Rights and Responsibilities' and 'Innovation'.

The WBCSD has committed to the Global Compact proposed by the UN Secretary General Kofi Annan at the World Economic Forum in Davos in 1999.The Global Compact challenges business to embrace a set of core principles for human rights, workers' rights and environmental protection.

The International Council for Local Environmental Initiatives (ICLEI)

ICLEI is an international association of local governments dedicated to the prevention and solutions of local regional and global environmental problems through local action. Established in 1990, ICLEI was one of the key players behind the 1992 UN Earth Summit in Rio de Janiero where Agenda 21 was launched. (For more detail on ICLEI's activities see Section 4.5.)

Organisation for Economic Co-operation and Development (OECD)

The OECD has taken an active interest in sustainable development since 1997. The OECD approaches sustainable development from an economic development perspective, while recognising social and environmental dimensions. It sees sustainable development in terms of:

> *A set of boundary conditions which economic development should respect*
> (OECD1999: Interim report, p 20).

The OECD is currently undertaking some work on approaches to measuring sustainable development. It is also undertaking a three-year sustainability project with an aim to make sustainable development operational through public policies.

Asia Pacific Economic Co-operation (APEC)

APEC, in conjunction with Environment Australia has prepared *A Guide to Sustainable Development for the APEC Region*. It was prepared to provide local authorities and the communities they represent with guidance and direction in planning and implementing a local Agenda 21 approach.

The guide is aimed at:

- individuals and groups who want to know how to gain commitment from key decision-makers to establish a local Agenda 21;
- local authorities that have committed to sustainable development and need guidance on how to commence a local Agenda 21;
- local authorities that have started to develop a strategy or who are actively working towards sustainable development but who need further direction, perhaps on a particular aspect of their work;
- local authorities that are progressing well and want some further ideas.

Some members of the APEC grouping, led by Japan, have established a 'Virtual Centre' to document and showcase environmental technologies or 'best practice' case studies. Japan has put substantial resources into it, whereas New Zealand has one person, working on a very part-time basis (out of NIWA– the National Institute of Water and Atmospheric Research), to develop the New Zealand section.

The World Bank

The World Bank has just released its World Development Report 2000/2001: *Attacking Poverty*. This report highlights poverty as a global problem of huge proportions. The report has seven goals and each goal has been linked to an indicator in order to measure progress. Three of these goals are to:

- reduce the proportion of people living in extreme poverty by half between 1990 and 2015;
- enrol all children in primary school by 2015;
- implement national strategies for sustainable development by 2005 so as to reverse the loss of environmental resources by 2015.

The World Bank also collects data for assessing human welfare in more than 170 countries. It uses a long list of indicators of social development to do this.

The World Bank is currently taking a fresh look at its environmental agenda. It is preparing an environmental strategy to better align the Bank's environmental work with its central mission of poverty alleviation. The Bank is signalling a move away from a 'do no harm' framework to a more proactive approach.

The Natural Step (TNS)

TNS is a non-profit environmental education organisation working to build an ecologically and economically sustainable society. It offers a science-based framework that involves the application of four system conditions. These are:

1. Nature cannot withstand a systematic build up of dispersed matter mined from the earth's crust (eg minerals and oil).
2. Nature cannot withstand a systematic build up of persistent compounds made by humans (e.g. PCBs).
3. Nature cannot take a systematic deterioration of its capacity for renewal (e.g. over-harvesting fish).
4. Therefore, if we want life to continue, we must
   (a) be efficient in our use of resources
   (b) promote justice – because ignoring poverty will lead the poor, for short-term survival, to destroy resources that we need for long-term survival.

TNS's primary focus is on business – working with business to achieve long-term redesign of business practices and processes, although it is also useful as a way of rethinking how levels of government or research bodies operate.

TNS has had a significant impact in Sweden in particular where many Agenda 21 projects have the four system conditions as a point of departure for their work.

International Chamber of Commerce (ICC)

The ICC has taken a strong interest in sustainable development and has prepared a Business Charter for Sustainable Development. It is also a strong advocate of tools such as Environmental Management Systems (EMS) and Life Cycle Analysis (LCA).

Summary

This overview has barely scratched the surface of the huge number of international organisations with an interest in sustainable development. Add to the list the Rocky Mountain Institute, the Resource Renewal Institute, SustAinability, the International Institute of Sustainable Development and many more. The key themes coming out of all these organisations are the same – widening inequality, continued environmental degradation, the dramatic failure of Africa, and the increased competition between Europe and the Americas.

4.3. The Natural Step, Natural Capitalism: Rethinking Capitalism

The business sector is singled out for comment because of strongly held views: by some, that commercial interests are the root cause of global environmental and social problems; by others, that business holds 'the key' to tackling issues surrounding sustainability. The issues are relevant for New Zealand, and the arguments are easily illustrated in the international arena.

Section 2 of this report highlighted that people and organisations promoting sustainable development may operate at different points on a spectrum from 'weak' sustainability on one end to 'strong' sustainability on the other.

In the international setting, strategies that allow for change but don't involve huge threats to current living standards in the rich countries (and that could accelerate growth in living standards in poorer countries) are very attractive – especially to the predominantly market-based political, bureaucratic, scientific and business elites.

In this group are transnational initiatives such as TNS and natural capitalism, which see rational scientific/technology-based socio-economic systems as the appropriate framework for achieving a more sustainable world. These strategies are 'radical' in their approach compared to initiatives such as waste minimisation, energy reduction strategies and so on. From the point of view of those who believe in a 'strong' sustainability agenda, however, they do not go far enough.

A cynical view is that these approaches provide comfort to those who would like to see the 'problem of sustainable development' solved without significant social or political change. Photovoltaics will solve the energy issues; low emission, low fuel using cars (or electrical ones) will solve part of the greenhouse gas issues; the house with its self contained energy, water, communication, waste reuse systems will remove the 'problems' associated with the provision of these services, while giving greater autonomy to households.

These initiatives then engage well with increasingly powerful groups such as the WBCSD and other such sector and global groups. They then have the potential to engage the science/engineering and allied professional groupings and business across political borders. It fits with mainstream views of globalisation and with the economic policy limits of the 'new right' (some extend this description to the views of labour/social democratic parties in most parts of the world – Europe to the USA).

Some see organisations such as the WBCSD as taking a strategic stance to:

- avoid more substantial regulatory reforms – energy taxes etc; and
- lead the next economic revolution based largely on new energy sources.

Athanasiou expounds a version of this view in *Slow Reckoning: The Ecology of a Divided Planet*.

> *Corporate environmentalism is, in the end, notable for the threads of both sincerity and cynicism that wind through its tangled patterns. Compared to corporate anti-environmental activism, it is a token of rationality and hope. Yet corporate environmentalism also offers a misleading win-win fantasy of environmental protection in which tough choices will not be necessary* (p 241).

This can also be put the following way: *"[t]he hard questions in sustainable development arise only when seemingly indisputable but contradictory realities are juxtaposed"* (Holtz 1998, p 292). Progress can indeed occur using the various approaches noted above – you can reduce energy intensity and use matter more efficiently. But the argument is that this will only slow the rate of decline, not reverse it. In other words, when the really challenging juxtapositions come up, further progress is halted.

The difficulty therefore lies in deciding how to treat positive, practical and credible changes in the way business is being done, while facing up to the more fundamental challenges mentioned above. The positive view is that the former is a necessary but not sufficient contribution to the latter. Less positive is the notion that business tends to be, at best, neutral in terms of significant social empowerment and control and also in terms of encouraging the development of more effective national regulatory regimes. The negative view is the apparent improvement in the way business is done actually hampers real progress.

Thus, in order to best use undeniable shifts in attitudes in corporate responsibility, it is necessary to avoid falling for a 'greenwash', which retards rather than enhances progress. This is an argument for the need for independent auditing processes coupled with 'genuine progress indicator' type monitoring.

In addition, it is not possible to disentangle the relationship between consumer demand, media and business reinforcement of this demand, political dependence upon this relationship, and the degree of real individual choice that can be exercised. While the cynical view may be justified at a global level, it may not apply at an individual one. Making progress within a system – even a flawed one – can be perceived as risky enough without trying to change the system at the same time. This is the very argument in favour of community-generated sustainable development. This removes the process from within an economic system, and places economics within the community and hence sustainable development. Ultimately the community must judge how best to use business initiatives on sustainable development, call to account those abusing the term and, at the same time, change the way we in effect do business. Such a revolution – if this is what is required – will not be driven by business, technology or science. Change being driven at a community level, however, requires knowledge and engagement, a common need being expressed in most sectors.

Summary

Strategies and solutions that emphasise techno-scientific solutions are likely to achieve high levels of establishment acceptance by 'doing more with less'. Technological changes are clearly likely to be key contributors to a more sustainable New Zealand. However, while this shift may be necessary it is unlikely to be sufficient to achieve sustainable development. Organisations supporting The Natural Step and natural capitalism are established or emerging. They offer very positive steps forward but they speak for part, not all, of the potential sustainable development agencies.

4.4 National Initiatives *

A large number of influential countries internationally have a more coherent approach to sustainable development than has occurred yet in New Zealand. This is apparent perhaps most of all at international meetings where the great majority of countries are able to put together a coherent national position. But there are limited ways of checking whether this is genuine or just well packaged business as usual. Environment Minister Marion Hobbs is reported to have been embarrassed recently by New Zealand's lack of progress, but it might have been New Zealand's lack of diplomatically worded statements that was the problem.

The coherent positions include those of countries from the poorest parts of the Asian, Latin American and African subcontinents. While in some cases perhaps this may be seen as well wrought propaganda, there are examples of national initiatives evolving and strengthening over time. The question now is how to measure progress, and which processes or tools seem to be the most helpful to achieve genuine rather than superficial change. How much is due to the adoption of sustainable development concepts and Agenda 21-style methodology?

Evidence from countries such as The Netherlands suggests that introducing sustainable development approaches works. Whether this is a function of sustainable development thinking, or a function of Dutch society, or to what extent this experience is transferable are sure to be topics for further future international research and debate. The fact remains that sustainable development is being taken very seriously, even though measuring and monitoring mechanisms still need much work.

In continental terms Europe leads. European agencies from the European Union to the OECD have provided solid research, development, policy formation and monetary support for much of the last decade. Within this grouping the Nordic countries (especially Norway and Sweden) and The Netherlands have long-established sustainable development initiatives and programmes. In this respect Germany and, more recently, Britain have moved in similar directions. In virtually all of these cases the national framework accommodates national regulation and incentives, support for research and industrial change, some form of 'measurement' of progress, inclusive approaches across sectors, business and agencies, and a well defined and often Agenda 21-based role for local government.

Comment is also provided on Canada and Australia as examples of some relevance to New Zealand.

The Netherlands

The Netherlands' National Environmental Plan is now in its fourth iteration. It is recognised internationally as the best example of green planning. It is premised on the interlocking of social, economic and environmental processes and is framed within firm assumptions about place and the role of people in making the future happen.

The plan itself was constructed by involving a wide range of interest groups from key sectors such as agriculture, business, universities, transport, energy suppliers, environmental organisers, unions, and the voluntary sector. Much emphasis was placed on taking a multi-disciplinary participative approach. National and local targets are linked. This approach lines up well with Agenda 21 processes in terms of setting targets and strategies with stakeholders including local communities. It shows clearly a belief in the importance of civic engagement in achieving national (and international) objectives.

* See also Appendix D: Sustainable Development: International Definitions and Actions

The current plan has four main platforms. These are:

1. Global: Availability of Natural Resources and the protection of Biodiversity
2. Netherlands: Nature and Biodiversity
3. Netherlands: Health and Safety (e.g. smog, climate change, noise etc)
4. Netherlands: High quality (urban) living environment.

The overall objective is to achieve sustainable development in one generation. The vision span is 30 years and the intent is to engage and form partnerships with citizens. Two key areas targeted in The Netherlands' Plan are how to attain agricultural sustainability and how to bring urban development and nature into greater balance. Much attention is being given to transport, and to the transport/energy relationship. The Plan envisages the potential for problem solving technologies becoming sources of future economic growth. The role of local government is central to achieving the objectives of the Plan – as the place to engage the public and to implement sustainable development.

The *Fourth Environmental Survey* demonstrates that The Netherlands has succeeded in reducing its environmental burden while enjoying economic growth. However CO_2 emissions are an exception to this – and other objectives still remain to be met.

Sweden

In the international context Sweden presents a comprehensive approach to sustainable development. It has full commitment to international treaties and has taken UN sustainable development initiatives seriously. At the national level sustainable development has formed a key element of public policy since the early 1990s, particularly following the Rio agreements. Policy frameworks tend to set objectives and to create room for localities to achieve the 15 key national goals. Approaches derived from the thinking of the Wuppertal Institute (and the Rocky Mountain Institute) of factor 4 (resource efficiency) use in one generation, and factor 10 in two generations, have been influential in Swedish thinking.

The priorities set by government have generated significant research on urban sustainability at three universities. Local Agenda 21 programmes have been widely adopted. The Swedish approach places substantial emphasis on active local participation. Sweden has partnered communities in less developed countries systematically since the early 1990s, sharing research and other resources as an active partner in redressing global inequalities. Within Sweden pilots have been run of holistic Agenda 21 programmes to model best practice in all key dimensions – social, economic, environmental and democratic. This includes the development of green accounts. The partnerships between researchers and local communities are a core part of the programmes being implemented.

Sweden is a good example of a country attempting to marry the 'top-down' with the 'bottom up'. Some mistakes have been made along the way – for example, a lot of central money has been invested in local 'environmental projects' but has been framed and focused at the central level in a way that is not always appropriate to specific situations.

Germany

In the late 1990s Germany emerged as a key example of economic restructuring to secure more effective resource use. A variety of economic instruments have been applied not only to reduce waste of resources (by producing goods that can be recycled) but also to encourage resource use efficiencies in production and less consumption waste. Green taxes are part of the policy mix. Environmental recovery in urban and industrial zones has been a key element in the redevelopment of former East Germany. Extensive restoration programmes at the national and province level are matched by often visionary local Agenda 21 programmes (e.g. Freiberg, Heidelberg, Dessau-Wurtenburg).

The Wuppertal Institute for Climate, Environment and Energy was formed in 1993 to follow-up commitments from the Rio

Conference. The aim was to create a centre of excellence in environmental science. Most of the institute's funding comes from central government (untagged) with the remainder coming from research contracts with the European Commission. The research programmes of the Wuppertal Institute are seen as setting the pace for viable sustainability programmes at the local and national state level for so called 'advanced economies'.

The United Kingdom

The UK model has been evaluated in some depth by the New Zealand Office of the Parliamentary Commissioner for the Environment, which has recently prepared reports on local Agenda 21 in the UK and on UK 'greening government' initiatives.

At a governmental level the UK has adopted a structure that includes ministerial responsibilities for developing sustainable development policy and ensuring coordination across government on sustainable development issues. Independent auditing of policies and programmes is also carried out.

The framework is supported by a large Sustainable Development unit, which acts as a pan-governmental resource to provide advice and other support. It also performs a monitoring role.

In 1997 the UK prime minister called on all local authorities to adopt a local Agenda 21 by 2000. This was a voluntary target but has resulted in about 70% 'take-up'.

In 1999 the UK government published a sustainable development strategy*: A Better Quality of Life*. This included 150 indicators to help measure progress. Fourteen indicators were selected as headline indicators intended to focus public attention on the meaning of sustainability.

Australia

Environment Australia has taken an active role in assisting councils to develop and implement local Agenda 21s. It has prepared guides (see APEC), including case studies, for this purpose.

Councils also have statutory responsibilities under the Local Government (Ecologically Sustainable) Amendment Act 1997. This requires all councils to integrate ecologically sustainable development into all activities and decision-making processes. The Institute for Sustainable Futures at the University of Technology, Sydney, has developed a self assessment package to assist councils to meet their legal requirements.

The 'greenhouse' issue is providing a focus for a lot of work in Australia and this is resulting in a linkage of energy, waste and transport work. Action plans are being produced, CNG is becoming the 'fuel of choice' and minimum energy efficiency standards for residential and commercial buildings are being put in place.

A large amount of governmental and non-governmental activity in Australia has focused on integrated catchment management. The process incorporates ecological, economic and equity/resource access issues and has a strong science-political viewpoint. For instance, a recent report commissioned by UNESCO outlined a strategy for addressing sustainability, sharing, efficiency and governance. It focuses on:

- the agro-ecological constraints on further water development;
- institutional reform (such as full cost recovery);
- product substitution (use dryland rather than irrigated products);
- location of new developments in resource abundant areas;
- opportunities to move towards higher value-adding water uses;
- reallocating water to the environment without great economic penalty;

and more recently:

- indigenous and women's access issues.

There has been an increasing awareness in Australia that technology is not the sole answer in water/wastewater management. Integrated catchment management is seen not merely as alignment and interaction of the relevant government stakeholders. The critical issue is seen to lie in a community's learning and involvement in the management of its living environment. Thus substantial federal and state government resources have gone into community catchment initiatives that stimulate, support and encourage community understanding and action at a local level.

Canada

Environment Canada is responsible for Canada's Sustainable Development Strategy (currently being reviewed). It has also helped pioneer the Sustainable Development Information System (Sdinfo), which has been designed for the world wide web and provides one window access to sustainable development knowledge in the Government of Canada.

Canada also has a Commission for the Environment and Sustainable Development. Making the government accountable for greening its policies, operations and programmes is a key part of the Commissioner's mandate. Twenty-four federal departments and agencies in Canada are required to prepare sustainable development strategies. Implementation of these is monitored by the Commissioner.

Statistics Canada is heavily involved in measuring sustainable development in Canada and in the development of national environmental accounts.

Comments

While increasingly countries draw together the components of sustainable development strategies from local to national levels especially in Europe currently the Nordic countries and The Netherlands remain international leaders. This reflects the clear strategic position in the national strategy, the explicit involvement of key sectors and the constructive partnerships between central and local government to give effect to sustainable development through community initiatives.

Summary

The defining character of national best practice is the drawing together of diverse initiatives supported by national leadership. This includes research strategies, sector programmes, NGO activity, and the programmes of local government. Public participation is seen as crucial not only to achieve ' buy-in' to changes in regulation (i.e. green taxes) but also to secure widespread participation in implementation projects and programmes.

4.5 Local Initiatives

Prior to 1992 agencies such as Greenpeace, Oxfam, the World Wild Life Fund and others undertook initiatives to draw attention to global threats – whether these be species extinction, pollution, poverty or famine. These initiatives brought the realities of hunger and environmental stress into the living rooms of the world (especially the well-off world). But Rio in 1992 brought an agreed set of principles and an encouragement to adopt an inclusive process, which enabled communities all over the world (maybe 2000) to set their own targets and strategies for sustainable development.

Agenda 21 is both a reality check and a methodology for action that can be adapted regardless of wealth or capacity. It involves an examination of the issues locally, of setting targets and goals, of mobilising all community groups and assets to make progress.

Groups of local governments have been brought together to improve techniques and exchange best practice under the umbrella of the International Council for Local Environmental Initiatives (ICLEI), based in Toronto. Over 300 cities and districts from all the continents belong and join together in campaigns to make progress towards global targets.

Those who see Agenda 21 as an excellent way to approach sustainable development, see that the formula's effectiveness lies in part in its collaborative, partnering approach so that participants engage with their communities, prepare plans, monitor and attack specific problems (e.g. global warming).

These initiatives are especially strong in Europe, the UK, Canada, Japan and China but significant programmes are now also being established in Africa, Indonesia and Thailand. In the less developed countries in particular, ICLEI has found that social change, not technology, is producing the solutions. The focus is on community engagement, smart thinking, local problem solving, strengthening local capacity and local democracy.

Summary

A core component in the activation of any sustainable development programme is the participation of local communities. The sustainable development agenda is seen as a corollary to re-establishing local democracy. Agenda 21 approaches have been adopted and adapted by a large number of countries and cities internationally and are seen as providing a template that small and large local authorities can use to develop an effective strategy and action programme.

SECTION 5: WHO IS DOING WHAT?

5.1 Introduction

This section of the report reviews the extent to which:

- central government departments and agencies
- local government (including regional)
- non-government organisations (NGOs)
- business
- universities and other research institutions

are undertaking research, monitoring, policy development or are engaged in practical initiatives to promote sustainable development in New Zealand.

Research for this section was undertaken mostly through face-to-face or telephone interviews and through accessing information from websites.

Because of time constraints, it was necessary to limit the number of people interviewed. The main concern was to attempt to get a good cross-section of organisations in each sector. Undoubtedly, there are many initiatives contributing to sustainable development that are not reflected in this report. The authors consider, however, that it is highly unlikely that the key findings and conclusions of this report would change significantly with further interviewing.[4]

5.2 Central Government Departments and Agencies

Overview

Politically there appears to be commitment to taking a holistic approach to social, economic and environmental issues, and some interest in Agenda 21. Examples include:

- the Prime Minister's recent speech to the Redesigning Resources conference in Christchurch;
- the Minister for the Environment attended a meeting of the Sustainable Development Commission in New York last year, and returned 'fired up' about Agenda 21. A recent speech that she gave to a public meeting on the North Shore was about Agenda 21;
- the Minister of Energy (and Research Science and Technology) is leading the charge on a number of issues and projects, including an interdepartmental working group on climate change, and the development of a national Energy Efficiency and Conservation Strategy;
- work on local government reform suggests that local government may, in future, be required to actively promote sustainable development;
- the Ministries of Environment, Transport, and Economic Development are all currently engaged in considering how the concept of sustainability applies to their areas.

Interviews with central government managers and staff suggest, however, that this government is taking a pragmatic approach. While it is happy to have sustainable development as a reference point, it is more interested in doing

4 Note: The level of detail provided about each stakeholder and agency varies. More detail doesn't always mean that the organisation is doing more; it may mean that the information was more easily available.

things than in setting up new structures or promoting a new conceptual view of the world.

In the early 1990s New Zealand's Resource Management Act, which integrated a vast array of environmental legislation, was regarded internationally as ground breaking legislation. With its focus on bottom lines it aimed to ensure sustainable management but fell short of promoting sustainable development. It could be argued that this was an important first step (particularly from an environmental perspective) which New Zealand has failed to move beyond. At worst it may also have encouraged complacency – the response of some people is that New Zealand has no need to address sustainable development because it has the Resource Management Act and other environmental legislation.

At a ministry and departmental level the evidence of commitment to the principles of sustainable development is mixed. Senior managers from the Ministry for the Environment (MfE) have been involved, in recent months, with discussions with other government agencies – including transport, economic development and social policy – about what sustainable development might mean for them. Staff in several government departments commented that the interdepartmental working group on climate change (which includes Ministry of Transport, MfE, Treasury, Ministry of Agriculture and Forestry, and Ministry of Economic Development) is providing a good opportunity for collaborative work on an issue at the core of sustainable development.

There is also some evidence that many departments are taking an increasingly holistic approach to addressing issues. Programmes such as 'Strengthening Families' and 'Closing the Gaps' have been instrumental in encouraging this. For example, the recent Health Strategy discussion document includes objectives such as:

- to support policies that reduce income inequalities and ensure an adequate income for all

and

- to reduce the incidence and impact of violence in interpersonal relationships, families, schools and communities.

Nevertheless, these examples are still limited. There appear to be fragments of policy and initiatives that could be drawn together to start developing a framework for sustainable development, but this would require much greater interdepartmental cooperation, and some form of overview.

The rest of this section provides more detail about the activities and programmes of a number of central government departments and agencies.

Summary

Central government ministries and agencies are starting to move beyond a framework of sustainable management to explore the concept of sustainable development. Politically there also appears to be some interest. However, unless the approach to sustainable development is a fully coordinated response, it will fall short of what is required.

Ministry of Transport (MOT)

The MOT is currently preparing a New Zealand Transport Strategy. The Strategy is intended to complete the Land Transport Pricing Study, undertaken in 1997, and will set a range of targets. Sustainable development is considered to be a key concept underpinning this Strategy, meaning that social (such as safety) and environmental impacts of transport will be addressed.

In developing the Strategy the MOT will be applying a new conceptual framework, where 'land transport corridors' rather than roads will be the focus. In the past footpaths (for example) have been seen primarily as a way of keeping pedestrians off roads. The new focus on corridors enables the needs of all modes to be considered interdependently.

The MOT emphasises that the current transport issues facing the country – and in particular cities such as Auckland and Wellington — are the direct result of road users not paying the full cost of road use, and the wrong signals (such as cheap housing loans for suburban housing) being given out for many years. Pricing instruments will be a focus of the Transport Strategy – for example the use of 'global positioning technology' for heavy vehicles is a realistic possibility in the near future. Some vehicles are already using this for business purposes. It would enable heavy vehicles to be charged the actual (rather than the average) cost of their travel and would have a significant impact on long haul trucks, potentially encouraging a shift in modes to rail.

The possibility of extending this to all motorised land transport in the not too distant future is a real one. The cost of direct charging equipment is becoming more feasible – and New Zealand could be a world leader because it has no borders with other countries.

In addition to the Strategy a number of other recent or current policy initiatives and studies were highlighted as contributing towards creating a more sustainable transport system:

- From next year there will be separate expenditure goals for different land transport modes so that, for example, projects for cyclists will no longer have to 'stack up' against projects for road. The amount of money allocated to each mode will be determined through the Land Transport Strategy.

- Passenger transport funding for regional councils will not be capped in the future but will be allocated on the basis of passenger transport kilometres travelled (plus a top-up for peak time travel). This will enable regional councils to invest and allocate their funding in such a way that provides more incentives for maximising passenger transport usage.

- The MOT has recent completed work (with MfE) on a Vehicle Fleet Emissions Study. This focused on local air pollution (i.e. excluded CO_2). As a result of this study, a range of initiatives will be introduced including minimum standards for cars entering New Zealand (where none have existed in the past). Having completed the air pollution study, the MOT is moving on to address the impacts of land transport on water quality.

- The MOT is heavily involved in an interdepartmental group working on climate change. This group is due to come back to government with a package by Christmas. As mentioned in Section 3, the MOT has developed a computer model to project likely $C0_2$ levels over 20 years – given what is known about New Zealand's current vehicle fleet and the technical changes that are likely to occur in that timeframe. The model shows that technology alone (fuel efficiency, new fuels, fuel cells etc) would probably be enough to meet Kyoto requirements (CO_2 reduced to 1990 levels), but not until 2025 which is 13-17 years too late (New Zealand's commitment is not to exceed 1990 emission levels, on average, during 2008-2012).

- The model is now being re-run using a series of 'what ifs' – for example, limiting the maximum vehicle size.

  The climate change group is looking at a wide range of instruments including carbon trading, emission standards, pricing, passenger transport, road sharing etc.

The comment has been made by others during interviews for this research that the MOT is overly fixated on pricing as an instrument for addressing transport issues – reflecting the free market ideology that if the pricing signals are right then the outcome will be efficient (and sustainable). It is worth noting, however, that in addressing sustainability issues across all sectors, a range of instruments will be required, including pricing. In the case of transport, pricing may well be the most important instrument.

Ministry for the Environment (MfE) and Energy Efficiency and Conservation Authority (EECA)

MfE is currently in the process of realigning itself and redefining its role. In doing so, it is extending its focus beyond sustainable management to sustainable development or, more precisely, to ecologically sustainable development. This shift is considered by senior staff to be partly evolutionary and partly reflective of a change in political priorities. From a political perspective the previous government viewed MfE's role as maintaining environmental bottom lines and 'limiting bads'. The present government's expectations appear to be wider than this although MfE still has a mandate to address only the biophysical. Staff also commented that 'urban sustainability' has now gained recognition as a concept, and is an issue that requires analysis and policy that is separate from sustainable land management.

This subsection of the report briefly outlines recent and current MfE initiatives that can be seen to be contributing to sustainable development (beyond overseeing legislation) and then outlines areas that the Ministry is likely to move into in the near future. It finishes by commenting on EECA, which has recently been brought under the umbrella of MfE.

Recent and current initiatives:

- When Agenda 21 was adopted by New Zealand, MfE played a limited role in assisting with its uptake. It produced an Agenda 21 kit and undertook a pilot project with several local authorities that had made a commitment to it. However, the Government of the time considered that Agenda 21 was local government's job to implement.

- The funding of research from the Sustainable Management Fund has been a major area of MfE's activity in the last few years, outside the administration of legislation, and has produced some useful work focused on practical tools such as education and information. One example is a virtual information centre developed by Business Care with the Environmental Business Network, Environment Waikato and the Auckland Regional Council. This is considered a good example of a website-based approach to disseminating practical information and linking up existing good ideas.

  Despite some useful projects staff have identified the lack of linking up of research as an issue with respect to the Sustainable Management Fund.

- Developing an extensive indicator programme has been another key area of MfE activity. The indicators cover not only the biophysical but also include urban amenities and indicators with economic linkages such as energy, waste, weeds and population.

It should be noted that in the course of undertaking research for this project a diverse range of views regarding MfE's indicator programme was encountered. Some supported the programme but pointed out that the indicators still fall well short of sustainable

development indicators. Others criticised the MfE's adoption of the 'pressure-state-response' model that tends to simplify cause and effect. These people favoured a systems-based approach to developing indicators – an approach that could require investing in modelling capability that New Zealand currently does not have. A third criticism was that the development of indicators should be through a community driven process, not a scientist driven process.

It is not possible to comment further on these issues within the scope of this report, except to say that there is clearly fundamental disagreement on some issues, even among those talking the 'sustainable development language'. It is important that the initiatives arising out of this report include providing the forum for facilitated debate on these issues.

- The MfE has contributed to the Fleet Emissions Study outlined in the section describing the MOT's programmes. It was also involved in the decision to remove capping from passenger transport and it is a key player in the interdepartmental work on climate change.

- The MfE has had involvement with the Ministry of Agriculture and Forestry (MAF) and Landcare Trust in relation to sustainable land management.

Areas that MfE will or may address in the near future include:

- focusing on practical tools such as public awareness and education. This may mean supporting their development, assisting with information sharing, and connecting what everyone does rather than actually developing the tools;

- conceptual work relating to the notion of ecologically sustainable development. This is likely to include a shift towards thinking about services instead of commodities – for example, seeing cars and buses as part of an integrated transport system rather than needing to be traded off against each other;

- developing a national Energy Efficiency and Conservation Strategy;

- providing support around the RMA and the next generation of plans. A Quality Plans Project is one example of this.

It is also understood that, although MfE is due to review its strategic plan (Environment 2010), there are no funds allocated to this at present. Some of the issues that need updating may well be covered in work on sustainable development if this is intensified over the next period.

This subsection of the report concludes with a brief comment on EECA, which is now a crown entity under the Energy Efficiency and Conservation Act 2000. Its parent agency is MfE and EECA, along with MfE, will assist in the preparation of the national energy efficiency and conservation strategy.

EECA's role is to encourage, promote and support energy efficiency, energy conservation and the use of renewable sources of energy. EECA's focus has always been a practical one – working with stakeholders in the private and public sector to bring about voluntary changes in behaviour involving energy efficiency, conservation and switching to renewable energy sources.

Key delivery programmes include Energy-Wise Business, Energy-Wise Government and Energy-Wise Homes. According to information on EECA's website, it *"aims to package its expertise into tangible programmes of action that it can undertake in partnership with organisations to (our) mutual benefit"*.

EECA has also undertaken technical analysis, which will underpin the likely introduction of minimum energy performance for commercial buildings initially – and later possibly for cars, houses, household appliances etc.

EECA also performs a monitoring role that has been strengthened by new legislation. While the Ministry of Economic Development (MED) collects statistics on the supply side, EECA's role is to look at how energy is used; for example, whether houses are insulated.

According to staff at EECA there is plenty of opportunity for 'win-win' solutions – energy efficiency that is also cost effective. Apparently the government is very receptive to energy efficiency initiatives, and part of that appeal is obviously the potential for outcomes that benefit everyone.

Despite the fact that EECA appears to offer a good model of a partnership-based approach to change, a recent report by the PCE (see below) highlighted a number of concerns regarding national progress compared to other OECD countries. Concerns included insufficient focus on renewable energy, low uptake of renewable energy research by the private sector, and the need to monitor the outcomes of various energy sector reforms. Recent changes to EECA (including an increased budget) should address some of these issues. No doubt others are targeted to be addressed through the National Strategy.

Ministry of Economic Development (MED)

The MED's website contains a press release from Jim Anderton headed "Sustainable development, key to new industries". It outlines a cabinet paper released in June by Jim Anderton and Phillida Bunkle on sustainable development. According to the press release, sustainable development involves:

- *thinking broadly about costs and benefits, not merely separating issues into economic, environmental and social compartments;*
- *considering long-term effects as well as short-term ones;*
- *assessing indirect as well as direct effects;*
- *taking extra care when developments might be irreversible.*

The website also mentions that MED is developing an Economic Development Policy and has a page entitled "Sustainable Economic Development" that outlines the existing and new functions of the Ministry.

Apart from these references to sustainable economic development no further information is readily available. No one from the MED was available to meet with the researchers. According to a staff member, the Ministry has been doing some work in this area and some working papers were promised when completed. It is understood that a cabinet paper is due to be released about the same time as this report.

Another interviewee, Ecologic Foundation chief executive Guy Salmon, noted that, while the MED refers to sustainable development, in practice it seems to emphasise economic needs as being paramount.

An interviewee who specialises in social policy sees huge potential in the approach the new Government might take to employment in Ministries such as this one. Employment is seen as a key ingredient in sustainable development, as it had far-ranging effects on families, children and communities. After 15 years of a 'non-active' policy around employment except for a 'supply' response, there is now an opportunity, despite globalisation and the relative isolation of New Zealand, to take more proactive steps.

Two practical steps are seen as helpful. One is the scrutiny of any policy to estimate its effect on short- or long-term employment, and the well-being of children. (This needs to extend to other sectors as well.) The second is the focus on regional economic development, particularly for rural towns, which are suffering from the effects of unemployment. The development of call centres, for example, where location is not important, could help unemployment and rebuild economies, even if they were (in a more restricted way of looking at 'cost') more 'expensive' to establish.

Ministry of Research, Science and Technology (MORST) and Foundation for Research, Science and Technology (FRST)

Over the last three years MORST and FRST have made significant progress towards developing a conceptual framework for addressing sustainable development issues in the research, science and technology areas.

This framework has arisen out of the FORESIGHT project, initiated by MORST in 1998 and completed by FRST in 1999. This project involved developing visions or scenarios of the future and assessing what they might mean for research and development in New Zealand. Individual sector projects were an integral part of the strategic visioning exercise. A key purpose of the project was to enable MORST and FRST to shift from being 'allocators' of funding to being investors.

One output of the FORESIGHT project was an environmental strategy. This was also influenced by the PCE's report on urban sustainability referred to below.

The FORESIGHT project has been reflected in four new goals for research and development – the innovation goal, the environment goal, the social goal and the economic goal. It has also resulted in significant reconfiguration of the Public Good Science Fund (PGSF) to align it with these goals. Notable changes to the PGSF include:

- carving off $37 million into NERF (the New Economy Research Fund). This money has been targeted for science that does not have a commercial function now. What is slightly puzzling is the lack of focus on sustainable development with respect to NERF. There would appear to be an obvious opportunity to focus on research that is compatible with moving New Zealand down a sustainable path – even potentially becoming a world leader in some aspects;

- developing a number of Strategic Portfolio Outlines (SPOs) describing research priorities that make very clear linkages between different research components and encourage researchers to think about their project in an holistic way;

- a more integrated view of productive systems as a whole in terms of funding research related to sustainable land management;

- a new focus on research contributing to urban sustainability.

According to staff at FRST, this last point is proving most problematic in terms of getting research lined up with the framework – that is, getting people interested in the 'right things'. For example, there tends to be more emphasis on physical infrastructure rather than the softer end of communities and developing new ways of meeting needs (such as accessibility) of those communities.

It is also worth noting that in 1997 MORST undertook a study to Australia, France, Canada, Germany and The Netherlands. The purpose of the tour was to contribute to development of sustainable development indicators in New Zealand by looking at overseas examples. The report makes fascinating reading as well as providing a good summary of what other countries are doing. It highlights opportunities for international partnerships (for example, by seconding scientists from places such as the Wuppertal Institute in Germany). Any future work on developing sustainable development for New Zealand should be undertaken with reference to this report.

Ministry of Health (MOH)

While no staff members from MOH were interviewed, useful information on its website assisted in formulating a picture of its priorities.

Our Health, Our Future: The Health of New Zealanders (1999) is a comprehensive 'state of the nation's health' report. The report focuses on levels, trends and inequalities across a range of indicators. It analyses variations in health between age, gender, ethnic and socio-economic groups. (Some of its key findings are quoted in Section 3 of this report.)

The report reflects a more holistic approach to measuring health; it focuses not only on mortality, but also on quality of life (morbidity). It uses 'independent life expectancy' (in simple terms, the number of years a person can expect to live independently) as the key health expectancy measure. Not surprisingly, the report highlights significant inequalities between Maori and non-Maori in all aspects of health status.

Ministry of Social Policy (MOSP)

MOSP does not have sustainable development as an explicit reference point; however, in recent years there has been a widening of focus to take a more holistic and integrated approach. The focus on prevention, on improving well-being and the Strengthening Families programme are all examples of this. Also the guardianship legislation, for example, recognises dramatically changed patterns of social behaviour and family disruption caused by separation of parents – rather than focusing just on the more traditional forms of dislocation and upheaval such as those caused by death.

MOSP is also interested in and contributing to, research on issues such as the survival of the Maori language and what role the government can play in whanau development. It sees these issues as relating to social sustainability.

This new approach has been the result of a shift in paradigm to some extent. The 'pure market' economic paradigm is that if you get things right for the individual, well-being will flow. By the mid-1990s there was growing concern about families and children and recognition that some targeted intervention was necessary. More recently there has been another shift, with the policy agenda now including concepts such as 'caring for communities', 'enhancing social capital' and 'social cohesion'. Strengthening Families is seen as the sort of intersectoral cooperative good practice model that is working well in different parts of the country and is expanding.

There is, therefore, an increasing awareness about the interrelated nature of a range of social issues, and also an acknowledgment that social issues will not necessarily be taken care of by individuals maximising their own welfare in the market place. However, MOSP has tended to view environmental issues as being addressed by the RMA and local government. There are some exceptions; for example, in undertaking work on children's rights there are linkages with issues regarding playgrounds, transport and shopping mall design.

Treasury

Primarily because of time constraints, Treasury officials were not interviewed as part of this research. However, it is worth making a few comments about Treasury's potential interest in this area.

- It is understood that the upcoming tax review will address issues regarding resource efficiency. The review will certainly address CO_2 but may address resource efficiency more broadly.

- Through this research several people have commented that Treasury has an interest in triple bottom line accounting and related concepts and is undertaking some research in this area.

- A scan of the Treasury website was undertaken for this research. No information that directly related to sustainable development was found. However, there was an interesting working paper that attempted to trace the underlying causes of New Zealand's increasing income inequality. It concludes that:

  > *Allowing more people to share in real income growth will require policies to rise national income per person, alongside policies to redistribute income growth.*

  And that

  > *Policies could aim to address*
  > - *situations of unacceptable hardship*
  > - *issues relating to the spread of incomes across individuals and families, and across different ethnic groups, and regions; and*
  > - *issues concerning fairness across different generations.*

Although this is a working paper only, it is a notable departure from the model that assumes minimal market intervention will ensure that economic prosperity will 'trickle down' from the wealthy to the poor.

Department of Conservation (DOC)

The New Zealand Biodiversity Strategy is intended to address the loss in New Zealand's indigenous biodiversity. New Zealand has made significant technical advances in restoring ecosystems. For example, DOC is now doing pest eradication on islands 100 times bigger than it was able to do ten years ago. In addition it has modified these techniques to enable restoration on 'mainland islands' as well. According to the Biodiversity Strategy New Zealand is recognised as a world leader in these fields. Yet, despite the technical advances, New Zealand's decline in biodiversity has been slowed – not halted.

According to a DOC staff member the four major challenges facing the implementation of the biodiversity strategy are:

1. conservation of the marine environment (which will be addressed through development of an Oceans Policy);
2. managing biodiversity on publicly owned land;
3. managing biodiversity on privately owned land (the subject of the *BioWhat?* report);
4. developing capacity and information to underpin 1-3.

The lack of information about the species that are out there and how our ecosystems function is considered to be a major issue which needs to be addressed.

In addition to these comments from DOC staff, PRISM is aware of other issues from a number of sources including:

- The need to address the balance between private property rights and responsibilities. This includes clarifying guidelines over who should pay for the costs associated with managing land for environmental purposes that do not have commercial benefits; it also means landowners should consider biodiversity management as a fundamental part of management.

- Uncertainty over what is meant by the conservation goals in the *BioWhat?* report. Essentially, one interpretation is that possibly as little as 10% of remaining native vegetation in any district would be given protection. Overall, the approach remains one of conserving and managing those parts of a productive landscape left over following development; in contrast, the ecological argument is that the balance needs to shift more towards establishing the most efficient ways to protect and enhance biodiversity.

- The reason these issues need addressing is that in order to reduce the rate of biodiversity decline, as outlined in the Biodiversity Strategy, changes in integrated land and water management may need to be more profound than currently suggested by these government documents. For example, putting aside representative fragments of vegetation has questionable ecological value and reinforces the message that productive land (urban or rural) is separate from ecologically valuable land. This contrasts with the idea of establishing the ecological capacity of a catchment (and this includes land, water and coastline) and marrying that with primary, secondary or tertiary economic sector requirements.

- There is a lack of integration between legislation dealing in conservation issues, e.g. fisheries and forestry. This creates distortions and can lead to a lack of integration of ecosystem-based sustainability modelling into what are often predominantly economic models of sustainability.

- There is a lack of integration between the MfE's pressure-state-response environmental performance indicator model (adopted from the OECD) and the Biodiversity Strategy.

The Office of the Parliamentary Commissioner for the Environment (PCE)

The PCE is an independent entity reporting to Parliament, rather than government, but has been included in the central government section.

Although the PCE is required to focus on environmental matters it articulates a clear vision of what sustainable development is about and has undertaken a lot of research that is directly relevant. Any government initiative to promote sustainable development across all sectors will need to consider the PCE's role in this.

Recent research and publications of particular note include:

- *Getting More From Less: A review of progress on energy efficiency and renewable energy initiatives in New Zealand* (February 2000)

  This report led to the shift of EECA from MED to MfE, to the passing in May of the Energy Efficiency and Conservation Act, and to the requirement in that Act to develop a national Energy Efficiency and Conservation Strategy.

- *Ageing Pipes and Murky Waters: Urban water system issues for the 21st century*

  This report highlights the compelling need to develop a clearer understanding of the sustainability implications for urban water systems – developing systems in harmony with the natural water cycle and encouraging more efficient resource use.

- *The Cities and Their People: New Zealand's Urban Environment* (1998)

  This report was instrumental in getting sustainable urban issues on the agenda. Although many local authorities were complaining that the Resource Management Act was more difficult to apply to an urban context, the official government line at the time was that urban issues were no different to rural issues and required no additional analysis.

  The PCE report not only challenged this view but also pointed out that the RMA was about sustainable management, not sustainable development. According to the report, the effects-based approach of the RMA does not address the nature and efficiency of resource use and gives insufficient emphasis to health and well-being of people and communities.

  Similar issues are also highlighted in a report entitled *Towards Sustainable Development, the Role of the Resource Management Act* (1998). This report questions New Zealand's commitment to sustainable development in spite of having signed the Rio Declaration and being a member of the Commission on Sustainable Development.

The urban sustainability report concluded with some strong recommendations including:

- a national sustainable development strategy;
- requiring all government agencies to report annually on how they have recognised and implemented the principles of sustainable development;
- a sustainable development unit;
- a non-government business oriented Foundation for Sustainable Development.

- *Setting Course for a Sustainable Future: The Management of New Zealand's Marine Environment* (1999)

  Overlapping and conflicting interests, agencies, processes and legislation was the impetus for this report, which has led to a government commitment to the development of an Oceans Policy.

- *The New Zealand Government and Sustainable Development: Possible Initiatives* (January 2000)

  This report summarises the extensive sustainable development programme being implemented by government in the UK and suggests issues for discussion in the New

Zealand context. UK initiatives include a national Sustainable Development Strategy, a Green Ministers Committee, a Sustainable Development Unit, a sustainable development indicators programme, and a requirement of local government to adopt and implement Agenda 21.

- *Local Agenda 21 in the United Kingdom: A review of progress and issues for New Zealand* (February 2000)

  This report focuses on Agenda 21 and on the experience of local authorities in implementing Agenda 21 programmes in the UK. It concludes that:

  - *Local Agenda 21 is providing a very suitable process for addressing the integration of environmental, social and economic issues at the local level;*
  - *The development of new mechanisms for public involvement has assisted the local democratic process and community participation;*
  - *A Local Agenda 21 strategy is a community and not a municipal agenda and is relevant to all sizes and types of authority and community;*
  - *The coordination and information provision role of the Local Government Management Board and other organisations has been vital, as has been the role of the national steering group.*

- *Sustainability Indicators for New Zealand Cities and Communities* (2000) (with Paul Honeybone, Sustainable Cities Trust)

  This report reviews progress in developing urban sustainability indicators in New Zealand and an outline of international initiatives that could be relevant to New Zealand. It also identifies how further progress could be achieved in New Zealand.

Ministry of Agriculture and Forestry (MAF)

A review of MAF's technical and other publications shows a definite shift towards measuring and analysing the social aspect of introducing sustainable farming practices. This complements earlier trends towards integrating ecological management systems into farming practice.

For example, from Technical Report 00/13 - *The Influence of Social Factors on the Future Performance of the Primary Production Sectors* (Ruth Underwood and Jack Ripley, April 2000):

> *This report compares and contrasts a selection of research commissioned by MAF Policy on sustainability and rural communities to identify key social issues that might impact on primary industry performance in the future*
> http://www.maf.govt.nz/MAFnet/index.htm

This can be seen in the context of earlier comments on the relative impact of tools such as quality assurance and environmental management systems:

> *To date, the impact of QA/EMS on sustainable agriculture/sustainable land management is unclear. The case studies indicate that such schemes are not yet achieving their potential in this area. This is because current schemes are largely driven by market requirements. Their main concerns are product quality and animal welfare, and in order to gain both producer and consumer acceptance, the schemes have been developed as single purpose schemes that are simple, with clear, tangible, demonstrable benefits. Such schemes can make a contribution to sustainable agriculture/sustainable land management outcomes, particularly in the areas of profitability, animal welfare, and food and fibre safety. Most of the case study schemes did not address the effect of production practices on natural resources, other than to require that producers 'met their statutory obligations'; for example under the RMA.*
>
> (MAF Technical Report 98/2 *The Role of On-Farm Quality Assurance and Environmental Management Systems (QA/EMS) in Achieving Sustainable Agriculture and Sustainable Land Management Outcomes* Stuart Morriss (Project Leader) July 1998. (On line at: http://www.maf.govt.nz/MAFnet/index.htm)

In addition, MAF is due to publish a report looking at the ecological, economic and social issues impacting on hill country farmers around New Zealand. The abstract to an interim paper based on this work (Rhodes *et al* 2000) says in part:

> *This study investigated a range of economic, environmental, and social issues affecting North Island hill country farmers. It showed that the majority of farms are in a fragile economic position, with only the top quartile producing a true disposable profit, and all farms having a negative EVA. On the environmental front farmers are very aware of the issues, with 80% of the surveyed farmers having altered their management over the last 5 years due to environmental concerns, and 30% have set aside areas of bush as reserves. The main motivations were aesthetic and/or ethical concerns rather than dollars.*
>
> *With respect to the social concerns, there is widespread acknowledgement of the need to maintain sustainable local communities, and the greatest threat to sustainable farming was seen as off-farm issues; retention of local schools, stemming population drift, access to health services, and cost of local services. The main constraint seen by farmers is time – to put into the farming business, to put into environmental issues, for the family, and for community issues.*

In April 1999 MAF launched the *RM Update* newsletter. It aims to keep readers updated on topical resource management issues affecting the land-based sectors and related industries. Topics have included dairying and the environment, sustainable hill country management strategies, and similar issues.

Earlier this year MAF was allocated an additional $10 million over three years, to establish a sustainable development fund. On September 6 MAF launched its Sustainable Farming Fund to *"support community-driven programmes aimed at improving financial and environmental performance of the land-based sectors. It will help rural communities overcome barriers to their environmental, social and economic viability"*.

Despite the above, a lack of integration between regulatory and management systems and the farming community means in many areas there is still a disconnection between effective ecological and social enhancement and farm management. This results in a confusion over the roles and expectations placed on land owners and managers, particularly in relation to wider 'common good' issues.

Statistics New Zealand

Although no one from Statistics New Zealand was interviewed for this research several people commented in passing that Statistics New Zealand is taking an active interest and developing some capability around topics such as environmental or green accounting, triple bottom line accounting, and the development of catchment-based data.

Statistics New Zealand has also recently published an interesting report, referred to in Section 3, which brings together a range of social, economic and environmental data with implications for the future shape of New Zealand society (Statistics New Zealand 2000: *Looking Past the 20th Century*).

Pacific Rim Organisations

It should be noted that there are a number of inter-governmental organisations that network and provide services in aspects of sustainable development. An example operating more at the environmental end is South Pacific Regional Environment Programme (SPREP). Formed in 1982, SPREP is a grouping of 22 Pacific Island countries, New Zealand, Australia, France and the USA. The organisation coordinates a variety of programmes from energy advice, conservation issues and capacity building for smaller nations in environmental/sustainability issues.

The New Zealand Government, through the Ministry of Foreign Affairs and Trade, also has an Overseas Development and Aid (NZODA) programme, funding and supporting NGOs to deliver a range of capacity building programmes in other countries. Many of these work with local communities in a multi-sectoral style closely mirroring the international Agenda 21 template.

5.3 Business

Overview

New Zealand must engage business in any commitment towards sustainable development. One view is that New Zealand could gain a competitive edge in some areas, such as organic produce, by striving for sustainable development. A more hard-hitting view is that if New Zealand ignores sustainable development it will shut itself out of future global markets.

In 1999 The New Zealand Business Council for Sustainable Development (NZBCSD) was established to provide business leadership as a catalyst for change towards sustainable development. The Council includes high profile business figures such as Stephen Tindall of The Warehouse, and Michael Andrews of Fletchers. Many people interviewed while researching this project commented that New Zealand must have champions of sustainable development and that the Business Council has a critical role to play in this.

As well as the Business Council there are other organisations, such as Business for Social Responsibility (BSR) and the Environmental Business Network (EBN), that have strong membership bases. There are also many examples of partnerships between local government, central government and business implementing cleaner production and energy efficiency programmes.

Despite this activity, sustainable development is not the common language of business. The Business Roundtable, for example, has not done any formal analysis of sustainable development. Its current view seems best summed up by the philosophy that sustainable development involves restricting resource use when the evidence for this need is unclear at best and wrong at worst.

For the past few years there has been considerable concern that New Zealand is losing large manufacturing companies to places like Australia as ready access to mass markets becomes more important. More recently there has been a lot of publicity about New Zealand's failure to attract Motorola. Overall there is concern that New Zealand is not positioning itself to be a player in the new global knowledge economy.

In the late 1980s and early 1990s what was 'wrong' with New Zealand's economy was too much market intervention and distorted pricing signals. Now many commentators are citing New Zealand's poor research and development record as 'the problem'. Given this concern with R&D there is surprisingly little attention being given to how New Zealand will be able to compete in a world demanding, at very least, higher environmental standards.

Internationally companies such as Shell, BP, 3M, British Telecom, Interface and Electrolux have recognised sustainable development as a key to future competitiveness and have embarked on processes to transform the way in which they do business. Apart from some members of the Business Council and a few other examples (see comments about Redesigning Resources Conference below), there is little evidence that large companies in New Zealand are addressing these issues.

From a primary produce perspective, sustainable development may be even more important. This can be viewed from two different perspectives.

Firstly, from a sector view, several people interviewed commented that for New Zealand to compete in global markets it must take sustainable production much more seriously. The increasing demands of consumers, particularly in Europe, Japan and the USA, mean that buyers are looking for 'safer' products and those with less demand on the environment. Horticulture and viticulture are leading the way in responding to this challenge, while dairy and meat are far behind. This lack of movement, if it continues, is likely to have serious economic consequences in the future. New Zealand has also been slow to take

advantage of the burgeoning market for organic produce. Kiwifruit growers and marketers have been leaders in this field.

From a cross-sector view, organisations such as the CRI AgResearch and MAF have found that in order to effect good agricultural management it is necessary to integrate ecological, social and economic research.

Tourism is another area where sustainability must be addressed. New Zealand is at risk of losing its major marketing strength – its clean, green image. In 1997 work was undertaken by the PCE, MfE and the tourism industry related to the environmental impacts of tourism and a strategy for putting New Zealand tourism on a sustainable path. The strategy does not appear to have been completed.

Research revealed some significant differences in opinion about what needs to happen for New Zealand business to become sustainable. Many point to the practical examples of win-win partnerships where business can reduce waste, reduce energy use and save money. Others believe that the priority rests with developing environmental standards for traded goods – in the expectation that the world will demand these sooner rather than later and that New Zealand needs to be prepared.

A third group is critical of energy efficiency, cleaner production, and waste minimisation programmes, claiming that these programmes make business less unsustainable at best. At worst they are a panacea, an example of 'greenwashing', and an excuse for not tackling the difficult issues. This group points to writers such as Amory Lovens and Paul Hawkens who claim that business needs to totally redefine the way in which it operates. To do so it needs to take a long-term view, look at production systems as a whole and reconfigure them to mimic nature. It also needs to look beyond its customers, staff and suppliers, to examine its role as part of the community.

A Redefining Resources conference held in Christchurch earlier this year involved five companies coming together to make a commitment to look at every aspect of their business from a sustainable development perspective. Each one has decided to use The Natural Step as a helpful tool in this process. These companies have agreed to reconvene in one year's time, before the same people, to report progress. This could be a good example of an effective way of triggering the fundamental change that business may be required to make.

The rest of this section outlines the activities of a range of groups representing business.

Summary

The recent establishment of the New Zealand Council of Sustainable Development is a positive sign that within the business sector there are leaders willing to champion the notion of sustainable development. However, sustainable development is not the common language of business. Failure of business to engage is of concern, not only for environmental and social reasons but also for economic reasons. In a world that will demand higher environmental standards, New Zealand's competitiveness may be threatened.

New Zealand Business Council for Sustainable Development

As outlined above, the Business Council was established in 1999 to lead by example, to demonstrate sustainability in action, and to be a catalyst for change. The organisation, which is still in an establishment phase, currently has 35 members. Membership is by invitation only and a limit has been set at 50 members. Members include Sanfords, the National Bank, Toyota New Zealand and Simpson Grierson.

The Business Council has spent some time discussing sustainable development and what it means for business. It is not, however, trying to define the concept. There is general agreement within the group that it is about taking a broad, holistic approach and that it is not just about recycling projects, or even just about the environment – but about the whole framework within which business operates.

The major purpose of the Business Council is to influence thinking through practical leadership underpinned by solid research. While business is the primary target audience, the Council is also developing relationships with other stakeholders such as central government.

The Council draws heavily on international research, particularly that undertaken by the World Council for Sustainable Development. It also intends to undertake some of its own research possibly around 'economic framework' issues. For example, the Council is interested in the economic implications of using tax policy to address climate change and wants to do some work in this area.

In February this year, the Council ran a Leadership Forum which was a multi-sectoral meeting of 50 people to develop a shared vision, build relationships and identify national strategies to increase social well-being, strengthen the economy and support the environment.

All members of the Council have made a commitment to report on their environmental and social performance, and the Business Council is assisting in developing a framework for this. The website also contains case studies of achievements from eco-efficiency initiatives.

Business for Social Responsibility (BSR) and New Zealand Centre for Business Ethics (NZCBE)

The BSR was founded in 1998 after Roger Spiller and Dick Hubbard returned from a conference of the American BSR. Current membership is 150 and expanding. The BSR is open to any business that wants to join. There are no entry requirements and no requirements of members once they have joined.

The primary focus of the BSR is on servicing the needs of its members. Conferences, newsletters, shared stories, best practice examples and networking opportunities are main services it offers. It is also underpinned by the philosophy of operating in a socially responsible way. For example, newspaper articles by Roger Spiller point to statistics showing that ethical companies may outperform others.

The BSR does not set out to 'conquer the world' but is quite focused on its own activities. As well as providing a forum for business, it has had some publicity and therefore some impact on increasing awareness of the concept. It is interested in moral leadership, the place of business in the community, and creating jobs as well as environmental issues.

The BSR has a close relationship with the NZCBE (which would also 'fit' under the university and research heading). The NZCBE was initiated by the Auckland University of Technology (AUT) and is supported by the AUT, the University of Auckland, Manukau Institute of Technology and the private sector. It supports business ethics research and education. For example, it may do some work in the near future on developing indicators for ethical performance. The BSR's recent conference "Leading the Way: Achieving peak performance through implementing ethical and socially responsible business" was held in conjunction with the NZCBE.

The main challenge for the BSR is to attract more mainstream businesses. Most members were the 'already converted'.

Auckland Environmental Business Network (AEBN)

The AEBN has a strong commitment to sustainable development although it does not use this terminology. It has positioned itself as playing a stronger role in environmental issues, partly because of its name and history but also because it sees the BSR as focusing more on the social side (although it should be noted that the BSR does not necessarily see itself that way). Most of its members are small businesses.

The focus of the AEBN is to:

- improve business performance;
- become more profitable and sustainable;
- network with like-minded business operators;
- increase environmental awareness.

It has some similarities to the BSR in that it is a networking and information-sharing organisation, but possibly has a greater emphasis on outreach – raising awareness.

Some of the projects that the AEBN is interested in progressing (subject to availability of resources) include:

- design a sustainable development index for small businesses;
- create a small-scale auditing process (more suited to small business than ISO 14000);
- set up an information exchange process that builds on the current system of seminars and workshops;
- set up EBN as a think tank with small business as a primary user of this information.

Business Round Table (NZBR)

The Chief Executive of the ASB (Ralph Norris) was interviewed for this research but did not speak for the Business Round Table because the NZBR does not have an agreed position on sustainable development.

The ASB has a well-developed environmental programme and sees this as part of responsible commercial management. It also sees a clear economic and social responsibility to run a good commercial enterprise to give a return to its investors. It is also a major sponsor of organisations such as Plunket, which it sees as helpful to building a sense of community.

Ralf Norris's focus is more on technology-based solutions to environmental issues. He considers that New Zealand needs a more competitive education system striving for 'excellence' and believes that the way tertiary education is funded, for example, should be reviewed to provide more graduates who are needed in the marketplace, such as in science and engineering.

The NZBR is most likely to support market-based mechanisms to address environmental issues. It may also have opinions on the seriousness of certain environmental issues. For example, a comment from the NZBR on climate change suggests that it does not accept that the greenhouse effect has been proven, and that it does not accept that if climate change did occur it would necessarily be a bad thing.

Roger Kerr, Executive Director of the NZBR, confirms that **t**he NZBR has not done any extended work on sustainable development. However, it is currently engaged in a study on corporate social responsibility that will say something about sustainable development.

On defining sustainable development:

> *[this] is the important starting point, ie, what does sustainable development mean? Clearly this needs rigorous discussion. I am unclear what the concept adds to the principles that have long guided both environmental policy and good private sector decision making.*

Roger enclosed a paper by Jerry Taylor of the Cato Institute that raises such issues. While not purporting to represent the views of the NZBR, this paper concludes with a similar statement:

> *Society has managed to sustain development now for approximately 3000 years without the guidance of green state planners. The result is not only a society that is both healthier and wealthier than any other in history, but a society with more natural resources at its disposal than ever before. One could reasonably argue that the best way to sustain development - or to maximise human welfare - is to protect economic liberty and confine state authority to protecting life, liberty and property. That is, the best way of sustaining development is to reject 'sustainable development'.*

Federated Farmers (FF)

There is no formal policy on sustainable development within FF. However, Catherine Petrey in the Wellington office says that FF sees sustainable development as critical in that it recognises that maintaining ecological systems is necessary to ensure productivity in the medium to long term.

It believes that the RMA is sufficient to achieve sustainable development but that it needs amending primarily to address the issue of compensation for loss of private property rights and to reinforce the need for s32 analysis – that is, paying serious attention to looking at alternatives to rules and regulations. It believes that it is unfair for farmers to bear the burden of conserving bush on their own land. It would like to see more flexibility in what farmers can do on their land to offset the costs of non-productive environmental management.

One view within FF is that sustainable development is a subset of sustainable management as per the RMA; that is, in order to have sustainable development you need:

- healthy physical environment conditions;
- flexible management processes that allow you to respond to changing market requirements as well as modify production methods according to biophysical conditions that vary in time and space;
- recognition that biophysical values only have value in an economic and social sense – that is, biophysical values are fundamental to farming success, and the way to judge these values is from an economic and social point of view.

FF is opposed to a national policy statement on sustainable development because it would either be too 'waffly' or too prescriptive.

FF has input to the Cairns Group on trade and agricultural issues. This includes statements on sustainable development that can be made available if required.

Christchurch Chamber of Commerce

The Chamber of Commerce has been a key player in many of the Christchurch initiatives that are discussed under the Sustainable Cities Trust and Christchurch City Council, such as Redefining Resources. The Chief Executive of the Christchurch Chamber of Commerce, Peter Townsend, qualified as a marine biologist, is also the Chair of The Natural Step, a Director of the Resources Recovery Foundation and Chair of the Canterbury Dialogues.

He is unequivocal about the 'inevitability of sustainability'. This is not just about the 'greening of business' or the 'socialising of corporate values', but realigning business thinking to make profit in the context of 'optimising sustainability'. He believes that at a regional level, business, local government and the community need to be communicating and actively working together on issues. There needs to be a commonality of thought, leadership in all these sectors and role models to show how a different way of approaching issues can work. Although Christchurch has achieved a good takeup at the executive level, he sees it as critical for the community at large to understand and take up the challenge. He is also clear that progress needs to come from the coordination of existing initiatives, leadership at a regional level, and 'benign' support, (i.e. advocacy not rules) from central government.

The Tindall Foundation

The Tindall Foundation was established as an independent body by Stephen Tindall who owns the chain of The Warehouse stores. This substantial philanthropic fund was established in order that community initiatives across a whole range of social and environmental activities in New Zealand might find funding that was difficult to access elsewhere. Many groups, initiatives and processes have benefited substantially from this Foundation that redistributes the profits of this particular private enterprise.

The belief of the previous CEO, Warren Snow, is that the Foundation has so many demands on it that it is spread too thinly. There needs to be a special funding body set up, focused on sustainable development, with its own investment arm. The investment arm might deal with new sustainable technologies, such as following ethical investment principles. Money flowing from these investments might then be utilised by a fund that would have its own board and make grants to smaller community organisations. He also commented that there is a need for some way of looking at the number of organisations in New Zealand that are working in this related field, looking at such things as synergies, benefits of coordination, shared resources, and mutual support. If there were to be some sort of national organisation, it needs to look at a clearinghouse and training function as well as a carefully designed funding agency as described above.

5.4 Universities and Other Research Institutes

Overview

This preliminary report suggests research institution advances in sustainable development fall broadly into the following categories:

- **Rural technological**: a significant positive shift towards a better appreciation of the need to understand the relationship between society, economics and ecology (for example, research by MAF, Landcare and AgResearch); but a major problem in knowing how to implement this in a practical way through visions, goals, policies and plans. In other words, there is a need for more work on operationalising the concepts of sustainable development.

- **Urban technological**: signs of genuine interest in pursuing such things as resource and energy efficiency projects (e.g. Landcare's involvement in a 'zero-impact' subdivision in Christchurch), which complements similar moves in the commercial world. Efforts to establish institutions or research organisations aimed at analysing and delivering urban sustainability are just gathering momentum, for example, the six cities quality of life project. Other initiatives are also just gathering momentum (e.g. the Sustainable Development Research Centre, IPENZ's Centre for Sustainable Management).

- **Educational**: institutions are incorporating sustainable development into teaching and research. While ad hoc, the moves appear to be gaining momentum. For example, IPENZ's Centre for Sustainable Management is concentrating on engineers, and its first group of graduates is entering the work force now. An integrated catchment management model incorporating sustainable development design and auditing processes is being investigated by Unitec in Auckland. The technical institute is considering setting the campus up as an example of a sustainable urban site. Unitec is also due to make what are described as significant announcements towards the end of this year about private sector and academic research initiatives related to sustainable development. Finally, Auckland University has adopted an Environmental Policy aiming to promote sustainability as a benchmark for teaching, research and facility development. (A possibility here is for the newly established Tertiary Education Advisory commission to promote sustainable development nationally as part of a Government educational policy.)

This section does not provide a comprehensive overview of what universities are teaching or of what individuals within universities are researching. It focuses instead on specific groups within those institutions. There are various sustainability research units within tertiary institutions, of which only a few are mentioned here. At an individual level there is no doubt a huge range of research being undertaken around the concept of sustainable development. Some people conducting this research were interviewed for their expert opinions on issues dealt with in other parts of this report – such as the gaps and barriers to progressing sustainable development in New Zealand.

In assessing the extent to which the university and research sector is engaged in sustainable development the key questions are:

- To what extent are institutions engaged in research programmes that are focused on sustainable development?

- To what extent is this research being applied – by business, communities, individuals, government? In other words, what practical contribution is the research making towards furthering sustainable development in New Zealand.

On this second point it is apparent that since the early 1990s research programmes funded through specific government contracts such as the PGSF have had to be focused much more on take-up. Government is not interested in funding academic research that sits on the shelf. FRST and other funding agencies require evidence that the end user – whether that be business, local government, a central government department, an NGO or a particular community – is involved in defining the research programme. Crown entities such as Landcare and AgResearch are excellent examples of a partnership-based approach to research – translating the outcomes of research programmes into practical tools.

The answer to the first question is less straightforward. The university and research sector as a whole does not appear to have sustainable development as its core guiding principle. However, this may be changing as institutions recognise the interrelationships between disciplines. In addition, individuals within institutions may be engaged in a variety of research that would contribute to the development of sustainable development methods of application. Unfortunately, much of this information is not 'captured' due to poor information exchange systems.

Overall it appears that the non-urban sector – sustainable land management and development – is better catered for than the urban in terms of applied research programmes to advance sustainable development. This is consistent with findings in other parts of this report. For example, FRST concludes that, despite explicitly recognising urban sustainability research as an urgent need, it is proving difficult to attract the right kind of research – especially research that is not exclusively focused on technical solutions. In contrast, a common comment from the rural sector was there was a surfeit of information on environmental issues and, by extension, sustainability issues; the lack was in guidance on what to do with the information and a clear incentive as to why the information and knowledge should be applied.

Summary

A number of research institutions are actively contributing to applied research on sustainable development. Rural sector-based research appears to be further advanced, although there are some issues with uptake. There are some good examples of urban-based research but more is required. Educational institutes are incorporating sustainable development into their teaching and there is evidence of more cross-disciplinary work being carried out.

AgResearch

AgResearch is described as the largest Crown Research Institute in New Zealand, providing knowledge and best practice technology to pastoral agricultural industries. It has a strong focus on biotechnology and 'ecotechnology' to ensure integrated life science solutions that create value for stakeholders and customers, wealth for New Zealand, and better health for all.

In common with other organisations and institutions, AgResearch recognises the importance of sustainable management to maintain productivity. The organisation is adding a social unit focusing on issues related to take-up – how people behave and what helps change behaviour. AgResearch's AgSystems research unit wants to position itself as a leading behaviour change research entity that will continue to grow and add value to New Zealand industries.

According to senior staff the social analysis of the introduction, explanation and uptake of environmental information needs to continue and become a greater component of agricultural research. There is a lot of technical data available on how to improve on-farm environmental management and a lot of related economic analysis. The major problem is how to get good management and technologies used.

Pressures for overproduction appear to be coming from the processing and export sector. These sectors take great care to comply with the RMA themselves but are not concerned about how farmers produce the raw materials. The dairy industry structure is also creating an incentive to overproduce, but the environmental downside of this structure is not widely appreciated or debated. A side effect of current moves to restructure the industry might be to make these negative aspects more transparent. The other major issue that needs tackling is getting people to link issues, such as soil compaction with productive capacity and nutrient loads with water quality.

Using the example of hill farms, there is a great deal of knowledge about environmental impacts. Farmers will take measure to reduce impacts if:

- there is an economic benefit;
- the environmental benefits are obvious, e.g. reduced erosion, enhanced landscape values as this visual (landscape) criteria can be readily appreciated.

However, there is a tendency to 'park' (i.e. eventually ignore) environmental management systems that do not result in the above.

Thus a constraint is the failure to:

- link issues – such as soil compaction with long-term productivity; or nutrient loads with water quality impacts;
- establish measures of 'efficiency' that go beyond economic.

There is a fundamental need to link and resolve longer-term resource status with shorter-term economic benefits. For example, a number of researchers are looking at 'low chemical systems' and there is a lot of interest among producers in the area. But the incentives and momentum are against adopting these ideas.

Manaaki Whenau - Landcare Research

Landcare Research is a Crown Research Institute that leads New Zealand research on sustainable management of land-based natural resources for production and for conservation. It undertakes significant environmental research for the public good through contracts with FRST (60% of its revenue,) DOC, the Animal Health Board, MfE, MAF and local government. Five per cent of revenue is generated through private sector projects and 6% from international consultancy work for global development funding agencies such as the World Bank.

Since it was established in 1992, Landcare has had a strong focus on developing partnerships with end users of information – to ensure that what it is doing is actually used. In its own words its science is *"making a difference for New Zealand"*.

Landcare's research programmes usually fulfill three different functions:

- basic knowledge – for example plant and animal systems research describes and documents species that are native to New Zealand;
- support for operational research and consultancy – management techniques that are innovative and supported by good technology and sound ecological understanding;
- support for policy development.

As Landcare says *"sustainable development is our business"*. Its core science areas are:

- protecting biodiversity;
- reducing threat of exotic organisms and improving pest management;
- sustaining the quality of land, soil, water, and food chains;
- reducing net emissions of greenhouse gases;
- improving the efficiency of natural resource use while minimising waste.

However, what makes Landcare's approach interesting is that it has gone beyond this to take a hard look at its own organisation and assess its contribution to sustainable development from a corporate perspective. In doing so it has produced a report, *Making a difference for a truly clean green New Zealand: Manaaki Whenua Landcare Research – Our report on sustainable development.*

This report on corporate sustainability is in two parts:

1. What we do for others
2. What we do for ourselves.

The first section is about Landcare's partnerships and the research programmes that underpin those partnerships. Examples include contributing to the Environment Sector Foresight Project and research into protection of the brown kiwi. 'Social responsibility' is also assessed. Many examples are given. For example, numerous hui have been held over the years as part of a commitment to engage Maori in science research.

The second part of the report focuses on sustainability of the organisations own activities. For example, it deals with 'animal ethics' in its own research.

Landcare was one of six case studies involved in the Christchurch Redesigning Resources Conference. It will be tracking its own progress over the next months and years in discussion with the other five, and will be monitored by the wider conference every two years. It has also using The Natural Step as a framework for addressing sustainability issues.

In the last two years Landcare, through its research programmes, has started to move into areas such as measuring stocks and flows of materials including energy. It is proposing to develop a piece of land near Lincoln with Common Ground (the commercial arm of the Sustainable Cities Trust – see Section 5.5 on non-government organisations). The intention is to develop a commercially viable 'zero net environmental effect' project. It will manage waste and stormwater on-site, increase biodiversity and maintain the rural character.

The Royal Society of New Zealand

The Royal Society is an independent statutory body with a statutory responsibility to foster a culture supportive of science and technology in New Zealand and to initiate appropriate international linkages.

The new CEO, Dr Steve Thompson, has a long-standing personal interest in sustainable development; however, he said that it was too soon to comment in detail on the Royal Society's position on sustainable development.

The society is forging close links with the New Zealand Business Council for Sustainable Development. It is also planning a conference for mid 2001 on "Sciences on Urban Sustainability". There have been discussions about the Royal Society doing an alternative state of the nation report to sit alongside the official government Rio plus 10 report back.

Throughout interviews conducted for this research the Royal Society was frequently mentioned as having a key role to play in promoting sustainable development in New Zealand. The idea of an independent state of the nation report was also mentioned by a number of people who saw the Royal Society as a natural choice for this task. Others considered that the Royal Society should take a lead role in a national sustainable development indicator programme.

Environmental Law Centre (ELC)

Established in 1998, the Environmental Law Centre aims to build on the Faculty of Law's expertise in the area of environmental law and resource management law. The Faculty says it has established itself as the leading law school engaged in research and teaching of environmental law in New Zealand. It is one of a number of law schools in the Asia Pacific region specialising in the field of environmental law and hopes to achieve its objectives and emerge as a regional centre of excellence in environmental law and policy.

The establishment of the NZELC is intended to provide a focal point for research, education, community-service, and a range of environmental law activities in New Zealand and the wider Asia Pacific region. The Centre aims to:

- develop monodisciplinary and multidisciplinary research programmes in the various fields of environmental law and policy;
- explore the relationship between environmental law and the Treaty of Waitangi and developments in environmental law in relation to the aims, aspirations and rights of Maori and other indigenous peoples;
- develop programmes to encourage and support graduate research on environmental law and policy;
- provide a wide range of expertise for consulting services;
- establish links with relevant research centres and environmental law associations in New Zealand and other countries;
- organise conferences and seminars for scholars and researchers, the legal profession, government agencies and business;
- make submissions to government on environmental law reform proposals;
- publish research.

Areas of special interest include international environmental law, environmental law in developing countries, European Community law, biodiversity conservation law, New Zealand resource management and planning law, and mining and energy law.

ELC believes that the priorities for New Zealand are:

1. a national report – which would be an independent state of the nation report;
2. a national strategy; and
3. a national eduction campaign.

Much of the work of the ELC is intended to contribute to these priorities.

The ELC has undertaken a range of activities and projects in a short period of time. These include:

- Seminars – in 1999 it hosted a national forum on "Environmental Law for Sustainability" and it recently hosted a seminar by the CEO of MfE on "Sustainable Development".

- A soon to be published book entitled *Environmental Law for a Sustainable Society* with contributions from eight leading environmental lawyers.

- A just-started project involving an international comparison of sustainability. It focuses on sustainability indicators, models and their implementation in selected North American and European countries.

- Undertaking some research on climate change and the role of the RMA and local government in the enforcement of national greenhouse emission standards.

- Members of the ELC were instrumental in drafting an environmental policy for the University of Auckland. The policy was

adopted in 1998 and obliges university staff to reflect on sustainability in teaching and research. It also requires the establishment of an environmental management system for the facilities and operations of the university.

UNITEC Institute of Technology

UNITEC has recently appointed an Adjunct Professor, Sustainable Development, with the charter to drive a "Key Centre in Sustainable Development" based on the principles and protocols for UNEP Agenda 21. Teaching and training courses are underway, along with research into using Agenda 21 as a basis for auditing progress towards sustainable development (see also Watershed Systems Centre for Sustainable Ecology below).

In addition, it is considering setting up the campus as an example of a sustainable urban site. Unitec is due to make what are described as significant announcements towards the end of this year about private sector and academic research initiatives related to sustainable development.

IPENZ Centre for Sustainable Management (ICSM)

ICSM was established in 1997 as a partnership between the Institution of Professional Engineers New Zealand, the University of Auckland, and UNITEC in Auckland.
Its primary goal is educational. However, its wider brief is to "provide products and services for companies, business and individuals that will enable these to manage and plan their activities in a sustainable manner". It is still working on this latter task.

ICSM sees engineers as the primary professionals for delivering sustainability – and wants to upskill them so that they are able to become the framers of questions, identifiers of problems, and participants in finding solutions.

It is aware, however, that business has to adopt a sustainability ethic, both in policy and in practice, before it will be receptive to what engineers may have to offer. ICSM therefore aims to achieve its mission through two streams of activity:

1. Upgrading awareness and skills within the profession of engineering across all sectors – consulting, construction, engineering management and education.

   This will be achieved primarily through teaching so that graduates are capable of implementing sustainable engineering. Auckland University is also looking at introducing a masters degree in sustainable engineering in 2001.

2. Provision of seminars, workshops and consultancy services to industry and business.

The Director of ICSM cites the lack of strategic planning within New Zealand businesses as a major impediment to getting business commitment to sustainable development. He is also critical of the attempts of some members of NZBCSD to address sustainability issues within their own businesses, on the basis that those attempts are superficial and provide solace for the participants rather than effectively address the issues.

Watershed Systems Centre for Catchment Ecology (CfCE) and Professor Haikai Tane

This is an Australian/New Zealand research body recently relocated from Australia. Last year it was elected to be the South Pacific station in an international network of R&D agencies for coordinating research and development programmes into the sustainable management of watershed catchments.

Professor Haikai Tane is Director of the Watershed Systems, Centre for Catchment Ecology (CfCE). He is currently Adjunct Professor, Sustainable Development, at UNITEC. CfCE was relocated from Australia in 1998 after a decade of work in the Murray-Darling Basin. The Australians have dedicated significant resources to investigating integrated catchment management, which is a community-oriented process for implementing sustainable development. During the 1970s and 1980s the

predecessor of CfCE specialised in sustainable development of the South Island high country, operating from field bases from Inland Marlborough to Central Otago.

At present CfCE has nine research directors covering key areas from geospatial imaging systems to resource ecology and community planning.

Professor Tane says a preliminary programme has begun to develop auditing systems for compliance with Agenda 21 protocols, using DoC projects in the Waitaki Basin. (The Waitaki Basin is the representative watershed for New Zealand as the Murray-Darling Basin is the representative watershed for Australia.)

Professor Tane says things working against sustainable development include Anglo cultural prejudice, the lack of adequate expertise in the application of complex ecosystems theory in the environmental sciences, and the cult belief that only native species and nature conservation can provide the answers.

Sustainable Design Research Centre (SDRC)

Based in Auckland University's Architecture, Property and Planning and Fine Arts Faculty, the SDRC's brief is to draw together research activities being conducted in the related disciplines of architecture, property and planning concerning sustainability and human settlements. Faculty staff are currently involved in, or are proposing, research covering several themes within the field of Sustainable Settlements. Recent research contracts have included specification for autonomous, zero CO_2 and zero heating houses and a design guide for a sustainable development in the UK. A major PGSF grant on life-cycle resource efficiency in the building industry started in 1999. The SDRC is also preparing a sustainable development plan for an island community.

The SDRC regularly puts on seminars that cover topics in the sustainability field.

The SDRC has not settled on an agreed definition of sustainable development, partly so as not to alienate potential contributors to sustainable development research. However, despite this, many researchers do not contribute and the assumed reasons given may be of interest generally:

- lack of professional advantage – publications in your discipline would result in advance, but interdisciplinary publications would not (part of this is because of the incentives and disincentives that exist within institutions and professions; these pressures will come from peers, bosses/Heads of Department and so on);
- lack of understanding about how the cross-fertilisation can be advantageous;
- lack of time – taking part in the process would disrupt time required to take part in other activities;
- genuine belief that their research would not be relevant.

5.5 Non-Government Organisations (NGOs)

Overview

The activities of NGOs in contributing towards sustainable development in New Zealand are the hardest to reflect because the sector is so diverse. Individual organisations are unlikely to view themselves as part of the NGO sector but may have relationships with smaller groupings of NGOs such as those providing social services, or those with an interest in environmental issues.

Because the sector is so diverse the researchers have not been able to do justice to the myriad of activities that are undoubtedly making a contribution to a better society. The focus has tended to be on those NGOs that have a stated

commitment towards furthering sustainable development – even so, many of these have not been covered.

Agenda 21 recognised NGOs as having a crucial role to play in sustainable development because of their community focus and their ability to engage in partnership style. However, it is clear that the contribution of NGOs to sustainable development will remain fragmented unless supported by other institutions – local government, central government, research and business – willing and able to work alongside them in a collaborative way.

The Landcare Trust model of drawing together and facilitating community groups to address economic, environmental and social issues in the rural sector appears to be a useful one. Despite some differing opinions on the effectiveness of Landcare it is the view of the researchers that this model deserves more attention – and could possibly be expanded or adapted to different contexts.

In the urban arena the Sustainable Cities Trust in Christchurch is a key player and has had considerable success in mainstreaming sustainable development thinking across business, local government and other sectors in Christchurch. Interestingly, although Landcare Trust and the Sustainable Cities Trust have quite different foci and different ways of operating, they have in common a brokering and facilitation role.

In the social services sector, in particular, the effect of the 'pure market' economic model of the past few years is marked. The emphasis on contracting and contestability in the delivery of Government funded social services has caused a significant move away from working cooperatively in the delivery of services to the need to compete for funding. The present Government has responded to this in a number of ways, including the formation of the Community Voluntary Sector Working Party, to see how the relationship with the Government might be improved. There are currently debates among some of the major NGOs about their role as quasi-Government service providers rather than filling the gaps as they used to do.

Summary

NGOs do not form a homogenous sector. They are a diverse group of community-based organisations and therefore have an integral part to play in contributing to sustainable development. While some NGOs address specific issues (such as poverty and environmental protection), others have an interest in the broader sustainable development agenda.

Environment and Conservation Organisations of New Zealand (ECO)

ECO is an umbrella organisation for a number of environmental groups such as Forest and Bird and Friends of the Earth. It is an advocacy, lobbying and information sharing group that has been outspoken on issues such as the sustainable management of fisheries and West Coast Forestry. It did not sign the West Coast Forestry Accord because it was concerned that there was inadequate protection.

ECO's focus is environmental protection. For example, ECO supports sustainable development but pursues sustainable management rather than sustainable development while emphasising the need for intergenerational equity. It sees sustainable development as useful as a way of *promoting alternatives*, e.g. to help promote the uptake of tools that better value the environment – it would provide more impetus to developing such things as genuine progress indicators or resource accounting.

It is keen to see better integration of legislation to reflect sustainability and an auditing process that can be used to check compliance. An important part of introducing sustainable development would be to improve participation of community and provide an audit of the influence of public input.

It does not speak on social issues because it does not feel that it has a mandate to do so.

Environmental Defence Society (EDS)

EDS is a recently reformed organisation; it sees itself as a national environmental watchdog. Its strength is in ligation (mostly *pro bono*) to protect the environment. While litigation tends to be unpopular with many people, EDS believes that it is a very powerful tool. It also regards advocacy as a key part of its role.

Along with ECO, EDS is one of the few organisations interviewed that consider their focus to be sustainable management rather than sustainable development. This is because they consider the latter to be a subset of the former and to exclude conservation.

EDS works collaboratively with a number of other organisations, such as regional councils and universities, on policy formulation, information sharing, peer review etc.

Current policy and research priorities are:

- Climate change – looking at the Kyoto Protocol and how to translate this into domestic law. It has assembled a team of experts to work on this drawing on help from the Environmental Defence fund in the United States.

- Heritage – how to better ensure the sustainable management of the landscape. Work includes researching the concept, developing policy and new approaches, and monitoring the inadequate outcomes of current practices.

The EDS also has an interest in:

- Transport – it sees this as a key issue that demonstrates the close nexus of the environmental, social and environmental. Environmental effects include CO_2 as well as a range of other pollutants. From an economic perspective, congestion costs Auckland $800 million a year. And from a social perspective there is stress, frustration and time wastage.

- Regionalism – issues such as transport and solid waste need be tackled at the regional level rather than the local level. 'Turf wars' between territorial authorities are producing absurd outcomes.

- Private property rights – the need to encourage stewardship and to offer incentives to landowners alongside this.

Ecologic

Ecologic is a small organisation promoting a more market driven approach to tackling environmental issues. Its view is that too few environmental organisations are willing to consider the economic and social dimensions of ecological issues. It believes in the need to harmonise principles related to ecology, environment and ethics ('the Three E's').

Ecologic is interested in, and doing work on, a range of issues including the need to consider compensation for landowners for transitional costs of moving towards sustainability. It is also concerned about the incentives to overproduce on farms, transportation issues, distortions in the way sustainable policies are implemented, and trade.

It sees trade and the environment as a priority area for government to address – focusing on GATT provisions, developing an environmental sustainability standard for a category of imports, and designing frameworks that allow countries to discriminate between products on grounds of the environmental effects of means of production.

Sustainable Cities Trust (SCT) and Common Ground

The SCT is possibly the most developed example in New Zealand of a non-governmental organisation taking a holistic approach to specifically addressing sustainable development.

The Trust was established six years ago and its main emphasis has been on building strategic alliances and weaving together a new set of dynamics in Christchurch between the council, business and other stakeholders. It has positioned itself as a 'broker' for urban sustainability.

Key achievements of the Trust (working alongside others) include:

- Establishment of the Canterbury Dialogues. This has involved bringing together community and business leaders to develop a shared understanding of issues and a vision for the city. The idea was to 'influence the influencers'. Overseas experts, such as Ray Anderson and Paul Hawken, have had an important role to play in terms of exposing the group to new ideas and forward thinking.

  One of the projects of the Dialogues has been the development of a 'quality of life' indicator programme – to measure progress of the city towards a sustainable future. A community survey was conducted through the daily newspaper with people asked to rank their quality of life in a number of areas. This information was used to develop eight 'headline' indicators for publication – with winter air pollution being the number one indicator (the measure is the number of days PM10 guidelines are exceeded in Christchurch).

- The Redesigning Resources Conference, which has been described elsewhere in this report (see Landcare Research above). Paul Hawken and Helen Clark were keynote speakers at this conference.

- A range of waste and recycling projects – for example, the Trust has been involved alongside the Christchurch City Council in establishing the Recovered Materials Foundation, which actively seeks out or creates commercial markets for recycled materials.

- Some work in the area of community empowerment and facilitation – for example, the Trust has worked with Ngai Tahu to enable them to utilise modern technology so as not to operate as eighteen disparate marae groups.

- Establishment of a commercial arm to the Trust – Common Ground. Common Ground is primarily involved in development projects – attempting to use urban design concepts, for example, to achieve zero net impact. It is involved with the Lincoln project described under Landcare Research and a development at Pegasus Bay. The

latter has run into some difficulties because the regional council's opinion is that not enough consideration has been given to its location (primarily in terms of transport/ energy/infrastructure impacts).

Mark Prain has also undertaken to have preliminary discussions with Paul Hawken on how to introduce innovative sustainable urban design concepts into postgraduate courses and courses for tradespeople.

The SCT has reached a point where it sees a need to slightly refocus itself although its 'core' will remain the same. It may expand its operations beyond Christchurch and Canterbury and start addressing other issues such as transport, water and air.

The following are some issues that it sees Christchurch needs to resolve.

- Although the profile of sustainable development has been raised there is some jostling and turbulence. The dynamics of that are no doubt very complex but the result is illustrated by issues such as a rift between the city and regional councils. This is acting as an impediment to a unified regional approach.

- Engagement of the community has been limited (there are some exceptions such as the 'indicate' programme), and the social aspects of sustainable development have not been fully integrated into the framework. Although Christchurch has a reputation for being progressive in the areas of employment and community development, the reality is, apparently, that the programmes are somewhat fragmented and the successes overstated. Some have described the approach so far as 'elitist' with the movers and shakers coming together to advance some interesting projects but not being prepared to tackle the hard social issues.

The Natural Step (TNS)

TNS was established in New Zealand in 1997 following a 1996 visit from Karl-Henrik Robert, founder of TNS in Sweden. It has run workshops and seminars over the last three years but it would be fair to say that it has been reasonably slow off the mark in terms of making an impact in New Zealand.

This may be about to change, with the launch of Pathfinders – a group of nine New Zealand organisations that are applying the TNS framework to work out what they need to do to become sustainable. Most of these organisations are Christchurch-based and several of them are also part of the Redesigning Resources process. Organisations include MacPac, Orion, Tait Electronics, The Warehouse, Landcare Research, The Open Polytech of New Zealand, and Christchurch City Council. Phoenix is another participant that got started 'ahead of the pack' and has recently changed its name from Phoenix Foods to Phoenix Organics Ltd.

The Pathfinder programme will involve training and ongoing support as well as connecting these organisations with others in the TNS framework.

Each company will look at:

- What is sustainability?

- The four systems conditions. These are the cornerstone of the TNS framework and are based on the 'immutable' laws of physics in terms of the earth's capacity to renew resources, absorb waste and emissions etc. The fourth system condition relates to equity and fairness.

- Where the company is now.

- Where it will be when it is sustainable. This goes well beyond making the current organisation more eco-efficient through cleaner production programmes (for example). It involves looking at a vision for the future that may result in totally redefining their business.

- What can be done now, in five years' time, in ten years' time... (this is called 'backcasting').

According to TNS staff, the advantage of the TNS framework is that it engages business at a strategic as well as a practical level. In contrast it is hard to get business excited about cleaner production because there are often simpler ways of saving money. Clearly, however, TNS is more attractive at present to larger businesses that take the time to engage in serious strategic planning.

The other notable aspect of TNS is that it opens up the possibility of radical change – beyond such things as recycling and energy efficiency.

As well as providing a framework for change, TNS has a research and knowledge dissemination focus. This knowledge base is one of the things that distinguish it from other programmes. The organisation may conduct some research into how TNS changes people's attitudes and behaviours, i.e. how it brings about practical change.

Issues for TNS in New Zealand appear to be:

- There is a perception that TNS has an ecological focus that dominates the social aspects. According to TNS staff this is less of an issue for Europe where the social component appears to be more integrated. The next TNS conference in New York will focus on the fourth system condition, which is about equity and fairness.

  TNS can also be run with community organisations; for New Zealand it was a matter of resources and priorities. It is expected that once Christchurch City Council becomes fully involved with the programme it will need to address issues around community interface.

- No consensus-based science exercise was conducted in New Zealand following the establishment of TNS. The purpose of such an exercise (which has been conducted in Sweden, the USA, the UK and Australia) is to get agreement to a vision and some goals and objectives. The main reason that this has not occurred here is that the structure of science in New Zealand is less conducive. There is a possibility that such an exercise will be undertaken in the future if it proves necessary.

- Getting buy-in at a central government level. Apparently two states in the USA (Oregon and Connecticut) are using TNS within state legislation.

Foundation for Policy Initiatives (FPI)

This newly established organisation is a think tank and research institution based in Auckland. Its role is to generate progressive new ideas that will reinvigorate public policy debate and political thinking. It is open to ideas from across the political spectrum.

Key themes include:

- renewing democracy
- fairness
- equal opportunity
- citizenship
- social investment
- innovation
- economic management
- job creation
- environmental sustainability
- effects of globalisation
- civil society.

FPI is concerned that fast change, based on short-term thinking, creates instability – or 'policy panic'. The capacity to think long term about public policy is what is missing in New Zealand and FPI aims to fill the gap. Activities will include publishing reports, commissioning research and analysis, holding seminars, and sponsoring speaking tours.

Landcare Trust

Landcare Trust was formed in 1996. It is an NGO with 17 NGO trustees from Ecologic to Federated Farmers to Forest and Bird. It has brought together organisations with differing views of the world – but not too different – and developed a strategic plan with a holistic vision.

Its strategic plan actually uses the term 'sustainable development' despite the Minister of the time being adamant that 'sustainable management' was its role.

Having a strategic development focus has proved critical in dealing with farmers – mainstream, 'hardcore' farmers are not interested in talking about the environment unless they can see what is in it (financially) for them.

Landcare Trust does not undertake projects as such. Its role is to foster, encourage, support, facilitate, build skills and broker information but not to 'advise'. It is a national organisation run on a total budget of $400,000. It has a small number of mostly part-time staff operating across the country – some of these have farming backgrounds as the Trust has found that it makes sense to have farmers talking to farmers.

Ninety per cent of Landcare Trust's work is rural. The Trust has positioned itself in the middle of the spectrum between pure production on one end and pure conservation on the other.

Landcare has a communication programme but involvement is often by 'word of mouth'. It considers its independence as a real strength that has enabled it to go into any scrap in any organisation!

Landcare Trust is also a strong advocate of a community up approach – it sees the key ingredients in tackling issues as:

- strongly supported community groups;
- resource conserving technology;
- enabling policies and institutions.

Instead, they have found that institutions are often a barrier, particularly regional councils whose performance with the community is very bad. Another barrier is finding people with the right skills to deal with rural landholders.

Specific areas of involvement for Landcare Trust have included:

- working with community groups in the Far North on a pesticides and clover project;
- working with Northland Dairy Company on ways of improving grass management. While this has an economic focus it will enable them to get the trust of the people involved and move on to address other issues;
- facilitating a process between Banks Peninsula Council and the community over their district plan, which threatened to 'blow apart' the RMA. The council agreed to totally revamp the plan and the community now owns and supports the process;
- assisting to resolve Te Anau Basin flooding issues that involved huge vested interests (farmers, power company, environmentalists etc.);
- tackling water quality issues in Waikato with the dairy industry.

Presbyterian Support Services (PSS)

Presbyterian Support Services operates as seven separate regional units. In some of the North Island regions, PSS are trying to make themselves financially sustainable by becoming the major providers of two services: the care of older adults in a residential setting, and the provider of government services for families. In the top of the South Island, however, there has been a recent decision to move away from this role into one of filling-the-gaps.

PSS also see themselves as having a clear advocacy role on behalf of the poor, needy and disadvantaged. This is effected through being part of NZCCSS (New Zealand Combined Council of Social Services) and through the work of each individual region. This may not make them popular with governments but they don't want to get too 'comfortable'. They are primarily to work towards a just society, which is clearly seen as a significant part of sustainable development.

The philosophy of the Upper South Island group is based on the principle of enabling others to help themselves, a preventative approach. They are not therefore providing services like food banks, but support for those leaving prison and returning to their families, or working with the unemployed to build self-esteem.

The observation was made that there was an economic impact of business leaving New Zealand so that many of those businesses owned off shore, in particular, no longer owned or supported local community issues or problems.

Agenda 21 - Christchurch

Christchurch City is the only city that the researchers know of that attempted to kick off an Agenda 21 Forum at the city rather than the council level. The group is still in existence – but only just – and appears to need some catalyst to get it going again.

The Agenda 21 Forum got off to a good start with a focus on biodiversity in the first year. This involved producing material to assist people learn about biodiversity in their own back yard.

The intention in the second year was to tackle poverty – initially by getting representatives from NGOs across the board. Withdrawal of funding and lack of leadership from government meant that this never really got off the ground.

Other Groups and Initiatives

As mentioned in the overview statement at the beginning of this section, a myriad of organisations work on different levels of sustainable development. Some of these include:

- **Sustainable Auckland:** Started by the Ecologic Foundation, the Sustainable Auckland group is conceived as an independent group that can lead public debate on solutions to Auckland's major problems and solutions that are sustainable in economic, environmental and social terms. The group wants to focus first and primarily on solutions to the transport issue, addressing within that the need for road pricing and for commuter rail development. The group wants to set its focus on transport within the context of an integrated strategy for Auckland's growth and liveability as a city.

- **Zero Waste**: an organisation that actively promotes waste minimisation, and seed-funds community-based employment initiatives in waste management.

- **Pacific Institute of Resource Management (PIRM)**: a group that promotes discussion on and shares information on resource management and related issues.

- **A New New Zealand** (formerly Network New Zealand): aims to network on sustainable development issues.

- **The Sustainable Futures Trust**: shares information and promotes sustainability.

- **Pacific Rim Institute of Sustainability (PRISM)**: set up as a trust in early 1999 to promote, encourage and provide consultancy services on sustainable development, with the intention of funding educational type projects in this field as the Institute developed. Its intention was to fill a gap at that time in New Zealand, but remains flexible to respond to future developments on this issue.

Two examples of future events of interest are:

- A Sustainable Development Forum in November 2000, being run in Auckland by private enterprise. A member of the World Business Council for sustainable development will speak at this forum, as will Helen Clark.

- The New Zealand Institute of Professional Engineers (IPENZ) is organising a conference on sustainability issues for Auckland in mid 2001. They are also discussing the possibility of joining forces with The Royal Society of New Zealand, which is organising a conference on a similar theme for the second half of 2001. IPENZ is keen that the conference be interdisciplinary.

5.6 Local (Including Regional) Government

Overview

Local authorities' attitudes towards sustainable development appear to fall into three categories:

1. Those who openly pursue sustainable development and/or Agenda 21.

   Seven councils have formally adopted Agenda 21: Christchurch City, Hamilton City, Nelson City and Tasman District, Taupo District, Waimakariri District, Waitakere City, and Wellington City.

   Some of these councils are still very much committed to Agenda 21 while others have shifted their focus slightly – for example, Nelson City and Tasman District now support a Healthy Cities and Communities programme.

   However, in a recent survey by Local Government New Zealand (LGNZ) it was found that 30% of councils (about 26) either referred to their strategic plans as Agenda 21 documents or referred to Agenda 21 principles and processes in their strategic plans. Often the reference was a brief one.

   Eighteen councils in the LGNZ survey claimed to have a sustainable development strategy, either as part of their strategic plan or as a separate document.

2. Those who are actively involved in programmes such as Healthy Cities, which address aspects of sustainability but don't call it sustainability.

   Manukau City Council is a good example of a council with an active Healthy Cities programme. Manukau has always had a reputation for having a strong involvement in community and social issues.

   The LGNZ survey found that a much greater number of councils referred to particular sustainable development issues in their strategic plans or vision statements. Issues that were mentioned by three or more councils included:

   - environmental sustainability
   - waste management
   - water quality
   - transport
   - economic development
   - population growth and decline
   - social well-being
   - community involvement
   - recreation
   - participation
   - equity
   - sustainability promoted as a process.

3. Those who consider that their role is sustainable management – administering the RMA and other legislation – and that they are not mandated to get involved in the more 'social' and 'economic' aspects of sustainable development.

   It is not possible to estimate how many councils fit into this category; however, it is likely that there are quite a few. The LGNZ survey found that the main reason for not adopting sustainable development principles was the lack of political will –

   > *Sustainable development issues were often seen as beyond the mandate of many councils and that they should keep within their regulatory and statutory functions.*

Review work currently in progress is likely to shape the next stage of local government. The objective of the review is to simplify the LGA to enable local authorities to be more responsive to community needs within a clear accountability framework. The new Local Government Act may explicitly require local authorities to promote sustainable development.

Of the councils that have committed to sustainable development, Waitakere City Council was held up as a leader in the field by many interviewed. Waitakere was very quick off the mark in 1992 to adopt Agenda 21 and declare itself an eco-city with three goals: 'sustainable', 'dynamic' and 'just'. It has made considerable progress on many fronts – including being at the forefront of thinking

about sustainable ways to accommodate rapid population growth. It can also take credit for leading regional thinking on this issue partly by targeting and hosting international experts on 'new urbanism'.

As a result of Waitakere's influence, and several years of transport and urban growth modelling undertaken by the Auckland Regional Council, it became apparent that continued urban sprawl was not a sustainable option for accommodating population growth in the Auckland region. The Auckland Regional Council has led the Regional Growth Forum, which was a process strongly supported by all the territorial local authorities in the Auckland region. The forum has also had strong community support, assisted no doubt by the almost universal acknowledgment that traffic congestion is the biggest issue facing the region.

The outcome of the Regional Growth Forum (the Regional Growth Strategy) is a regional agreement that future growth should be accommodated within the current urban area. This would mean increased housing densities along passenger transport corridors and near town centres, in order to create liveable communities that, in turn, can support a viable passenger transport system.

The Regional Growth Forum was referred to frequently by those interviewed. Most were very supportive of the process (which was inclusive and collaborative) and outcomes. The challenge for the region now is to implement the Growth Strategy while continuing to address issues around aspects such as transport, stormwater and wastewater.

Summary

Some local authorities are actively pursuing sustainable development and/or Agenda 21. Of these, Waitakere City was described as a good example of a comprehensive and integrated approach. Other local authorities have programmes such as Healthy Cities, which do not bear the 'sustainable development' label but nevertheless take a holistic approach. A third group considers sustainable development to be outside their mandate. This group, in particular, will be challenged if local government reform delivers a requirement to take sustainable development on board.

Local Government New Zealand (LGNZ)

LGNZ, an organisation set up to service its members, spends about 60% of its time on advocacy work, 30% on producing sharing and information, and 10% in upskilling and training to help members fulfill their statutory functions better.

LGNZ undertook the survey referred to above earlier this year. The purpose was to gain an overview of local government strategic planning, determine the relationship between strategic planning and other parts of the planning process, and gain some information on 'best practice' that could be used to assist other local authorities. The survey was also used to seek information about the extent to which Local Agenda 21 and sustainable development were picked up by local government.[5]

They are engaged with MfE in producing Quality Plan, which canvasses a range of best practice, in order to help councils to improve their district plans and processes. There is an awareness of the lack or paucity of monitoring by local authorities, many seeing monitoring as a 'luxury' rather than an essential ingredient to measure progress.

They are also playing an important role in the forums set up by the new Government to improve the relationship between central government and local/regional governments. LGNZ has also expressed a strong interest in the process to strengthen the relationship between the government and iwi/Maori, community and voluntary organisations. They see the need to look at the relationships between these two processes, which at present are working in parallel.

There was encouragement for intersectoral debate and discussion on sustainable development, not in 'talk fests' but in sharing examples of best practice, and associated training that might help with key elements such as integrated planning and participatory processes. This sort of training and exchange of information was seen as a key ingredient in preparing for the amendment of the Local Government Act, which looks very likely to include a requirement for long-term strategic planning and a strengthening of public participation in local body affairs.

Christchurch City Council

Christchurch City Council has been an important partner in many of the projects that have been described in other parts of this report – for example, the Canterbury Dialogues and 'indicate' programme. The mayor and one or two other politicians are seen as influential figures with a commitment to sustainable development principles.

A recent agenda item to the council's Strategy and Resources Committee summarised some of the achievements of the city and highlighted the strands of activity already there. The agenda item suggests that the council could use TNS and the principles of natural capitalism to become one of the "world's leading sustainable cities".

The report suggests that:

> *There is… a huge potential for significant advances to be made to improving the sustainability and restorative capacity of both Council operations and other activities in Christchurch by applying some focus to the task.*

Some of the council's achievements have been:

- The Recovered Materials Foundation, which has already been mentioned under the SCT. This was a joint initiative between the Council, the SCT, Envirowaste and Waste Management. The foundation is directly involved in investigating and creating

5 A background paper has recently been published with a summary of the survey results. These have been workshopped across New Zealand. The next step will be production of materials, such as a booklet or website, for a good practice guide.

markets for its products. It has a turnover of $2.5 million per annum. One example is a glass compound that can be seen in a café in the America's Cup village.

- A recycling and composting scheme. The recycling scheme is currently trying to set up the commercial side of its operation so that the ups and downs of the recycling market are accommodated without the need for subsidy. The council is currently looking at technologies for composting.

- Waterways and wetlands have been advanced and developed since 1994 when stormwater began to be recognised as a valuable resource rather than a nuisance that should be piped out to sea – streams have been 'depiped' as a result.

- A community garden initiative to assist with waste minimisation.

- Energy cost savings of more than $8 million since 1993 from employing an Energy Manager.

Future opportunities and possibilities that are highlighted include:

- Redesigning the Canterbury Dialogues. The council may review the structure of Dialogues and consider changing its name to Sustainable Christchurch. It also needs to consider ways of engaging with people in the community because there is a concern that the Dialogues is seen as 'elitist'.

- Getting its own house in order – becoming an outstanding example of how an organisation can contribute to a sustainable Christchurch. A steering group has already been established to lead this process.

- Addressing energy use in Christchurch (in partnership with Orion) – based on an estimate that if Christchurch reduced energy use by 3% per annum it would save $17.5 million annually. It would take a 50% reduction in landfill and wastewater treatment costs to achieve the same level of dollar savings.

- Establishing a 'catalyst fund' for Sustainable Christchurch initiatives.

- The council itself is a participant both in Redesigning Resources and The Natural Step Pathfinders programme; it will use these as an opportunity for cross-fertilisation of ideas with other participants.

Waitakere City Council

Waitakere City Council is an example of a local authority that has combined a strategic and coordinated vision with a practical approach to creating decent communities.

In 1992 it formally adopted Agenda 21 and soon after produced its strategic plan, the 'Greenprint'. The Greenprint was probably New Zealand's first example of a strategic plan taking a holistic approach. It was centred on combining social, environmental and economic goals and objectives with its three principles: sustainable, dynamic and just. Each principle was applied to each goal. For example, the council considered what a dynamic society, or a just economy, would be like.

The Greenprint was developed at a time when other councils were preparing strategic plans with a corporate focus and were driven primarily by financial considerations. Waitakere's Greenprint was criticised by some for lacking the financial dimension. It was instead a visionary document, marking a significant change in direction for the city. It was later backed up by a Long-Term Financial Strategy, which had the benefit of being based on asset management plans, developed with the eco-city vision as their guiding star.

The eco-city vision was adopted at a time when the costs of managing urban growth in Waitakere (and in the region as a whole) were escalating. The city has sought to achieve optimal social and job outcomes while arresting the decline in the environmental sphere. The city is not a wealthy one and has had to find innovative ways of achieving outcomes without spending a lot of money.

Key elements of Waitakere's approach include:

- taking a fresh approach to each issue and building up a repertoire of techniques to deliver multiple outcomes;
- using a number of different vehicles to deliver outcomes including its property company which has been involved in a number of commercial development projects;
- actively seeking out thinkers able to transcend the functional approach;
- using innovative methods to reach the community – for example bringing together developers, community groups, individuals, and businesses in 'charettes' to redesign town centres;
- developing a host of partnerships including with Maori. This has proven a very effective way of delivering outcomes, particularly in the social arena (on issues such as health);
- mainstreaming of 'the arts' so that, for example, artists and engineers work together on projects such as footbridge design;
- resolving highly contentious community issues, such as the extension of the life of a landfill in a residential area, by working in an inclusive way with the community and developing joint solutions. There are several examples of this – where other approaches would likely have resulted in expensive litigation.

Some specific achievements include:

- Greater housing choices (terrace houses, apartments etc) for people by creating a framework that has generated a response from developers. This has been achieved while enhancing urban amenity.
- 'Soft' engineering solutions applied to tackling stormwater issues at a time when the cost of traditional solutions (pipes) was crippling.
- The production of a bi-annual 'well-being' report assessing quality of life for Waitakere residents. In producing this report Waitakere had to be prepared to expose some of the harder hitting facts about the socio-economic status of its residents. This report has proved a very effective tool in lobbying, particularly for health related services.
- Significant reductions in solid waste to landfill by combining a successful recycling scheme with user charges for bag collections.
- Brokered the development of a 'health plan', prepared by eight community groups. The plan sets out health needs and priorities for Waitakere City in a way that is actionable.
- An award winning, effects-based district plan, which was prepared with extensive community involvement.
- Strongly supported community advocacy for the building of a general hospital for Waitakere City. The city staff are now working with the hospital architects to create the first 'eco-hospital'.

A new council in 1998 has seen a shift in political dynamics away from a strong 'environmental' focus towards a concern with fiscal responsibility and economic growth for the city. Interestingly, despite initial concerns, the new council has not thrown out the eco-city direction (in fact it adopted the Greenprint, which had remained in draft form for several years). The eco-city principles are now seen by many as good common sense, rather than something created by the 'lunatic fringe'.

One criticism that has been levelled at the council is that there has been limited community involvement in its strategic planning processes. The council's response to this is that it has preferred to engage with the community on an issue by issue basis because concepts such as sustainable development mean little to the community unless given a context. Also the council believes that its delivery record is better than other councils that have had extensive community visioning exercises that have fizzled over time.

Taupo District Council

Taupo District Council (TDC) adopted the Agenda 21 principles formally in 1997 and they are recognised within its strategic plan. From a policy perspective it has also adopted protocols that officially recognise the role that community 'Action Groups' play in the community. Those protocols say that the TDC will support the

Action Groups in specific ways such as providing and funding a secretarial service, providing venues for meetings and advertising those meetings, and being an active advocate of the Action Group process.

Four Action Groups have been established: the Lakes and Waterways Action Group (the natural environment), the Healthy Communities Action Group (the people), the Business Support Action Group (the economy), and a State of the Environment Action Group (the overall health of the community).

One of the big issues facing Taupo district is the health of its waterways. Sustainable Management Fund funding has been obtained for to develop an Integrated Lake Management Framework. The Lakes and Waterways Action Group is involved in this project, which is very much a community driven process. The TDC is contributing $50,000 a year for research initiatives on Lake Taupo. The framework, once completed, should provide a model for other lakes and water catchment areas around the world.

The most notable achievement of the Lakes and Waterways Action Group has been the production of a *Draft Lake Taupo Accord*, which identifies those values that the community wants to protect.

Another TDC initiative is the Taupo District Community Profile process aimed at identifying gaps pertaining to:

> *the indicators, and also the linkages between the environmental components of the Natural Environment, the District Economy and the Community Vitality in relation to measuring the sustainable development and management of Taupo District* (Taupo District Council letter dated 24 January 2000).

This process, known as the Vibrant and Sustainable Taupo District (VAST), is currently being validated. The TDC's role is to act as facilitator and secretary for the group.

While there have been some successes Taupo district has yet to adopt fully a sustainable management framework. There is a general lack of knowledge and understanding about Agenda 21 and sustainable development together with a resistance to change. This is partly due to a view that local authorities have no business being involved in community or the 'natural environment'.

Wellington City Council

Wellington City Council is a good example of a city that has included the community in the preparation of a strategic plan *Our City ~ Our Future*. It is a plan not only for the council but for the city as a whole with 135 different parties identified as having a role in implementing it.

The development of *Our City ~ Our Future* started in early 1996 with the formation of a city steering group to oversee and guide the process. The group included a wide cross-section of Wellingtonians with 30 members drawn from the council, tangata whenua, business and economic interests, natural and physical environment interests, social and cultural interests, the Pacific Island community and youth interests. A background report on the state of the Wellington environment was prepared from existing information and provided to the steering group.

Over 70 vision workshops were held in 1996 and these provided the foundation ideas that were further developed by a community forum in June that year. Eight specialist working groups developed the details of the strategy; they were then checked at 'open houses' and reviewed by an advisory peer review group in 1997. Further community consultation was undertaken before the strategy was finalised. Regular progress reports are prepared and the plan is due for review in 2002/3.

Wellington's state of the city report is *Right Here ~ Right Now* and it monitors the city's progress using four indicator groups:

- our community
- our economy
- our environment
- our footprint.

A feature of the state of the city report is the use of the ecological footprint concept as a composite indicator of Wellington's progress towards sustainability. A public summary version of the report has proven a very effective tool for communicating progress.

Despite the 'model' process underlying the strategic plan there has been some criticism of the plan mainly due to the lack of buy-in by council and other groups.

(Note: the information from this section was taken from the PCE report *Sustainability indicators for New Zealand cities and communities.)*

Hamilton City Council

Hamilton City officially adopted Agenda 21 in 1993. The mayor of the time, Margaret Evans, was the driving force.

Hamilton developed its first strategic plan in 1996 (as well as its local Agenda 21). Extensive community consultation was undertaken. Agenda 21 awareness was raised through publications, seminars and questionnaires. This achieved two major goals:

- broadening community input before the draft plan stage;
- increasing tangata whenua participation through a parallel process which is integrated at the strategy preparation stage.

Three full day workshops were held (involving around 200 people). Strategies were generated then evaluated using an Agenda 21 'sieve' and a formal Memorandum of Understanding was signed between council and various stakeholders – essentially committing all parties to the principles of Agenda 21.

Despite this impressive start there is evidence that the commitment to Agenda 21 has faded somewhat. The strategic plan was revised in 1999. The intent has not changed at a strategic level; however, there is a lack of action planning. Action plans have been developed on an ad hoc basis with no consistent approach to community involvement.

The council actually has a sustainable environment team whose work is driven by Agenda 21. The team has had problems, however, in integrating its work with the rest of the organisation.

Projects that the team are involved in include:

- A suburban environmental improvement project. This was an attempt to take a holistic approach to one area of the city and focus on a range of issues. There has been extensive community involvement and a number of priority areas were identified. However, the outcomes have been somewhat limited in what could be implemented, which has led to some disappointment in the community. The project is ongoing.

- An enviro-schools project that has sustainable management fund funding and may become the model for a national project. The project follows the development of an environmental education strategy two years ago where the formal education sector was identified as a first priority.

- Developing sustainability indicators for the city. The first report is due next year.

Hamilton City Council also has a reputation for having a strong community development focus. For example, it contracts out the delivery of many of its community development programmes to the community sector as a way of fostering partnerships and building capacity in that sector.

Canterbury Regional Council

The Canterbury Regional Council provides a somewhat different perspective on Christchurch's progress towards sustainability. The regional council's view is that there has been insufficient attempt by the city council to engage the community.

While it acknowledges that progress has been made in some areas such as solid waste, it is concerned that the city has placed little emphasis on transport and sustainable urban form in its district plan. In fact the two councils have been at loggerheads for some time over this issue. The regional council is concerned that too much land has been earmarked for urban expansion and believes that the city's population growth estimates are too high. As well as the pattern of expansion being unsustainable from a transport and energy perspective, the council is concerned about the loss of prime agricultural soils.

The Canterbury Regional Council sees transport as the biggest issue facing the region. Although congestion is not as obvious as in Auckland, the council believes that the region will have to act now to avoid future problems.

The Canterbury Regional Council is developing a Sustainable Living Strategy for the region for the next 30 - 50 years, but it has only just got agreement from Christchurch City to participate in the process. Also the Christchurch City Council has agreed only as long as it is not required to change its density provisions in its district plan.

The regional council was also a founding member of the Canterbury Dialogues – a process that it sees as useful, but now needs to focus on actions.

Environment Waikato

In 1992 Environment Waikato (EW) formally considered whether or not to adopt Sustainable Development/Agenda 21 as a guiding principle. It decided not to, on the basis that its responsibilities under the Resource Management Act were consistent with sustainable development. EW has since promoted integrated management (in respect to media-soil, water, air etc. and working with other organisations), regional dialogue (communication, consultation, facilitation) and the establishment and maintenance of partnerships (formal and informal).

This year, as part of the review of the Strategic Plan, EW has again considered sustainable development as a guiding principle and also in terms of specific actions it could take, that is:

- regional growth forums;
- information dissemination;
- sustainable development indicators.

As an example of recent interest, EW in its recently signed Memorandum of Understanding with the Hauraki Maori Trust Board referred to working with the Board to achieve sustainable development. It works with key stakeholders (community groups, sector groups, iwi, territorial local authorities, government agencies) on principles underpinning sustainable development (research, monitoring, integrated management etc).

EW's research agenda is driven by the requirements of the RMA, but for projects involving other agencies, the mandate may be broader, to encompass social and economic considerations. It does collect information as part of its formal information plan on social, economic and cultural areas and, arising from the state of the environment report, it incorporates monitoring indicators relating to natural and physical resources, social, economic and cultural areas.

EW feels it has successfully promoted sustainable development to the extent of the council's RMA and Biosecurity Act responsibilities, and in terms of how it works internally. It accepts it has been least successful in pursuing sustainable development in terms of social and economic development.

The areas EW sees as creating the biggest impediments to work on sustainable development include:

- a lack of a clear legal mandate;
- securing commitment, cooperating with other agencies in a partnership approach; and
- resourcing initiatives beyond 'core business'.

From a national perspective, the priorities are seen as:

- identifying priority areas and targets;
- ensuring relevance and understanding of sustainable development at all levels and sectors, and practical ways initiatives can be implemented;
- intergovernmental and sector coordination;
- a group/organisation to provide initial impetus, ongoing coordination and information sharing.

National Indicators Programme

The National Indicators Project was started in 1999 by the chief executives of the six largest cities in New Zealand (Auckland, Christchurch, Manukau, North Shore, Waitakere and Wellington). This was in response to the growing pressures on urban communities, concern about the impacts of urbanisation and the effects of this on the well-being of citizens. A report on the project is due out before the end of this year. It is currently being edited and reviewed.

The project began with the objective of selecting a set of key social, economic and environmental indicators to measure changes in social conditions in New Zealand's six largest cities. It is anticipated that around 50 indicators that address demographics, housing, health, employment and economy, health, education, community safety, urban environment, community cohesion and governance issues will be selected.

Manukau and Auckland City have both made significant progress in developing their own indicators that look at the total well-being of their cities. Auckland City has also completed a Liveable Communities Strategy, which is designed to fit with the Regional Growth Strategy and identifies areas suitable for intensification.

SECTION 6: GAPS AND BARRIERS

6.1 Introduction

Section 5 has shown that in all sectors there is evidence of some interest, commitment and progress in terms of creating a sustainable future for New Zealand. It has also shown, however, that commitment to sustainable development is variable, that progress is disjointed, and that the rhetoric is often not followed up by action.

This section outlines some of the gaps and barriers that appear to be preventing New Zealand from moving in a more integrated way towards a sustainable future. The opinions of 'stakeholder' representatives and 'experts', together with the experience and personal observations of the researchers, are reflected in this section. Gaps and barriers have been identified in each of the following areas:

- institutions;
- people and attitudes;
- information and research;
- tangata whenua and partnerships.

From this the critical gaps are identified.

Many of the gaps and barriers arise because sustainability is a 'messy' concept. The 'pure market' model, in contrast, is clean, simple, transparent and therefore intuitively attractive. Sustainability must accommodate difference – but it is diversity and complexity that make it more challenging.

6.2 Institutions

This section relates mostly to central and local government although it includes some comments of relevance to business.

Three key areas that need addressing appear to be:

1. Leadership

Most people felt that central government needs to play a strong role in leading sustainable development. There was, however, a spectrum of views. Many thought that this was critical while a few thought it would be useful but not essential. The latter were usually those involved in 'on the ground' initiatives who felt that they were already making considerable progress in their areas and were concerned about central government control.

Important components of leadership might include:

- preparing a national sustainable development strategy;
- strategising – setting priorities and targets;
- tracking global trends and issues with a view to harnessing opportunities for New Zealand – a particular component of this would be looking at the implications of trade and trade agreements (the latter needs to be viewed in both a 'threat and opportunity' manner);
- providing the policy framework within which to evaluate the effectiveness of local government and community-based programmes.

2. Partnerships

The way in which government institutions relate to each other and to the public is of concern. Specific issues include:

- **Inter-institutional relationships**. There are some good examples of (say) local and regional government working together to achieve sustainable solutions, such as the Auckland Growth Forum. There are starting to be a few examples of local government and central government delivery agencies establishing good relationships at a local level, working together to identify priorities and coordinate services. There is the potential for much more of this.

- **Breaking down interdepartmental barriers**. 'Silo mentality' may be an overused term, but there is no doubt that most government institutions still tend to work focused on their own particular areas without being aware of what is happening in other departments or sections. There is little time or encouragement for cooperative work as everyone is focused on achieving their own 'outputs'. Technical and specialist expertise is valued over the ability to transcend functional boundaries.

  Organisations that:
  - are cross-disciplinary, open and adaptive;
  - encourage diversity and experimentation;
  - relish problem solving; and
  - create an environment for continuous learning

  are much more likely to take and create opportunities to bring about significant change.

- **Engaging in genuinely participative processes**. The dominant approach is still top-down rather than community driven. Policies are written prior to public input and are 'tweaked' to reflect feedback from token consultation such as public meetings. Opposing views from those sitting outside institutions and challenging them cannot be accommodated due to 'institutional inertia'. Where communities are making progress, they are often thwarted rather than encouraged by government institutions. For example, situations were cited where community-based programmes were seen by some regional councils as a threat to their power base.

  While a process like Agenda 21 has an international perspective, its emphasis is on community-led initiatives that are supported by government institutions. Partnerships between sectors are integral to this; however, developing effective partnerships will require a fresh approach for many government institutions. It will also mean developing new skills and tools for communication. The Government is taking some steps to re-examine its own interactions with its communities. One example is the Working Party to scope a possible agreement or protocol between the Government and iwi/Maori, community, and voluntary organisations. The work on this over the next couple of years is critical.

  The need for debate on issues facing New Zealand, regions and communities, not just at an 'elite' level, but engaging communities, business, central and local government, is highlighted and referred to later in this section.

3. 'Joined up thinking'

This is an issue particularly for central government – and one that appears to have been a priority in the international arena. Government departments and agencies are explicitly required to take sustainable development into account and to report on this. Interdepartmental coordination is seen as a critical component in implementing sustainable development policies.

This process is starting in New Zealand – climate change is an inter-agency issue, while three key ministries (Economic Development , Environment and Transport) now have an explicit concern with sustainable development.

Other issues that are related to institutions include:

- The need for true cost pricing and strengthening of regulations.

  Some see true cost pricing as the main priority for central government. Others believe that it is an important first step but needs to be accompanied by other tools such as regulation and education.

  Some people believe that, if the government does not regulate it, it will not happen. The example most frequently cited was that environmental and social accounting (or triple bottom line accounting) will not happen until businesses are required to do it.

- As noted in the section on local government, some local authorities hold the view that their functions and responsibilities, with respect to sustainability, do not extend beyond the RMA and other related legislation.

- Related to this, over the past decade there has often been a narrowing of local body focus while there is a broadening of community expectations, adding to the difficulties for local bodies deciding on their roles.

- There is a need for better auditing or monitoring of aspects of government institutional performance – for example, central government's commitments to international agreements. Some people believe that central government (via MfE) should also be undertaking more monitoring of local authority performance in relation to the RMA – and that this should be focused on environmental outcomes rather than compliance with legislative timelines.

- A lack of strategic planning was often cited as a problem – both within businesses and within government. It should be noted, however, that while strategic planning may be a necessary condition for sustainable practice, it is clearly not sufficient. The Local Government New Zealand survey found that most local authorities have strategic plans, but that a much smaller number have strategic plans that are about Agenda 21 or sustainable development. Also some councils had strategic plans that focused on sustainable development, but struggled to put it into practice.

Summary

Lack of leadership and a poor record in forging effective partnerships between central and local government, and with communities, appear to be two significant institutional gaps. In addition, responsibility for sustainable development has not yet been 'mainstreamed' across departments.

6.3 People and Attitudes

The 'pure market' model expects people to pursue their own self-interest as individuals on the premise that the effects of improving themselves will 'flow on', creating stronger communities – as long as the pricing signals are right. Sustainability requires the pricing signals to be right but also requires people in communities, businesses, and other institutions to actively pursue 'better' ways of doing things *as a member of a bigger community*– and, in doing so, improve 'quality of life' without compromising the ability of future generations to do the same. Thus the way people regard their role in the broader community becomes hugely significant.

Two of the biggest barriers related to people and the attitudes that they hold are:

1. Many people simply remain unconvinced that sustainability has any relevance for them.

This issue is the hardest to address. There is a spectrum from 'arrogance' on one end to 'complacency' springing from ignorance on the other. There are those who believe that technology will solve all the world's environmental problems (while ignoring the social issues). There are those claiming to be concerned about environmental issues but who underrate their importance. Statistics that are quoted such as *"half the world's wetlands have been lost in the last century"* and *"more than 40% of agricultural land has been badly degraded"*(Zoo Alive, Spring 2000) appear to have lost their impact amidst this complacency.

Complacency tends to be fueled by a fixation with private property ***rights*** with very little acknowledgment of ***responsibilities***, such as stewardship over environmental resources. In fact many people believe that their 'rights' extend well beyond being able to do what they want on their own property, and include things like a 'right to consume whatever the consequences', a 'right' to cheap oil etc. Concern with private property rights is often highlighted as an issue in non-urban areas where, for example, landowners stand to lose money by setting aside land for conservation purposes.

However, at least in non-urban areas, landowners expect to have to take care of their own wastewater disposal and provide for their own water supply. The way the water infrastructure has developed in cities, people are distanced from these responsibilities, so that the management of water/waste and solid waste become 'out of sight – out of mind'. There is little incentive for reducing the use of water, for example, or minimising the production of waste. In a faster paced consumerist world, speed, convenience and ease are the key ingredients and are now expected by city dwellers.

2. Amongst those who do 'speak the language of sustainable development' there is often disagreement about what is sustainable and what is not.

   This issue is more complicated. There is a tendency for those actively committed to sustainable development to criticise the efforts of others, often on the grounds that 'they do not understand what sustainability really is'.

   There appear to be two factors primarily driving these tensions. One is that people do have genuinely different views about sustainability. Section 2 highlighted some of these differences and concluded that, while it is not particularly helpful to pin down a definition of sustainability (or sustainable development), there needs to be opportunity for debate about, for example, 'weak' versus 'strong' sustainability.

   The second factor is that people have different styles or approaches. Some of these approaches are summarised in Table 3 below. For example, some people want to just get on and 'do it' whilst others argue that if you can't measure it you can't manage it – and therefore that the priority is to develop good indicators of sustainable development.

   Those who are 'doing it' are often disparaging about those who are 'measuring it' those who are 'measuring it' may consider that those who are 'doing it' are being ineffective in tackling the 'real issues'. All approaches and styles have their strengths. The key barrier is not difference but lack of tolerance for difference.

Table 3: Approaches to Sustainable Development

Approach	Strengths	Limitations
'Do it'	Practical, often community-based, demonstration effect, creates enthusiasm	May lack evaluative framework Tendency to think everything is 'simple'
'Analyse it'	Recognises that issues are complex, enables debate	May not get beyond analaysing to action
'Measure it'	Focus on effectiveness – ie enables evaluation ("If you can't measure it you can't manage it")	Open to scientific capture May get caught in measuring outputs or inputs rather than outcomes
'Redesign it' (eg natural capitalism)	Solution oriented Systems approach	The 'techno-fix' Can ignore the softer edge of sustainability – people/communities
'Challenge it'	Keeps us honest Encourages paradigm shift	Can be antagonistic – off-putting
'Package it' (structures, processes and plans)	Encourages accountability, commitment	May be process driven Structures can become confining
'Share it' (networking)	Communication, information sharing	Lacks accountability – 'take-up' of ideas may be 'hit and miss'
'Link it' (strategic alliances)	Powerful – significant potential for leverage across a range of issues	May be 'elitist' Tendency to depend on key individuals
'Lead it'	Charismatic leaders (champions) can be effective role models	Open to capture – needs to be confined to leadership rather than attempting to control or manage

Other gaps and barriers that relate to people and attitudes are:

- A lack of people with the 'right' skills and a lack of valuing these skills. This was a recurring theme throughout interviews, particularly interviews with people who are working with business and communities to produce better outcomes. The importance of communicating, facilitating and brokering were emphasised. However, these skills tend to be in short supply. People with these skills are often paid much less than the 'specialists' and the analysts.

- Sustainable development requires cross-sectoral cooperation. It requires, for example, business to talk to government, government to talk to NGOs and NGOs to talk to researchers. It requires joint ventures, strategic alliances and partnerships. While this is a challenge in itself, successful alliances can be – or can seem to be – exclusive and elitist. Remaining open and inclusive is a challenge for individuals involved in sustainable development. This will require moving away from an emphasis on competitive ways of working to more cooperative styles, agreement on roles, capacity building for communities, the sharing of 'power' and the development of trust and respect between quite different organisations.

- Despite opportunities to save money, decision-makers in businesses are often not interested in energy efficiency, waste minimisation or other such initiatives. This may be because the business is too busy trying to stay afloat, or it may simply be that there are easier ways of saving or making money. Proponents of TNS identified as one of its strengths the ability to engage businesses at the strategic level. This is seen as a good way to enable business or organisations to start rethinking how they operate, to think long term and holistically about their impact on the community in which they operate. As TNS develops, a key challenge will be to open up opportunities to engage small business.

- Daily decisions are driven by immediate pressures that are often commercial or commercial-related. Hence, while sustainable development may measure such things as quality of life, such measures may not alter daily behavior. What is needed is a model that translates sustainable development indicators and information into incentives at the daily level.

- Indicators of sustainable development must have a profile in the public realm so that people stop judging the performance of the country just on interest rates, the value of the dollar, GNP growth, oil prices and so on, and start taking a broader view of the factors that contribute to quality of life.

Summary

People and communities are integral to the sustainable development process. However, few people see the urgency to tackle some of the serious issues that the sustainable development agenda presents. Those playing a more committed part are not always prepared to acknowledge or support the efforts of others. This arises in part from a lack of tolerance for diversity – in ideas, styles and approaches.

6.4 Information and Research

If New Zealand were to make a serious commitment to sustainability, there would be a need for a substantial research programme. This section highlights what appear to be some major information gaps. It is by no means comprehensive and there are bound to be many others.

- The lack of data about New Zealand's natural resources is well documented (in the Biodiversity Strategy, for example). There is insufficient information about what species are out there – and about how ecosystems function. Until these gaps are filled New Zealand may not be able to arrest the decline in New Zealand's biodiversity or even accurately measure the loss.

- It is not only the absence of data but also dissemination, storage and use that is the issue. In many cases it is the application of existing knowledge that hampers progress towards sustainable development. For example, there is a strong argument for greater use of existing knowledge of the risks being taken by exceeding ecological limits. However, because such information has a great deal of uncertainty attached to it, there is a still a tendency to wait until better information is available. Examples include fisheries, water quality impacts and biodiversity initiatives. This appears to run counter to the precautionary principle.

- An international study tour undertaken by MORST in 1998 to examine international measures of sustainability found that many countries have better developed tools for modelling environmental systems, enabling a better understanding of impacts. Some, particularly European countries, have managed to incorporate a social perspective into their modelling.

- There is a widely acknowledged gap in research into urban sustainability. While this research gap has been recently recognised through the Public Good Science Fund and MfE's Sustainable Management Fund, it is not clear whether this is being addressed adequately. There is a concern that research proposals tend to focus too heavily on infrastructural solutions rather than community-based solutions.

- More generally, there is a lack of knowledge and expertise in relation to community-based models to achieve change – in both urban and non-urban areas. Existing models that show some promise are not being adequately resourced and the lessons learned are not being applied elsewhere. Community learning, uptake and ownership is one of the most challenging issues that New Zealand faces, yet relatively few resources are directed that way.

- Recent moves towards establishing the factors that actually bring about behavioural change need to be encouraged. This needs to be linked to community-based models. This gap has been recognised by a number of stakeholders – some of whom are making contributions in this area.

- There is also a need to have some more information and debate about the serious issues facing the world including New Zealand. This extends across the 'too hard' issues such as the huge impact of 'consumerism', the alleviation of poverty, through to the many ways in which a household impacts upon the environment around it.

- There is limited exchange of information about what is happening, who is doing what, what is being successful and why. This obviously limits the opportunities for learning from what others have done and may also result in duplication of effort. As Section 5 of this report has shown, there are a lot of groups out there with an interest in sustainable development. Better information sharing would undoubtedly improve the effectiveness of these groups.

- There is a need to develop and evolve the OECD-based pressure-state-response (PSR) model for explaining and planning for environmental issues favoured in New Zealand to date. The model has its critics and included in the criticism is that it does not fit well with sustainable development thinking.

- Even as it stands, the PSR model is only partially used. The pressure components (consumer demand, multilateral trade obligations) are poorly understood and hence poorly incorporated into strategic planning. Better delineation of the external drivers of decision-making could lead to a better understanding of the issues. For example, globalisation tends to be presented as one side arguing for the rejection of multinational trade agreements. But many argue that in fact such negotiations offer great potential benefits, and that existing international trade rules do offer environmental protection but have yet to be tested adequately.

- There also needs to be more work carried out in developing indicators of sustainable development rather than just national environmental indictors. These indictors must be developed in such a way as to get 'public ownership' as noted above.

Summary

This section has highlighted gaps and/or difficulties with information and research about New Zealand's biodiversity, urban sustainability, community-based models of change, and indicators of sustainable development. It has also noted that there is insufficient exchange of information about good practice.

6.5 Partnership and Tangata Whenua *

There are two broad issues relating to consideration of barriers and gaps as they affect tangata whenua and the wider concept of partnership under the Treaty of Waitangi. First, there is the need to provide for the ability of Maori to give practical expression to the Maori approach to sustainable development. Although there is most definitely a range of Maori views, there are a number of common central ideas, processes and institutions.

Active protection and expression goes beyond merely raising awareness of these ideas. It requires major engagement with the issues of structure, governance, ways of making decisions (as discussed in Section 2) and authority. Much of this, of course, is part of the ongoing debate and development of ideas about the practical meaning of the Treaty of Waitangi in New Zealand.

However, at the very least it requires a stepping beyond an approach that focuses merely on Maori access to existing, seemingly universal paradigms of decision-making and world view, to an approach that recognises that such universality might not be so real. For example, there is a need to move beyond merely ensuring Maori access to key decision-making structures and processes, to engagement with the very idea of how decisions are made and the structures that sit around that decision-making.

Similarly, there is a need to ensure that information about environmental issues and solutions developed using scientific method can acknowledge and be couched in language and action that makes sense from the point of view of those who hold a metaphysical world view. Again, the development of sustainable development solutions via a society that generally separates out social, economic, political and management processes and systems into separate structures, needs to be

* See note page 9

aware of and adaptable to a system where frequently social, political, environmental management and economic activity are bound together in each of the layers of whanau, iwi and, particularly, hapu.

The second broad consideration is New Zealand society's engagement with Maori concepts in its exploration of the broad approach to sustainable development. Maori concepts may shift debate into areas that would otherwise be neglected – for example, around fundamental approaches to decision-making. There may be wider groups who are as uncomfortable with primary reliance on consequentialist decision-making processes and concepts of tradeable values as Maori.

However, it is suggested that at present the fundamental driver requiring engagement with the Maori approach to sustainable development is the need under the Treaty of Waitangi to search for true partnership around key cultural concepts and structures. This is given further force under the principles of the Treaty, which focus on the need for active protection. This demands an approach that avoids the assimilationist approach under the current sustainable management model. Taking up this challenge will inevitably raise questions for the wider debates about sustainable development.

A number of barriers and gaps exist in addressing either of these issues. These are:

- A limited awareness of the fundamental nature and structure of the world view and decision-making structures that characterise the prevailing paradigm within which sustainable management **and** sustainable development debates currently occur in the New Zealand context.

- A limited general awareness of the fundamental concepts that underpin the Maori sustainable development paradigm and a tendency to convert concepts into more comfortable generalised forms; for example, the structures of kaitiaki shifted to a more generalised concept of guardianship and a metaphysical world view that is subsumed to a degree into the concept of spiritual values.

- A limited understanding of the nature of Maori social, political and economic structures and the role they play. This is obviously a complex area, including as it does significant issues around the nature of the iwi and the place of Maori living outside traditional rohe. A key issue here is the nervousness of institutions in dealing with what are essentially fluid relationships and a mixture of roles within structures.

- The emphasis in government/ Maori relationships on a legalistic approach – in the sense of trying to define minimum statutory requirements and trying to define the legally acceptable structures around which to build relationships. This is particularly so of local government and for those local authorities that are focused on their minimum statutory duties in relation to resource management. This approach makes the fluid structures and processes noted above seem problematic, with local authorities seeking legal certainty around representation – a process that consumes significant resources. While performance to minimum statutory requirements is an important issue for government performance, given that formal government structures are often the locus for debate about the future, this approach constrains the level and nature of debate.

- A failure to distinguish between the legalism of the sustainable management/ RMA model and the potential for engagement with iwi and hapu structures around the sustainable development concept. For example, structures set up for dialogue between local authorities are generally built around the immediate and minimum needs of the Resource Management Act and not a wider exploration of the future – which can include a range of iwi groups and urban Maori. The exceptions are one or two local authorities such as Waitakere City Council and Manukau City Council, that embrace a wider concept and structure. The result is the unnecessary creation of barriers to wider debate.

- A focus by central government institutions and national institutions on the issue of

access of Maori to sustainable management, for example the Parliamentary Commissioner's report on consultation, the Ministry for the Environment's overview of the same issue and the recent Local Government New Zealand's report. Te Puni Kokiri also tends to focus on this issue. The MfE through the Sustainable Management Fund has begun to look at the development of whanau, hapu and iwi environmental management plans but again this is in order to improve the articulation of ideas and requirements to ensure adequate input into RMA processes.

The universities are not presently providing obvious leadership in this area – perhaps reflective of their understanding of and engagement with the principles and relationships that underpin sustainable development rather than the science of such things as ecosystems survival. A shift would require engagement by philosophers as much as from the scientists.

- A corresponding lack of national, regional or local forums that would assist in critiquing mainstream debate about sustainable development from a Maori sustainable development perspective – in a way that engaged with fundamental structural and process issues and not just issues of access. The opportunities at present seem most advanced at the local authority level; should they have the will, they are best placed to work with hapu, the locus of much of the detailed analysis of kaitiaki responsibilities and their practical application to local problems. The problem at present that the Maori perspective is only being explored by those few councils who are actually committed to sustainable development principles. Otherwise there is no external requirement to focus on such issues.

- A risk averse approach on the part of national, regional and local government to engaging with Maori concepts because of the perceived issues associated with structure and legal requirements. This is partly the result of the blurring of the immediate legal requirements around formal sustainable management processes in people's minds, with the wider idea of sustainable development.

- Nervousness in engaging with metaphysical concepts and idea of duty and obligation having a role in decision-making processes. Both can raise uncomfortable questions about world views and assumptions about what underpins democracy – as much for those who see themselves as firmly embracing sustainable development concepts as anyone else.

- An emphasis in debate on particular forms of voice – generally science and procedural law, the latter divorced from substantive debates about sustainable development or management, or 'weak' and 'strong' sustainability. The language of moral philosophy is absent, making it difficult for groups such as Maori to articulate an approach that is concerned with moral concepts. The language of debate used by Maori can also differ in focus from the largely academic and scientific language; this also renders engagement difficult.

Summary

These are fundamental, complex and challenging issues for New Zealand. The disempowerment and marginalising of indigenous cultures is something being faced increasingly by countries worldwide. There are no simple answers. The gaps and barriers described above for Maori need to be acknowledged and worked on at every level. Empowerment may be the key to enabling a real partnership with this different world view.

6.6 Critical Gaps

A number of gaps and barriers have been identified, many of which arise because sustainability is not a neat, self-contained concept with a clear set of rules, but an all-encompassing notion that needs to be 'invented' rather than 'defined'.

Significant gaps and barriers that cut across many of the issues outlined above include:

- **A lack of leadership.**
  While the NZBCSD and others are championing sustainable development from a business perspective, this will not be enough. Leadership will need to come from central government – preferably in the form of some overall drive towards sustainable development, but at a minimum by making sustainable development an imperative for local government.

- **The need for capacity building.**
  There is a need to develop and apply community- based models of change that are strongly supported by institutions operating in genuine partnerships with communities. This will require education and upskilling for people both within institutions and at a community level. Across local government the differences are big. While some local authorities have already invested in capacity building, others are struggling or failing to acknowledge the need.

- **The lack of fora to debate some of the 'really hard' hard issues.**
  There are significant differences in views about what is and is not sustainable, how sustainability should be measured, what the priorities are, what are the most effective tools. Debate would not resolve these issues but would give people the opportunity to broaden and perhaps crystallize their views.

- **Insufficient recognition of diversity**. Diverse ideas and styles have the potential to enrichen the process of creating a sustainable New Zealand. There is a need to foster an environment in which diversity is at least tolerated, and hopefully valued. All styles have their strengths and limitations. The trick is not to adopt one way of doing things but to recognise that a range of approaches can be accommodated.

- **Inadequate opportunity to 'share and compare' knowledge and experience.** There is actually a great deal happening in New Zealand but it is difficult for people and organisations to tap into it. Informal (and in some cases more formal) networks are reasonably well developed, but a range of tools for information sharing needs to be considered.

Summary

The critical barriers tend to centre around people and institutions. Strong leadership and support for capacity building would start to address these barriers. Debate and information sharing need to be brought into the public arena in a way that provides for diverse approaches.

SECTION 7: MOVING ON

7.1 Introduction

It is an ambitious task to move from a snapshot of progress and an identification of gaps and barriers to an analysis of how these gaps and barriers could be addressed. Further work may need to be undertaken to focus specifically on advancing sustainable development in New Zealand in light of this report.

It has not been possible to undertake a comprehensive review of international models and approaches within the scope of this project. Instead Section 7.2 draws on three different international sources that provide some useful insights for New Zealand. Section 7.3 looks at possibilities for advancing sustainable development at a national governing level. It highlights the need for a strong leadership role, while building on a wide range of existing initiatives across transport, economic development, energy, taxation, social policy, and local government reform. Section 7.4 discusses iwi/Maori issues in relation to progressing sustainable development. Section 7.5 specifically addresses possible roles for a national cross-sectoral organisation such as Sustainable New Zealand.

In terms of evaluating the usefulness of different models it is worth noting that there are different types of models:

- Conceptual – ways of viewing sustainable development. The interlocking circles diagram and the TNS 'nested egg diagram' illustrated in Section 2.2 are examples;
- Delivery – addressing how sustainable development becomes incorporated into day to day decision-making;
- Evaluation – ways of judging whether specific projects fit with sustainable development requirements;
- Management – who is overseeing/ promoting/monitoring the process of getting sustainable development take-up in New Zealand.

All of these need to be addressed at some stage. This section of the report focuses most strongly on delivery and management models.

Summary

This section is intended more as a starting point for further discussion than providing the definitive 'answer' in terms of delivering sustainable development. It focuses on the national level as a matter of priority. It also, however, suggests possible roles for a cross-sectoral organisation.

7.2 International insights

New Zealand will need to develop its own models of sustainable development consistent with local conditions, requirements and existing structures, particularly taking into account Treaty of Waitangi issues and responsibilities. Nevertheless, it is possible to be informed by international experience and opinion.

The overview of international trends provides a range of insights with two that stand out from the rest. First, relative to the challenges we face and despite valiant attempts by some, progress is sketchy. There are many examples (of countries in particular) where contradictory policy programmes exist

Second, there are international examples at the country, sector, agency and local authority level of concerted drives towards a paradigm shift. While almost inevitably such initiatives, however patchy, are embraced, it is the joined together policy/practical examples that offer most.

The approach taken in this section is to select three international perspectives that may be useful for consideration in the New Zealand context.

1. Comments by Dr Klaus Bosselman of Auckland University who has extensive knowledge of European models and practice and an understanding of that might apply to the New Zealand context.

2. Hazel Henderson's identification of agency levels or entry points for securing shifts towards sustainable development as outlined in her latest book *Beyond Globalisation.*

3. Success factors for agencies focused on delivering sustainable development as outlined in a book by Carew-Reed *et al – Strategies for National Sustainable Development: A Handbook for their Planning and Implementation.*

Professor Klaus Bosselman

Professor Bosselman is in the Law Department of Auckland University and is a driving force behind the recently established Environmental Law Centre (see Section 5 for more details). He retains strong links with Germany and other European countries and has been able to offer some comments on European experience.

He argues that a critical part of any model is to raise community receptivity through education. However, before promoting the concept of sustainable development in a way that might inspire the general public he warns of three traps:

1. **The trap of the 'empty formula'.** To promote the concept without addressing critical issues may be the easiest way of getting popular support but may not achieve the level of commitment needed.

2. **The trap of 'over-feeding'.** Trying to promote a new ethic to underpin sustainable development may fail to engage. For example, an eco-ethical approach to sustainable development usually marks the point at which economists leave the debate.

3. **The trap of 'institutionalisation and atomisation'.** A solution to the dilemma of being too modest or too demanding might be to promote the dialogue and concentrate on procedures and institutions. The concept of sustainable development would then shape up as a result of a participatory process – from local initiatives to a national picture. (This approach has also been suggested by this report in relation to 'weak' versus 'strong' sustainability arguments, which are obviously strongly related to the issues being discussed here.)

   However, this carries the risk of being limited to the current actors – government, NGOs, business and academic – and failing to engage at the community level.

He suggests a discussion document or independent state of the nation report that is provocative enough to inspire action.

> *These three traps call for a strategy which tells us, first of all, why we need sustainable development here and now. There is a need to (re)create a sense of urgency. Recent political research overseas has shown that the 1990's idea of sustainable development lacks the sense of urgency which the 1970's and 1980's were so characteristic of. The questions asked then have largely been forgotten and replaced by well-groomed answers like sustainable development. Ever since environmental issues became mainstream and part of political party manifestos they have increasingly been perceived as less urgent or even under control. The success of the environmental movement became its own defeat: today everyone is green* (Professor Bosselman, pers. comm.).

Professor Bosselman argues that similar reports were the impetus for change in countries such

as Germany and Sweden. He suggests that it should be prepared by an independent entity such as the PCE or perhaps a group such as Sustainable New Zealand.

He suggests that such a report could form the basis for development of a national strategy for sustainable development. Like others he points to The Netherlands' Environment Plans as being one of the best examples of a national strategic plan.

Summary

Debate on sustainable development must get into the public arena, rather than remaining institutionalised. Recreating the sense of urgency of the 1970s and 1980s could be achieved through an 'independent' state of the nation report that would form the basis for development of a national strategy.

Agency Levels/Entry Points

Hazel Henderson in her most recent book *Beyond Globalisation* has produced a hierarchy of agency levels at which sustainable development might be addressed. These are:

a. Global systems – technologies, currency markets.

b. International system, trade rules, treatises, etc such as the Biodiversity Convention.

c. Nation states that have the ability to blunt some effects of globalisation, to establish national sectoral and local Agenda 21 action plans, and to implement tax systems that punish waste and over consumption (for example).

d. Corporate systems – the development of resource/ethics charters, of entities such as the Business Council for Sustainable Development exemplify change in this sphere. Small and medium size businesses need to be fully in the picture as well.

e. Provincial and local systems – mainly, though not exclusively, under an Agenda 21 framework diverse local sustainable development initiatives are now recognised. These range across the continents, across rich and poor communities. They often represent partnerships between communities, business, agencies and governments to secure significant shifts in social and environmental well-being. Public participation in an ongoing way is a critical component of these processes.

f. Civic processes – the contribution of local voluntary groups is frequently a key component of effective sustainability strategies. These include macro organisations like Greenpeace through to locality clean-up groups. Such groups promote alternatives, new visions for possible, desirable futures. While in this information age access to worldwide resources is a possibility, these groups frequently survive or die with the coming and going of key individuals.

g. Families and individuals – informed families can contribute by decreasing stress on local and community social and environmental systems.

While action on any of these levels is possible, effectiveness derives from securing movement on several planes at the same time. A key move involves actions at a national level. This should lead to interlocked actions and engagement at the local and household level. Without this there

is little coherence and the real prospect that local actions will be nullified by national activities.

> ***Summary***
>
> *The section on gaps and barriers identified lack of national leadership on sustainable development as a critical gap. This conclusion is strengthened by reference to Hazel Henderson's work, suggesting that action at a national level is the linchpin in terms of securing maximum gain from action at other agency levels.*

Critical success factors

Another useful source (Carew-Reed *et al*) identifies nine critical success factors for sustainable development strategies. The success factors actually relate to an evaluation of the common features of non-government organisations (such as ICLEI) that have been influential and that have succeeded in linking programmes at the local level to international objectives. Most of these factors would seem relevant to any programme at a national level in New Zealand.

a. The strategy is focused on securing change and achieving specific objectives such as to improve the well-being of people and ecosystems.

b. The strategy integrates the social/economic and ecological components at every level of policy, plans and programmes.

c. The strategy is tactical and focuses on areas where change is most needed and can be achieved.

d. The strategy is adaptable and cyclical – able to respond to change, grow over time and be applied to all geographic levels.

e. The strategy and its associated processes are as participative as possible, with responsibility jointly shared between the key parties within and outside government. This particularly concerns those whose values, technologies and institutions most need to change.

f. Effective communication is the life-blood of any successful sustainable development strategy. The purpose is to agree on issues, priorities, resource allocation and programmes.

g. Strategic plans and processes are developed and implemented. These include a vision, targets, and a framework for setting priorities. The process for developing these plans is inclusive. Planning and action proceeds in parallel.

h. The strategy is integrated into the decision-making strategy of the country/area/locality/sector. It fuses with decision-making cycles and builds on strengths. It reflects local circumstances, values and skills and builds on existing plans and initiatives.

i. Capacity building enables success. Programmes will almost certainly require additional resources. Government support is critical and needs to be provided for in the core ministries.

> ***Summary***
>
> *A range of critical success factors that relate to processes rather than dictating structures has been identified. These processes, accompanied by some structural change, should help guide the development of strategy. The factors reinforce themes that are highlighted elsewhere in this report: the importance of participative processes, building on existing initiatives, and capacity building.*

7.3 The National Level

This report has argued that advancing sustainable development in New Zealand will be much harder without national commitment and leadership. This section suggests how this could be achieved by building on, or linking to, existing initiatives and programmes. It is obvious that further discussion with key people needs to take place, so that options could be refined or developed.

It would be highly desirable for sustainable development to become more of a 'named' focus at a number of different levels.

At a national level there are a number of options. A specific entity (or entities) that focuses efforts on sustainable development is considered desirable. Whatever is established must be adequately resourced, probably quite small initially, and with a limited life of 2-3 years. Review at the end of this time would be appropriate.

The rest of this section considers how a new entity or entities might be structured, and what it/they would do.

Structures

A number of options exist.

1. A unit within Government

This would probably be located within an existing ministry (or the Prime Minister's Office).

- The ministry should be a key ministry with good linkages to other ministries.
- The unit would be responsible to a minister with connections across sectors.
- The unit would have an independent steering group with cross-sectoral representation. The steering group would probably stay in place for the 2-3 year period.
- Some independent audit function sitting outside the unit would be required.

2. An independent Commission for Sustainable Development

This might be a new entity or it could, for example, involve expanding the functions of the current PCE.

- Desirably a commission would also make use of external advisors drawn from across sectors.

The main advantages of the first option are:

- may be best placed to build on existing initiatives and develop cross ministry linkages;
- may have more influence on government decision-making.

The main disadvantages of this option are:

- possibly less visible in the public eye;
- easiest to dismantle because of this;
- open to capture by one sector – economic, environment or social;
- open to political capture, which could have a 'diluting' effect.

The main advantages of an independent commission are:

- its independence – therefore its ability to be outspoken on issues;
- more visible in the public eye (and therefore harder to make it 'disappear');
- if within the PCE, for example, this would avoid setting up a new structure.

The main disadvantage of this option is:

- potential for being marginalised.

If the expansion of the PCE office were to be considered, there are two points that need to be avoided:

- diminishing the resources allocated to focus

on the environmental sector;
- reinforcing the widely held belief that sustainable development is primarily about the environment. (Renaming should partly deal with that.)

3. A combination of these two

There could be a unit set up within Government, complemented by an external unit that would have an audit function, but might also take on broader responsibility. Several comments were made by those interviewed that efforts needed to be intersectoral, so that a unit sitting within Government alone may simply not get wide enough buy-in.

Summary

At the national level a new entity or entities, with a responsibility for sustainable development would be highly desirable. This could take more than one form. Three suggestions include a sustainable development unit inside an existing ministry, an independent commission for sustainable development, or a mixture of both.

What would the unit or commission do?

Whatever is chosen, the importance of building on and coordinating existing programmes cannot be over-emphasised. Section 2 established that sustainable development is either an implicit or explicit consideration in a number of areas of government policy development, but that the linkages across strategies are not necessarily being made.

For example, the New Zealand Biodiversity Strategy highlights the cost of ecological decline in New Zealand. Put in a sustainable development context, it raises wider issues to do with accounting for non-economic values, and private property rights and responsibilities.

The following programmes present some obvious opportunities:

- Transport work – including the New Zealand Transport Strategy
- Climate change
- Sustainable Economic Development Strategy
- Treasury Tax review
- Closing the Gaps
- The Government's strengthening relationships process with iwi/Maori community voluntary organisations
- MfE's work on ecologically sustainable development
- Public good science funding for urban sustainability research
- Local government review.

The last bullet point is critical. A new Local Government Act may require local authorities to prepare sustainable development strategies. Local government is also likely to be required to adopt more participatory processes. Many councils will struggle with these new requirements and may turn to consultants who will prepare templates to ensure compliance with legislation. This will not necessarily produce the kind of engagement that is needed.

The following is a list of possible roles and priorities for a sustainable development entity within Government. It could:

- **Develop a national strategy** – in consultation with local authorities. While most of the following would come out of this strategy there would be a need for action to proceed in parallel with planning (as outlined in the critical success factors below).

- **Raise the profile in the public arena**. The strategy might be preceded by a discussion document or state of the nation report as described by Professor Bosselman above. This, or a version of it, should be targeted at the public.

- **Take a tactical approach**. A small unit will need to get runs on the board to establish credibility within two or three years. It will need to tackle a small number of issues taking into account existing programmes and eyeing up 'entry points' (see discussion of Hazel Henderson's work above).

- **Facilitate a high level think-tank**. This is linked to the previous point. Being tactical will require some analysis of where New Zealand can be most effective. For example, New Zealand's greenhouse gas contribution is negligible on a global scale. Addressing greenhouse issues in this country will have little impact on the global picture. However, Wayne Wescott of ICLEI suggests that New Zealand may have a part to play in 'moral leadership'. The steering or advisory group will have a key role in this.

- **Focus on capacity building** – with local government being the first priority. The section on gaps and barriers identified the need to develop community-based models of change, and genuinely participative processes. Local government may be the best entry point for this, but a strong partnership between central and local government will be needed to help develop skills and capabilities. Focus on this now should mean that local government is well positioned for change in about 2002. LGNZ will need to play a major role in this – and this may have resourcing implications.

- **Have a measurement function**. At a minimum there will be a need to measure targets in the national strategy. Ideally the new entity will oversee the development of sustainable development indicators, building on existing work such as the MfE environmental indicator programme.

- **Coordinate reporting requirements for Rio plus 10**. This role currently lies with MfE. The new entity may lend support to MfE, and work with other interested parties to raise the profile of this international rallying call.

Note that if all government agencies were required to report against contribution to sustainable development objectives or targets (perhaps through adopting a sustainable development charter), some form of independent audit would be required. This could be undertaken by a commission or some other independent entity, as mentioned previously.

This also might be the best place for a 'clearing house' of some kind. There was overwhelming support from those interviewed that there is a need to share information, know what is going on in the rest of the country, and thereby avoid reinventing the wheel, be inspired by innovative practice, and generally not to be working in isolation. Web-based technology is an obvious way of gathering what information already exists, linking it by some sort of 'intelligent' search function, and working to fill in the gaps.

Summary

A sustainable development agency within Government would gain maximum leverage from using existing programmes and initiatives as a springboard for advancing sustainable development in New Zealand. But an external audit function would still be required. Capacity building prior to implementation of local government reform is likely to be a priority.

7.4 Iwi/Maori *

Analysis in sections 2 and 5 argues that there are a number of issues relating to the advancement of a sustainable development vision in the New Zealand context of the Treaty of Waitangi. It was suggested that the debates about sustainable development were the poorer for the neglect of key concepts and processes of decision-making found in a broad Maori approach.

These concepts, if not the particular Maori structures that sit around them, could enrich debate and take it in directions not otherwise expected. However, it was also argued that the most immediate concerns were to first ensure that Maori sustainability concepts were not assimilated into sustainable management models and structures so that these concepts were not undermined and rendered powerless in any future debates.

Second, it was suggested that those engaged in the search for institutional and community structures, models and processes to support sustainable development in New Zealand, must find solutions that provide active protection for the Maori concepts as they are and as they may evolve. This is not because the Maori model is considered as being of inherently greater value than other sustainable development perspectives; it is because of the particular status of the Treaty of Waitangi and all it carries with it about partnership in the New Zealand context. Even if this is not the concern of those outside government, it must be of concern to those working within it.

The previous discussion suggested that active protection cannot be discharged by merely ensuring access to structures that of themselves may bear no relations to the fundamental concepts underpinning the Maori approach. It is suggested, for example, that active protection must include the ability to have decisions made in a way that is consistent with the concepts of duty and obligation as the drivers of human action. It must also include provision for structures and institutions such as that of kaitiaki in a way that ensures they work in their fullest sense, including therefore issues of jurisdiction and authority. It must also involve working with the intertwined structures of hapu, iwi and whanau as well as the individual, and the structures evolving and developing around Maori not necessarily living and working within their traditional tribal rohe.

All this, of course, raises fundamental issues about the institutional, constitutional, legal and governance structures in New Zealand. It will be an ongoing debate that crosses a number of national preoccupations, not just the emerging concern with the issue of sustainable development. However, the complexity and fundamental nature of these debates does not mean they exist outside sustainable development preoccupations; indeed they are a fundamental part of its focus on community, processes of decision-making, and culture.

A key part of this overall report is concerned with how the ongoing exploration of sustainable development in New Zealand can be supported and enhanced. It has been pointed out that the whole area is fluid and diverse with a range of ways of acting in relation to the concept. It has also been suggested that this diversity is important and not to be 'corralled' into fixed and/or inflexible structures and processes. A number of possible options are explored in this section. However, this report does not suggest a particular structure or range of structures, or processes, in response to the issues raised about sustainable development and tangata whenua. Rather a series of notes or points are raised that, it is suggested, may guide future debate. These are set out below:

- Maori should be seen as already being actively involved in debate on sustainable development.
- There should be a preparedness to work with and listen to a range of Maori voices about sustainable development in a way that is responsive to different modes of expression.
- There is ample information about the Maori approach to sustainable development.

* See note page 9.

There is no need to expend further Maori community effort in articulating the concepts. Efforts need to be made by other groups to:

  - understand the fundamental concepts and how they might differ from some other sustainable development models – e.g. the metaphysical aspects, the duty-based structures;
  - understand and be familiar with Maori political, social, environmental and economic structures in a way that does not collapse them down into generalised structures – e.g. kaitiaki as opposed to the concept of kaitiakitanga as defined in the RMA.

- Where groups are suggesting change that will, in their view, contribute to an increased national focus on sustainable development, it should consciously address how this works with and enhances the current or evolving approach to sustainable development articulated and practised by the Maori community.

- Central government agencies and entities, as key players in future debate about sustainable development, should understand the difference between Maori access to sustainable management structures and Maori concepts of sustainable development. While working towards improving the former, they should be aware of and seek to rectify the marginalising effects for more fundamental concepts that appear to accompany the process.

- Where central government agencies are involved in debates about sustainable development they need to take a role in:

  - ensuring the Maori approach to sustainable development is articulated;
  - developing and critiquing statutory, institutional and governance responses in terms of active protection of these key concepts.

- Sustainable development groups should not assume that they need to find a structural response in their organisation, or any wider umbrella organisation, to gain greater understanding of the issues raised. Listening to debates coming from Maori groups and talking about the issues raised can be a powerful tool. Working at the local level to find practical solutions based on a principled approach to the idea of partnership can be just as valuable as a centralised approach.

- Structures set up to 'speak for' the 'sustainable development community' should be avoided. At the very least it won't be able to speak for the range of Maori interests and will not be able to resolve the complexities of representation. If they are created it should be made explicit that they speak for a portion of those actively involved in sustainable development issues and that they are not articulating the full range of concepts found in New Zealand. This, of course, is not the same issue as structures set up by government to develop or advise on policy; here the issue of the breadth and nature of representation is key.

- An emphasis should be placed on processes for dialogue – be it at the local or national level rather than a structural response that requires the issue of selected representation to be addressed. This is a key issue given the dispersed nature of Maori structures. Undermining those structures can undermine the concepts under debate themselves. It needs to be accepted that the debate will be dispersed and time-consuming.

- Should there be any structure for disseminating information on sustainable development initiatives, it should take an active role in assisting Maori groups in the exchange of information. To that end there would need to be a focus on networking with iwi and other groups.

Summary

The needs and views of iwi/Maori must be specifically and actively taken into account in any attempts to strengthen New Zealand's approach to sustainable development.

7.5 Possible Roles for a 'Sustainable New Zealand' Body

One of the reasons that this report was commissioned was to establish whether there were gaps and barriers that could be addressed by setting up a nationwide, cross-sectoral organisation to promote sustainable development in New Zealand.

This idea was canvassed through discussions with a wide range of experts and stakeholders. Key points from these discussions were as follows:

- Quite a large number of people could not see the need for 'yet another organisation'. These people pointed to existing entities (such as the Sustainable Cities Trust, The Tindall Foundation, The Royal Society, the NZBCSD.) They felt that people were already confused about the differences between these groups– some of which have a national and/or a multi-sectoral focus – and that the priority should be to build on what is already there. They were also concerned about the possibility that any new organisation would become little more than a 'talk-fest'.

- Some people raised concerns about how it would be possible to get cross-sectoral buy-in and representation. They warned that there was a strong possibility that any such group would not end up being representative and that would reduce its effectiveness. They saw a risk that it would be captured by one sector – with local government being the most likely.

- Another group was supportive of the idea, although most were reasonably vague about what functions the organisation might perform. Education, raising awareness, information sharing, advocacy and establishing international linkages were all mentioned.

Once again there is a range of possibilities. This report focuses on one option that is considered a pragmatic response to some of the issues raised. Key aspects include:

- An organisation is formed with a short-term focus on Rio plus 10.

- After Rio plus 10 the role of the organisation is reviewed. At this point it may be disbanded or reconfigured.

- The organisation does not have an overly ambitious agenda but seeks to make a significant contribution in one or two areas.

- The organisation focuses more on information sharing and discourse than on advocacy, although there may be advocacy roles on particular issues when representation is not so critical.

- An attempt is made to get good cross-sectoral representation (although this is not critical if the organisation does not have a major advocacy function).

- Funding issues are addressed before the organisation is established.

If any agency is established to deliver sustainable development at a national (governing) level there would be a need to review the relationship between this agency (agencies) and the Sustainable New Zealand organisation. It is possible that the latter could take on an advisory role with respect to the former, or even that steering group members, for one or both agencies, could be drawn from this organisation. However, the issue of representation would become more important again.

Finally, the following is a list of the types of activities that people interviewed felt the organisation could consider:

- Networking and information sharing between member organisations – one interviewee described this as providing an "under-arching web of information". The purpose would be to learn from others' experience and possibly identify joint opportunities.

- Reviewing ways in which wider information sharing, access and dissemination could occur. For example, the information collected in Section 5 of this report could be expanded and updated on a regular basis. There are web-based opportunities associated with this, as mentioned above. The group could investigate added value options in this area.[6]

- Undertaking some national publicity on sustainable development or on particular issues. Note that the funding implications of this would need to be seriously considered.

- Acting as an entry point for international visitors/speakers. The organisation could also establish international linkages and proactively seek out speakers. Note, however, that there are other groups also doing this.

- Providing fora for debate on some of the issues raised in this report, such as different approaches to evaluating what is sustainable. The debate would need to be properly facilitated.

- Having a regional focus as well as a national one. There is a lot to be gained from sectors interacting on a regional level. Christchurch is a good example of a region that is doing this already. In other parts of the country central government delivery agencies and local government are forming stronger partnerships. These initiatives could be strengthened.

Summary

A national cross-sectoral organisation to promote sustainable development in New Zealand would face a big challenge in getting buy-in from all sectors. A pragmatic approach is suggested where the focus would be on information sharing and networking leading up to Rio plus 10. Such an approach would reduce the importance of the representation issue. Funding issues should be addressed before the organisation is established.

7.6 Framework for Moving On

A number of options have been canvassed in the preceding discussion. All of these will require further discussion. Some could be effected quite quickly; others would take longer.

As commented on before, a wide variety of innovative and leading edge initiatives are taking place in New Zealand, quite often oblivious of one another. The following options do not suggest 'controlling', dominating or ignoring these; they are intended to complement and support them. Even though some of the initial steps are suggested at a national level, this is intended as a support for regional and city initiatives where the main focus must lie.

6 However, note that this 'clearing house' function might be more effectively addressed by a commission.

The following suggests possible actions that could be taken:

1. Government

a. Political

Encouragement for:

- Leadership at a political level – seen as a key ingredient to any successful national strategy.

- Advocacy for the concept of sustainable development by the Prime Minister and senior colleagues.

- Ministers across the departments to start to indicate a blurring of the 'silos' (so that Social Policy in its work on building stronger communities, for example, would speak of this in the context of sustainable development).

- Rio plus 10 in 2002, to be explicitly named as a short-term target for concerted action. Highlighting of international calls by the United Nations for evaluation and progress reports. Re-stimulation for communities to consider programmes like Agenda 21 to engage the wider public in local moves towards global targets.

- Continuing to name sustainable development in new and amended legislation.

- Advocacy to achieve regional intersectoral debate and cooperative initiatives.

b. Bureaucratic

Encouragement to:

- Build on and develop the initiative taken by MFE to draw together CEOs of Ministries to continue the **discussions/consciousness raising** on sustainable development.

- **Name** 'sustainable development' as the target and gradually **begin to refocus** each Ministry on it, each one developing its own vision, goals, targets and action plans to achieve the vision. Within these plans, need to be explicit linkages and interrelationships with other Government departments, which demonstrate how each is working cooperatively in the broader context of sustainable development.[7]

- Name a **specific unit** within Government to focus efforts, drawing on help and advice from inside and outside Government, and with direct political accountability.

- It would have a number of functions to be taken up gradually as the unit develops:

  - drawing together a working definition of sustainable development, based on current political priorities;
  - developing an interim national strategy;
  - identifying opportunities for refocus in Government initiatives that have already started, (eg, community input into policy before it is written);
  - establishing an internal monitoring system for inconsistencies of policies and progress by departments;
  - establishing need for information and training in Government departments;
  - capacity building for departments, for example, in participatory decision-making and communication;
  - strengthening funding opportunities for initiatives that explore ways to encourage community learning and ownership of the most pressing issues facing the country;
  - looking for opportunities to work with business, communities, local government on cooperative ventures to test different ways of doing things more sustainably.

7 This is not intended as hugely disruptive for departments that have just settled into 2000-2001 programmes. It would build on political priorities already established which are all elements of sustainable development, but need interconnecting and naming in a more visible way.

2. Non-Government (but established by government)

Encouragement for a **Commission[8] for Sustainable Development** to be established as an autonomous, or semi-autonomous body that would sit outside government and provide a national focus for sustainable development. This could be either established as a separate body or sit within a semi-autonomous body such as the Office of the Parliamentary Commissioner for the Environment.

It could have a number of functions:

- A **clearing house** for information, including a database of organisations, information on themes, who is doing what in New Zealand. This needs to be updated annually. The potential for web-based technology has been mentioned but should not be restricted to this. There also needs to be an exploration of the critiquing of initiatives on the database, as a guide to those who don't wish to reinvent the wheel and need more than a showcase list of what is happening where. (This could also form part of the New Zealand response to Rio plus 10.)

- An external **monitoring and auditing** of Government policies and practice at central and local government levels.

- **Advocacy and encouragement** across the sectors including the benefits of such processes as The Natural Step, as a start to rethinking present practices.

- Identifying **training** needs across the sectors.

- Possible role in drawing together research (jointly with bodies such as The Royal Society) to look at encouraging more cooperative ventures across universities and research bodies to avoid duplication and build on synergies.

- Facilitate intersectoral discussions to establish a plan of action for community education on sustainable development issues.

8 There are other structures that might be considered, such as a foundation or an institute.

3. Cross-sectoral non-government [9] organisation

A body like Sustainable New Zealand could be set up, meeting every 4-6 months as a whole, but in working groups as required to:

- Monitor the outcome of this report.
- Advocate action on selected recommendations;
- Report on progress in each sector;
- Facilitate a meeting of national NGOs focussed on sustainable development to establish connections/ interlinkages/network possibilities;
- Explore funding opportunities, such as a fund for community initiatives and an investment arm that might feed it;
- Local authority members talk with LGNZ about how best to boost capacity building for councils, to deal with the implications of the amended Local Government Act, seconding expertise from councils and NGOs;
- Facilitate debate on the concept of sustainability, drawing on case studies in business, communities and levels of government;
- Look at the development of national, regional and district fora to encourage intersectoral discussions on a range of relevant issues such as true cost accounting, and triple bottom line accounting;
- Engage in dialogue with iwi/Maori, to further an understanding of the Maori worldview;
- Support iwi/Maori moves towards empowerment and capacity building;
- Facilitate the arrangement of national/ regional fora to share different ways to achieve sustainable management;
- Utilise the opportunity of the Asia Pacific Regional meeting in Hamilton in March 2001, for profile for one or more of these initiatives.

Summary

A four pronged approach is suggested for further discussion. The first element would involve political leadership. The second element would be the establishment of a small unit within government with a specific focus on sustainable development. It is also suggested that a Commission for Sustainable Development be created – either as a new entity, or by expanding the role of the PCE. Finally, a cross-sectoral organisation could be established for debate, information sharing and networking.

9 Non-government in this context means that it would not be created by government. However, it is expected that the organisation would have government representation.

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APPENDIX A:
'SUSTAINABLE NEW ZEALAND' ORIGINS AND WORK BRIEF FOR OVERVIEW OF SUSTAINABLE DEVELOPMENT INITIATIVES IN NEW ZEALAND

Background

Sustainable New Zealand had its roots established at the 'PATHWAYS TO SUSTAINABILITY local initiatives for cities and towns' International Conference held in Newcastle, Australia, between 1-5 June 1997. The objective of that conference was:

> *Shifting the pattern of human settlements towards a more sustainable future*
> (Welcoming address by the Lord Mayor of the city of Newcastle, Greg Heys).

The Rio Conference of 1992, known as the *Earth Summit* by many, preceded the 1997 Newcastle Conference. The Rio Conference was the birthplace of the global vision for 'sustainable development'. New Zealand was represented at the RIO Conference and is a signatory to the Agenda 21 Agreement.

On return to New Zealand after that conference, many attendees felt that a national association was needed in New Zealand to promote the principles of 'Agenda 21', particularly the concept of sustainable development.

A number of meetings were subsequently held to explore the possibility of establishing a national association within New Zealand. The association was never formed, and there are a number of reasons for that. Principal among those reasons was the perception that New Zealand as a nation was not ready for the paradigm shift required to enable a sustained move toward 'sustainable development'.

Now, nearly three years on, there is increasing evidence that the time is right.

A number of organisations with sustainable development as their central focus have been formed, and there has been a noticeable increase in interest by the general population to discover enduring and 'sustainable' solutions to national issues.

Some of that initial group of 1997 met again in late 1999 to rekindle the idea of forming a national association and to use that as a vehicle to share the vision of 'sustainable development' with the rest of New Zealand. They noted that many nations now have both national strategies and multi-sector structures, i.e. UK and USA.

For the vision to work, however, there must be 'local solutions'. That collective objective is sometimes referred to through the phase: *Think Global, Act Local.*

An inaugural meeting of parties interested in progressing a sustainable New Zealand organisation was held on 14 February 2000, followed by a working group meeting on 29 February to consider matters arising from the 14 February meeting. A second meeting was held on 10 April where another working group was established. This group was tasked with preparing a brief for a researcher to investigate New Zealand's progress on implementing sustainable development, and to manage the process of having that research completed.

THE STUDY BRIEF SHALL COVER THE FOLLOWING:

1. Statement on sustainable development
2. Evidence
3. Snapshot
4. Gap analysis
5. Models

1. Statement on sustainable development

- Description
- Examples of definitions (formal and 'societal', triple bottom line)
- Definition to be used for this project

2. Evidence

2.1 Identify 'high level' facts and trends (state of the nation report covering economic, environmental and social components), perceptions and surveys;

2.2 International examples: OECD, APEC, CSD, World Business Council on Sustainable Development, other nations, ICLEI, …..

3. Snapshot of progress on sustainable development in New Zealand

3.1 Determine what the major stakeholders in each of the areas of:

- central government departments/agencies
- local government
- NGOs
- business
- education/research

are doing, including monitoring and measuring, in the area of sustainable development.

3.2 For each of the major stakeholders determine the extent of effort directed at…

- researching policy and strategic directions
- setting policy and strategic directions
- carrying out actions

3.3 For each of the major stakeholders, determine whether that organisation has a multi-sectorial or singular mandate/approach.

4. Gap analysis

Identifying the gaps and barriers in advancing sustainable development in New Zealand based on the findings in tasks 1 to 3 above.

Identify the critical gaps where value can be added. This is to include comparison of New Zealand's performance with our countries.

5. Models

Identify the range of organisational models in terms of meeting the needs identified in task 4 to advance sustainable development in New Zealand.

(What is the best vehicle to achieve this?)

APPENDIX B:
STATEMENT ON SUSTAINABLE DEVELOPMENT

Introduction

Moves toward sustainability are driven by the need to harmonise global systems. Current knowledge strongly suggests there is continuing net global decline in ecosystem health from an already deteriorated base (WRI *et al* 2000). In addition, while economic growth in many communities remains strong, it is not universal. Finally, economic growth notwithstanding, social dislocation and distortion may be a hidden cost of continuing development (see for example MCEWH 1999).

A primary difficulty is that while the monitoring and analysis of economic performance is relatively highly evolved, comparable ecological and social indicators are relatively undeveloped (SustainAbility 2000). In addition, attempts to create such comparable measures raises profound ethical questions about whether and how this should be done (O'Connor and Spash 1999; Toman 1999).

The situation is sufficiently worrying that international organisations focused primarily on economic performance recognise that government policies dealing with the economy, the environment and equity are badly disconnected and often in direct conflict (OECD 1997). Thus contributing to global ecosystem erosion is the chronically poor monitoring of the links between ecological, business and social health (Knight 1997b).

Thus sustainable development is not so much a goal as a process highlighting contradictory ecological, economic and social trends and identifying gaps in our ability to tackle such contradictions. This is partly why some argue the process is as important as any solution (Marcuse 1998; Redefining Progress *et al* 1999).

A common example: the Rio Principles recognise the value of free trade as well as the need for sustainable development (UNCED 1992). Yet freer trade is linked to increasing per capita consumerism, a trend accused of countering attempts to reduce ecological degradation (Carley and Spapens 1998). While free trade is not predicated upon more consumption, nor upon economic growth per se (Guild pers. comm. 1999), it is sold politically and through the media as a primary means of improving standards of living. Standards of living are perceived to be linked to improving economic growth (United Nations 1999; MCEWH 1999), and this is in turn presented largely in terms of having the potential to consume more.

The scale of these contradictions will vary district by district, region by region and nation by nation. The specific nature of the gaps will similarly vary, as will the solutions. And of course individual perceptions about the scale of the problem, the apparent gaps, and the claimed solutions will also vary.

This helps explain why definitions of sustainable development also vary greatly: they take the general case outlined above and apply it to a set of specific conditions. The aim is to generate the best way that a particular sector, district or country can contribute to addressing the contradictions noted.

Aims

This section of the PRISM report outlines international sustainable development definitions, their context and a brief overview of applications. Methods of application provide a more accurate picture of SD, as definitions on their own do not reflect the actual practice of SD.

While the scale and specifics vary, there are also strong similarities between countries and consequent lessons to be learned. It is these lessons that this section of the PRISM report provides a brief overview of.

Finally the following sections touch briefly on some of the issues that New Zealanders will need to tackle in order to use the sustainable development concept. The issues raised are not comprehensive but indicative of the challenges and opportunities the sustainable development process gives rise to.

General Definitions

The most familiar definition of sustainable development (SD) is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987 p43). The idea behind this statement is that if this condition is met, other conditions for sustainability would also have been met.

As an example of how this is translated into a definition, Statistic Canada says "sustainable development implies that all people have the right to a healthy, productive environment and the economic and social benefits that come with it… [while taking account of] equity, both among members of the present generation and between the present and future generations".

Sustainable development, in common with terms such as free trade, has moral overtones: development that is not sustainable is ecologically, socially and ultimately economically harmful. Among the difficulties is agreeing on how to compare the needs of the current generation against those of future generations.

SD is also based on the idea of living within the world's carrying capacity (Carley and Spapens 1998). This concept forms the basis of many definitions of SD. For example:

> *sustainable development … reflects a concern (a) to live within the limits of the world's and the community's resources, and (b) to ensure the long-term prosperity and well-being of future generations* (MCEWH 1999).

A graphical representation of this argument is the **ecological footprint** of nations, which suggests most countries are in 'ecological deficit': that is, are using more resources than they can produce in order to maintain the lifestyle of their citizens. Summing these deficits results in a net global deficit (Wackernagel *et al* 1997). The more sophisticated **'ecological backpack'** approach reaches similar conclusions (Carley and Spapens 1998). If such assessments reflect reality – and there are massive assumptions made in such calculations – it reinforces the idea that consumption patterns have to alter significantly, and most significantly for those countries with highest per capita consumption rates. This would include Western Europe, North America and many of the Asia-Pacific nations including New Zealand. But such a conclusion is seldom considered outside some strategic plans such as those in Germany and The Netherlands (Carley and Spapens 1998).

Different Meanings for Different Audiences

Obviously it helps when explaining sustainable development to use concepts and examples relevant to the particular audience. For example, sustainable engineering is the application of sustainable concept to engineering (McDowall pers. comm.) creating in effect a set of guidelines, restrictions or opportunities (depending on your point of view).

The danger however lies in narrowing the meaning beyond what was intended. For example, some commentators distinguish between economic, social and environmental sustainability (for example, Munasinghe 1993; Munasinghe and Cruz 1995: quoted in Pugh 1996). That is:

> *… economic sustainability is understood as generating a maximum flow of economic welfare whilst maintaining the stock of assets, including environmental assets; social sustainability is people oriented, identified with the stability and cultural diversity of social systems; and environmental sustainability refers to the preservation, the resilience and the adaptation of physical and biological systems*
>
> (Pugh 1996 p1).

Such sector-generated definitions can fragment interpretations of sustainable development, leading to confused efforts to apply the term. For example, a 1998 survey of English local authorities (Hales 2000) concluded there was "a lack of unified coherence in approach amongst local planning authorities as they struggle to translate the rhetoric of sustainable development into practice" (Hales 2000 p99).

Thus while it is useful to encourage sector-specific definitions of sustainable development to increase the likelihood of adoption, it is necessary to recognise the limitations of such definitions.

On the other hand, while the term does lend itself to contestability and indeterminacy (McManus 1996) these are also the hallmarks of possibility and choice (Hales 2000; Torgerson 1995). The question is whether, given possibility and choice, the existing institutional, cultural and regulatory regime can accommodate conclusions that may challenge or threaten. Or, in the words of one of the respondents to the questionnaire:

> *It's not that the concept is invalid, its just that approaching it in this way is like asking couch potatoes if they think they should be healthy. They will always say "yes", until it comes time to lace up the running shoes and get out onto the track. Same with SD – of course we want it, unless it means changing anything about our current lives*
>
> (Dr Robert Guild, August 2000, pers. comm.).

The Netherlands

One example of a country trying to tackle this issue of practical implementation of SD is The Netherlands. A summary of its National Environmental Policy Programme (NEPP) is given in the section Sustainable Development Initiatives of Selected Countries. One practical outcome of The Netherlands approach is decoupling (Box 1).

Box 1 Decoupling

'Decoupling' refers to improving living standards (economic growth) while at the same time reducing the environmental pressure. A distinction is made between relative and absolute decoupling.

* **Relative decoupling** occurs when the environmental pressure rises, albeit at a slower rate than that of economic activity: i.e. environmental pressure grows more slowly than the economy.

* **Absolute decoupling** occurs when the environmental pressure reduces or at least remains constant while economic activities are increasing: i.e. economic growth while the environmental pressure is falling.

The term 'recoupling' is used when the initial reduction in the environmental pressure is transformed back into growth as the economy grows.

Although the term 'decoupling' may be new, the underlying idea is not. In fact it has always been the objective of Dutch environmental policy to sharply reduce the environmental pressure for a given economic growth. For example, the objective to reduce air pollution emissions per unit GNP by a factor of between 2 and 10.

Types of Sustainability

One issue New Zealand needs to tackle is what *kind* of sustainability is meant when talking about sustainable development. This influences, for example, the development of both policies for implementing sustainability and indicators for measuring it.

Strong and Weak Sustainability

The basic argument here is whether degradation of one set of assets (ecological, economic or social) can be compensated for by increases in one of the other sets. Such trade-offs tend to be seen as typifying the economic approach to defining and measuring sustainability (Toman 1999). This weak sustainability (WS) is contrasted with strong sustainability (SS), which argues the inviolability of ecological assets.

It is clear that one strand contributing to sustainable development thinking emphasised ecosystem integrity as driving social and economic systems (IUCN 1980). For example, the World Conservation Strategy for sustainable development had three main goals:

- to maintain essential ecological processes and life support systems;
- to preserve genetic diversity; and
- to ensure the sustainable use of species and ecosystems (Lucas 1980).

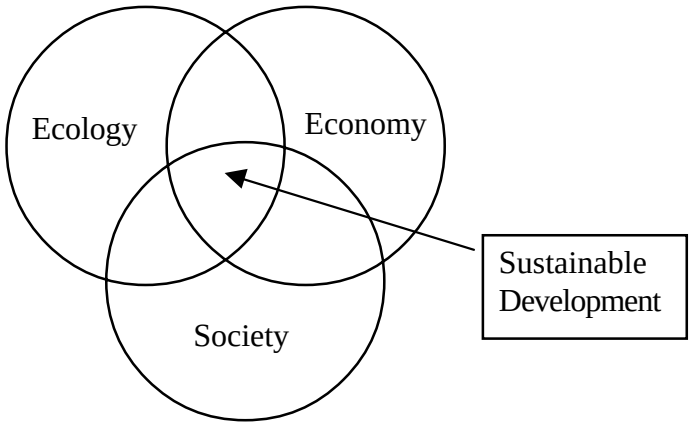
Echoes of this emphasis still occur today (OECD 1997; Wackernagel *et al* 1997). But comments at the time also clearly indicated the path SD was to take. For example, then UN Secretary-General Dr Kurt Waldheim said:

> *… the Strategy suggests a framework for development policies capable of meeting the complementary objectives of improving the quality of life for all through a steady process of growth while respecting the fragile base of living resources on which development is founded*
>
> (quoted in Lucas 1980 p13).

Thus while ecological principles influence policy development, the question is to what extent. Concepts such as industrial ecology, eco-accounting, ecological services assessment and eco-taxes, along with the growth in environmental effects assessment methodologies and state of the environment reporting, all reflect a realisation that ecological processes underpin economic and social activity (OECD1997; MfE 2000). In this context sustainable development is seen as a process of balancing economic, social and ecological needs and is often presented as a series of intersecting circles (Figure 1).

The argument is that using such tools in the current (largely Western democratic) political and economic systems encourages a likely-to-succeed evolutionary rather than a less-likely-to-be-accepted revolutionary approach. The concern is whether this is sufficient.

Figure 1.0 A diagrammatic representation of weak sustainability



For example, there has indeed been a lowering of bureaucratic hurdles to recognising the importance of tackling economic, ecological and societal issues together. The 1992 United Nations Conference on Environment and Development was a high-profile example of this. It is agreed that all three spheres must be tackled in concert in order to effectively address problems in any one of them. And during the 1980s and '90s, policy in many countries and international institutions such as the World Bank has evolved to incorporate the weak sustainability methods mentioned. Yet, despite this, global indicators show continuing environmental decline (WRI *et al* 2000).

The question is whether this is because the tools have yet to be used effectively; or because using such tools within the current economic paradigm is, on its own, insufficient. The other way to interpret this is that WS is a pragmatic response to current knowledge. That is, while global ecological indicators are negative (WRI 2000) in order to determine whether a country is on a sustainable development path, the possibility of substitution between natural and man-made capital should be assumed in order to allow the development of measurable indicators (Atkinson and Pearce 1998). This reflects the vastly greater amount of work done on economic indicators and analysis than on the ecological and social equivalents (SustainAbility 2000).

Thus part of what New Zealand has to assess is how different sectors and communities would respond to the following statement:

> *[strong sustainability] has at its starting point ecological imperatives and this dictates the subsequent form of economic analysis. By contrast, [weak sustainability] begins with standard assumptions in economics and this in turn shapes the form in which ecological and environmental concerns are evaluated*
>
> (Hamilton and Atkinson 1998 p96).

Note that the tools mentioned above can be included in either strategy; the difference lies in the goals, guidelines, standards, regulations and subsequent monitoring.

Choosing between SS and WS depends upon what is considered a factual interpretation of reality, or "since the facts themselves are uncertain, choosing between SS and WS will invariably depend on attitudes to behaviour under uncertainty …" (Hamilton and Atkinson 1998 p96). The importance of this statement cannot be over-emphasised: understanding the perceptions and analysis of risk plays a fundamental part in putting in place effective and acceptable sustainable development policies. Or – to borrow from chaos theory terminology – a major problem is that the outcome of the debate over how to implement sustainable development will be sensitively dependent on initial assumptions.

Thus the remaining questions are:

- How to make meaningful linkages between the economic, ecologic and social sectors – there are numerous indicators in each sector, but few agreed-upon composite or integrative indicators;
- How to reconcile the successful development of 'weak sustainability' indicators with arguments for more 'strong sustainability' policy development.

Green and Brown Agendas

This relates to strong and weak sustainability. Broadly speaking, green agendas require strong sustainability indicators (for example, resilience of ecosystems and biodiversity) which are difficult to establish (Hamilton and Atkinson 1998), while brown agendas (concerned more with mitigation eg pollution, healthy urban living) involve largely well established indicators. Examples of the latter include the biophysical indicators of water, land and air quality as adopted by New Zealand Ministry for the Environment's Environmental Performance Indicator programme (MfE 1997).

The two agendas are typified by what can be called **ecologism and environmentalism**. That is ecologism is a radical critique of social, economic and political practices that takes seriously

propositions about the finitude of the planet (Pugh 1996). This means

> *… the advocates of ecologism believe in extensive interference in economic, social and political institutions. In this context, sustainability requires a new (environmental) political ideology because it cannot, according to the advocates of ecologism, be accommodated within the inherited ideologies of capitalist liberalism, state socialism or their compromised variants. The new political ideology would have biocentrism as its significant stance, in contrast to a damaging anthropomorphism*
>
> (Pugh 1996 pp1-2).

Whereas environmentalism

> *can be set within existing political ideologies. It is reformist in a pragmatic way, centring upon concerns of institutionalising environmentally relevant adaptations. Some examples of application would include conservation, pollution control, waste recycling and improvements to squatter settlements in developing countries.*
>
> (Pugh 1996 p2).

Thus part of the process of settling on acceptable definitions of sustainable development in a New Zealand context will depend upon where along this spectrum those being addressed sit.

Institutional and Political Processes

As indicated by the above, sustainable development can challenge institutional and political processes as well as economic ones. Respondents to the PRISM questionnaire (see separate section) noted that the European approach tended to look more at the social, institutional and political aspects of sustainable development, while New Zealand (along with other ex 'colonial' countries such as Australia and the United States) emphasised biophysical issues.

The implication is that the influence of, and influence on, society, institutions and political systems of adopting a sustainable development rationale is an area New Zealand needs to address. This can be expressed as adopting a **political *ecology*** research approach which

> *[b]y critically focusing on the relationship between environmental change, socio-economic impact and political process… explores how such change is incorporated into concrete political and economic relationships, and the ways that it may then be used to reinforce or challenge those relationships*
>
> (Bryant 1992 quoted in Pezzoli 1998 p27).

This recognises that some of the barriers to change are societal, institutional and political; that this relates to economic assumptions and processes; and that formal research and monitoring systems addressing these factors are needed as part of the introduction of a sustainable development programme.

Sustainable Development and Agenda 21

Background

Agenda 21 "…reflects a global consensus and political commitment at the highest level on development and environment cooperation …" (UNCED 1992). It is based on the Rio Principles (UNCED 1992) that cover a range of interrelated political, social, economic and ecological issues. In short it is often referred to a 'blueprint' for sustainable development.

New Zealand committed itself at UNCED to Agenda 21 (A21) and sustainable development (MfE 1995). Despite this, by the mid 1990s sustainable development and Agenda 21 terminology had largely disappeared from central and local government planning and policy documents[1].

The November 1999 election brought in a left-of-centre coalition government, and a possible change in attitudes [2]. This apparent change of heart raises several issues.

Firstly, will (or does) introducing Agenda 21 and/or sustainable development principles improve overall 'sustainability'? Evidence to date seems equivocal (Hales 2000). While adopting sustainability-driven planning concepts and terminology can indeed raise awareness and improve outcomes (see for example Velasquez 1998), this may not apply in all situations. It is necessary to understand the unique and complex case-specific interaction between environmental issues and such things as education, community participation, planning mechanisms, monitoring (both environmental and plan-effectiveness), regulations and legislation (Robinson and Tinker 1998; Hukkinen 1999).

It may be that the sustainable development ethos is really a fillip to good strategic planning: it reminds us that we need it, and details what needs to be taken into account when doing it. Conversely, the danger in adopting Agenda 21 is confusing planning outputs with environmental outcomes, as it can give the appearance of activity with none of the substance. Yet handled properly Agenda 21 can draw attention to the practical implications of integrating economic, ecological and social policy in terms of sustainable development. In other words "[t]he hard questions in sustainable development arise only when seemingly indisputable but contradictory realities are juxtaposed" (Holtz 1998 p292).

But despite a decade of attention the understanding of the role of economic growth in sustainable development remains cloudy. This may be because while the hard questions are being asked they are not being addressed. In addition, disciplinary ideology means arguments still tend to focus on the superficial rather than substantive.

This has to be borne in mind by any country, or particularly any local authority, adopting sustainable development. Also to be noted is the need to distinguish between sustainable development as a constraint rather than a goal (Marcuse 1998). In the former sense the concept can remain invaluable as a means of substantially lifting ecological and social standards of development, particularly in countries where standards have been or remain poor. But because it has value as an education and enlightening tool does not mean it is a practical tool for realising sustainability goals. In fact, it could be dangerous to weigh sustainable development down with such a load. The expectation could then become that sustainable development replace processes that address inequity, establish values, and reflect ethical beliefs. Normally such a process is part of a multi-dimensional interplay between individuals, society and the environment (Gunder 1998).

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[1] See for example the Government's 1995 Environment 2010 Strategy; the 1998 Stocktake of the Environment 2010 Strategy; and the Environment Ministry's November 1999 briefing notes to the incoming Environment Minister. The first two documents talk of the need to integrate environmental, economic and social policies but neither refer to sustainable development nor highlight local Agenda 21s as a mechanism for doing this. The last document – prepared for the new centre-left Government voted in in November 1999 – does not mention integration in a SD sense at all, although it highlights issues arising from a lack of integration.

[2] The Ministry for the Environment now talks openly of sustainable development being an important policy initiative, the first time it has done so for five years, and the government also talks of 'sustainability' in a variety of guises.

National Policy

One of the effects of not having a national policy dealing with the integration of economic, social and ecological issues is that it reduces a local authority's ability to manage global trends. This is both in terms of keeping abreast of the evolution in the meaning of sustainable development, as well as what pressures impinge on sustainable development ideology.

For example, the influence on the formation of local integrative policy (Holtz 1998) of the globalisation of finance, investment, information, strategic planning and democracy (Friedman 1999) is largely ignored in discussions on SD, as is the vast range of definitions and measurement techniques applied to sustainable development (see for example Pearce 1998 for an economist's view; Roseland 1998 for a community empowerment commentary; Rowledge *et al* 1999 for a business perspective; and Schnurr and Holtz 1998 for a planning-integrative management approach).

For the few New Zealand bureaucrats, researchers and consultants deeply embroiled in sustainability issues, much of this falls into the teaching-grandma-to-suck-eggs category. But those trying to implement sustainable development (whether via Agenda 21 or any other vehicle) would benefit from guidance on identifying what the egg is, or more correctly, how egg-like their policies, plans, guidelines and standards are. They can then decide whether the egg is relevant for them. A national policy on SD would help this process.

Lessons from Abroad

While the United Kingdom provides a raft of examples on the application of local Agenda 21s (LA21s) (Freeman *et al* 1996; Hughes 2000; Hales 2000), when outcomes rather than outputs are critically assessed, the UK may have resolved fewer issues than expected. As noted earlier, a 1998 survey of a selection of English local authorities (Hales 2000) concluded there was "a lack of unified coherence in approach amongst local planning authorities as they struggle to translate the rhetoric of sustainable development into practice" (Hales 2000 p99). The problem, it seems, is that sustainable development "links objectives of market efficiency, to help the private land and property market work better on its own terms, with concerns for quality of life and biospheric quality" (Healey 1997 pp74-75).

Similar issues exist in Australia. Paraphrasing Mercer and Jotkowitz (2000), liberal economic development favouring individualism and emphasising property rights at times appears to contradict support for a more sustainable society, the need to promote property ownership responsibilities, and debate over the role of the state, regulations and planning.

Resolution of these contradictions are relevant to New Zealand.

The Australian experience is also relevant because our geographically neighbourly status and interrelated histories have led to close social, cultural, economic and political ties and concerns; and largely because some 75 out of Australia's 750 councils have implemented or are working on LA21 plans (Mercer and Jotkowitz 2000). And, as in New Zealand, Mercer and Jotkowitz also point out that the Victorian experience has strong parallels with what has been happening to local government in Britain since the early 1980s. The key characteristics are:

- increased centralised control;
- prescriptive approaches to management practices and organisational structures imposed from above;
- a redefinition of local government service functions in terms of market performance criteria;
- a redefinition of citizens as 'consumers' or 'clients'; and
- an extensive program of privatisation and 'outsourcing'

(Mercer and Jotkowitz 2000 p177).

Other Australian characteristics noted by Mercer and Jotkowitz of interest to New Zealand include:

- a lack of standardised reporting procedures or evaluative criteria across the different local government authorities, particularly in Victoria;
- the need to establish the extent of central government support and guidance for local authority initiatives;
- the need to reconcile the exercise of state control with decentralisation and community empowerment.

It is also important to note there are obvious major differences between New Zealand and Australia: the geology, climate and ecology; the pre-European and post-European histories; different national political systems; and economies distinct in size and type. Such characteristics must be taken into account whenever importing ideas, lessons or models developed and honed in different political, social and ecological environments.

That said, Australia has developed various guides on Agenda 21 (Cotter and Hannan 1999) that can be cross referenced with similar United Kingdom initiatives (Mercer and Jotkowitz 2000) and used in a New Zealand setting.

Practical Applications of Sustainability

Countries such as the United Kingdom and Australia have tried to 'operationalise' sustainable development, with SD indicator development a measure of this (see Appendix C). Australia for example has been working towards definitions and guidelines that are useful for New Zealand (Environs Australia 1997; Cotter and Hannan 1999).

However, overall there has been limited success in reconciling sustainability, an inherently strategic process, with day to day decision-making. As the OECD states, "benefits from improving the sustainability of development often have the nature of public goods, accruing to more than one country and one generation, while their costs may be more narrowly concentrated. Providing these public goods requires balancing the role of markets with public provision" (OECD 2000 p3). In other words, the incentive to practice SD at a personal level is diluted by economic incentives not to do so.

In contrast with countries such as Australia, with its Local Government (Ecologically Sustainable Development) Amendment Act 1997, New Zealand has no national programme or legislation addressing sustainable development. Is there a need to amend the 1991 Resource Management Act to reflect sustainable development rather than sustainable management (Table 1)? Related legislative and regulatory issues include:

- the status of SD in relation to other pieces of legislation;
- the need for auditing of national and local policies and plans to ensure compliance with any SD requirements;
- the need for clear monitoring and feedback mechanisms to enable both the tracking of moves towards SD and any changes required as a result.

Table 1 The Difference Between Sustainable Management and Sustainable Development [1]

Sustainable Development goals, as defined by the World Commission on Environment and Development (WCED 1987):	**Sustainable Management goals, as defined by the 1991 Resource Management Act:**
• to ensure all society's needs are met (needs as distinct from wants, referring to those essential inputs required to sustain life); • to ensure all members of society have their needs met (the equity clause); • to ensure that all development is sustainable over time in a social, economic and environmental sense [2].	• seeks to achieve only one aspect of these elements, sustainable development in an environmental sense; • but also recognises that people and communities must provide for their social, economic and cultural well-being and for their health and safety; • better recognition of the full environmental costs of activities and policies in order to protect natural and physical resources; • better consideration of the earth's resources, with a view to conserving the potential of resources for future generations [2].
Interpretation: if followed through, could fundamentally alter the structure of society and economic management. However, as it also allows for continuing trade-offs between ecological health and social and economic performance, this is an area of much current debate, not least because of claims that such trade-offs override efforts to address existing global ecosystem issues. Thus SD could help maintain the status quo.	**Interpretation**: allows the adoption of sustainability principles within existing economic and social structures. However, because it identifies ecological fundamentals, it could more effectively identify and address anomalies such as economic growth within a closed system. This in turn could give rise to a fundamental shift in the practice of development and materially alter the status quo. However, this depends on whether eco-system protection and enhancement (both locally and globally) is seen as a primary or discretionary constraint.

[1] The definitions in Table 1 are derived from the New Zealand Ministry for the Environment. The interpretations are Stephen Knight's.

[2] MfE circa 1992.

APPENDIX C:
SUMMARY OF SELECTED INITIATIVES ON DEVELOPING SUSTAINABLE DEVELOPMENT INDICATORS INTERNATIONALLY AND IN NEW ZEALAND

There are many ways to measure the degree of interest and progress in sustainable development internationally. One is the extent of work being done on indicators of sustainable development. In addition, these measures are themselves detailed definitions of how sustainable development might operate in practice.

Organisation of Economic Co-operation and Development	
The accompanying notes are from two recent OECD reports on SD and SD indicator development: 1. Framework to Measure Sustainable Development: an OCED expert workshop. Paris 2-3 September 1999. 2. The OECD Initiative on Sustainable Development: Progress Report to the 2000 Ministerial Council Meeting. Access to OECD information on SD can be made through the internet at: http://www.oecd.org/subject/sustdev/	The 1999 Framework conference follows a 1998 expert workshop. Topics include: measuring social and human capital, aligning economic and ecological indicators, identifying and recording real savings, and establishing headline, core and trend indicators. As with the 1998 conference, the range of topics reflects debate between strong and weak sustainability and the brown and green agendas (discussed elsewhere in this report). The Progress Report notes the OECD is releasing a report in the last quarter of 2000 on sustainable development. It will include descriptions of some of the approaches to measuring progress towards sustainable development already pursued in national and international organisations. The approach to measurement taken by the OECD combines the development of a measurement framework and the selection of a limited number of indicators covering both the outcomes and the resources underlying development in OECD countries. Rather than developing a single index of sustainability, for which important measurement difficulties exist, the identification of a confined set of indicators – focusing on each of the three pillars of sustainable development and linked through an organising framework – appears as a more useful approach. This work will draw on the OECD expertise developing indicators for the economic, social and environment fields, for different Sectors and spatial scales, as well as experience in refining and expanding the national accounting boundaries.
Genuine Progress Indicators	
The accompanying notes are edited from the following: Measuring Genuine Progress: Synthesis Paper prepared for Made to Measure Symposium, Halifax, October 3-6, 1999 (MCEWH 1999).	**The paper says**: By default, and contrary to the intention of its architects, the Gross Domestic Product has become the primary measure of our well-being and prosperity as a society. How fast the economy is growing is the principal measure used by economists, politicians, journalists and the general public to assess how 'well off' we are as a society. The GDP makes no distinction between schools and prisons, clinics and casinos, tree planting or pollution. Introduced during the Second World War to measure Britain's total wartime production, the GDP simply adds together the total quantity of goods and services produced in the economy, regardless of which economic activities contribute to well being and which detract from the quality of life. More crime, pollution, sickness, addictive gambling, accidents, and natural resource depletion all make the GDP grow, simply because they increase output.

This material, including diagrammatic examples of GPIs, can be accessed through the internet at:

http://www.mcms.dal.ca/mcewh/Inclusion-docs/gen-progress3.htm

This paper provides an overview of both selected international examples of GPIs and the Canadian situation. The latter includes both governmental and non-governmental initiatives.

Examples: one of the fastest growing sectors of the U.S. economy is imprisonment, with an annual growth rate of 6.2% throughout the 1990s, well ahead of overall GDP growth rates. One in 150 Americans is now behind bars, the highest rate in the world along with Russia, compared to one in 900 Canadians, and one in 1,600 Nova Scotians (Chart 1).

The O.J. Simpson trial alone added more than $200 million to the American GDP, according to *The Wall Street Journal*. The Oklahoma City explosion was still better for the U.S. economy, because it fueled the $40 billion U.S. security industry, as government offices and firms throughout the country invested in new high-technology electronic surveillance systems and hired more security guards.

Our social and spiritual values and the quality of our environment, which are vital to our well being and prosperity, remain invisible in our measures of progress. Certainly we pay public homage to those values, the way we might preach to our students about the importance of their research assignment. But if don't grade or measure what we regard as important, we effectively sideline it.

Fortunately, considerable progress has been made in the last 20 years in developing more comprehensive measures of development that integrate social, economic and environmental variables to provide a more accurate portrait of our well-being.

In recent years, the United Nations Development Program has expanded its Human Development Index to include measures of gender equity (see below). Even the internationally accepted guidelines in The System of National Accounts 1993 suggest that natural resource valuations be incorporated into national balance sheet accounts, and that satellite accounts be established to value household work and to integrate environmental and economic measures.

Outside the official government agencies, independent researchers have developed composite indices of well being, including Nordhaus and Tobin's Measure of Economic Welfare, Cobb and Cobb's Index of Sustainable Economic Welfare, Osberg and Sharpe's Index of Economic Well-being, and Cobb, Halstead and Rowe's Genuine Progress Indicator. These indices incorporate up to 26 social, economic and environmental indicators, including unpaid work, income distribution, changes in leisure time, and valuations of natural capital, and distinguishing direct contributions to economic welfare from defensive and intermediate expenditures and from economic activities that produce an actual decline in well-being.

Just as the GPI views a peaceful society with a high degree of personal security as a social asset, it also regards our natural resources as natural capital, subject to depreciation and depletion like produced capital. This contrasts sharply with our present accounting system that literally measures the depletion of our resources as economic gain, and pays no heed whether our current harvesting and consumption habits are at the expense of the next generation. In the GPI, the challenge is to live off the income, or services, produced by our natural resources, without depleting the capital stock that is the basis both of wealth both for ourselves and for our children.

Because the GDP counts only goods and services exchanged for money, it ignores the vital productive work that occurs within households, and assigns no value at all to voluntary work. In addition, the more hours we put into paid work, the more the market economy grows. No value is assigned to the loss of free time, and increased time stress is counted as "progress". In the market measures currently used to assess social progress, "time is money", and has only an exchange value. By contrast, the GPI counts time as time, and assigns it a value in its own right: The GPI therefore goes down if leisure time diminishes, and goes up when it expands.

GPI Atlantic found that Nova Scotian adults contribute an average of 3 hours and 23 minutes a week to formal and informal voluntary work, helping the elderly, sick, disabled and youth, cleaning the environment, and contributing to their communities. It is the highest rate in the country, well above the Canadian average of 2 hours and 40 minutes, and represents a rich reservoir of care and generosity. Halifax has twice the rate of volunteer participation of most other Canadian cities. The 134 million volunteer hours contributed by Nova Scotians are the equivalent of 81,000 jobs, when both formal volunteer work (through organizations) and informal voluntary work (direct assistance to individuals in need) are counted.

The economy can also grow dramatically while inequality and poverty grow. During the Brazilian "economic miracle" three decades ago, characterised by rapid economic growth rates, 40% of the population became poorer in absolute terms, and infant mortality rates sky-rocketed to parallel those of the poorest African countries. In the U.S. too, many Americans have been left behind by the growth spurt in that country. According to the U.S. Census Bureau, income inequality has risen dramatically since 1968, by 18% for households and by over 23% for families.

By contrast to measures of progress based on the GDP, the Genuine Progress Index explicitly measures trends in income distribution. If there is movement towards greater equity, the GPI goes up. If our society is becoming more unequal, the GPI goes down, presaging greater social tensions and hidden costs that will come back to the economy.

The 20 GPI components also include a sustainable transportation module, currently under way, that will compare the full social, economic and environmental costs of alternative modes of transport. Work has begun on trends in health care and educational quality, viewed as investments in our human capital resources. The health component will distinguish defensive and preventive expenditures, and assess trends in the primary determinants of health in the province.

The GPI also includes a valuation of "durability". The quicker things wear out, the more production is stimulated, and the faster the economy grows – a sign of progress in our current accounting system. By contrast, the GPI counts expenditures on consumer durables as costs, and values the services they provide over time – thus valuing durability rather than simply interpreting increased spending as a positive sign of "consumer confidence". Because measures of progress based on the GDP value only the quantity of production and consumption, more spending is always regarded as positive. In the GPI, because quality is valued over quantity, less spending is often more predictive of true progress.

A recent U.S. poll found that 72% of Americans had more possessions than their parents, but less than half said they were happier than their parents.

United Nations Human Development Report	
The UN HDR includes indicators that would contribute to the creation of indicators of sustainable development. The UN HDR 1999 can be accessed through the internet at: http://www.undp.org/hdro/report.html	**To quote from the report:** Since first being published in 1990, the Human Development Report has developed and constructed several composite indices to measure different aspects of human development. The human development index (HDI) has been constructed every year since 1990 to measure average achievements in basic human development in one simple composite index and to produce a ranking of countries. The gender-related development index (GDI) and the gender empowerment measure (GEM), introduced in Human Development Report 1995, are composite measures reflecting gender inequalities in human development. While the GDI captures achievements in basic human development adjusted for gender inequality, the GEM measures gender inequality in economic and political opportunities. Human Development Report 1997 introduced the concept of human poverty and formulated a composite measure of it– the human poverty index (HPI). While the HDI measures average achievements in basic dimensions of human development, the HPI measures deprivations in those dimensions.
Factor Four	
Factor Four is a variation of similar concepts that can be summarised as getting more for longer for less. It sets up a model as a basis for designing indicators to measure progress towards this goal. (Ernst Ulrich von Weizsäcker, Amory B. Lovins and L.Hunter Lovins. 1997. "Factor Four. Doubling Wealth - Halving	**Edited extract from the book:** "Factor Four, in a nutshell, means that resource productivity can – and should – grow fourfold. The amount of wealth extracted from one unit of natural resources can quadruple. "… this heralds nothing less than a new direction for technological progress. In the past progress was the increase of labor productivity. We feel that resource productivity is equally important and should actually be pursued with highest priority. Our message is simple by offering a primitive quantitative formula. Our book depicts technologies representing a quadrupling or more of resource productivity. Progress must, as we know since the Earth Summit of Rio de Janeiro, meet the criterion of sustainability. Factor Four progress does. "[Factor Four also] says that some of that efficiency revolution is available now at negative cost, i.e. profitably. Much more can be made profitable. Countries engaging themselves in the efficiency revolution become stronger, not weaker in their international competitiveness. That is not only true for the old industrialized countries. It is even more valid for China, India, Mexico or Egypt that have a supply of inexpensive labor but are short of energy. Why should they learn from the US and Europe how to waste energy and materials? Their development to prosperity will go smoother, swifter and safer if they make the efficiency revolution the centerpiece of their technological progress." The above should be read in conjunction with criticism of the Brundtland report (WCED 1987). For example, Rees (1990) points out that the Brundtland Report claimed a "five-to-ten-fold increase in world industrial output ...some time in the next century" but did not adequately explain how this will happen within the earth's carrying capacity. And Daly (1994: 7) draws the distinction between growth and development. Growth refers to the quantitative increase in the scale of the physical dimension of the economy, the rate of flow of matter and energy through the economy, and the stock of human bodies and artifacts, while development refers to the qualitative improvement in the structure, design, and composition of physical stocks and flows, that result from greater knowledge, both of technique and of purpose.

United Kingdom	
On 17 May 1999 the UK Government published *A Better Quality Of Life: a strategy for Sustainable Development in the United Kingdom.* A full list of the UK indicators are available from the following internet site: http://www.environment.detr.gov.uk/sustainable/quality/monitor/index.htm	The strategy has four main aims: • social progress which recognises the needs of everyone • effective protection of the environment • prudent use of natural resources • maintenance of high and stable levels of economic growth and employment. To help measure progress, the strategy includes a series of indicators. The Government has revised the national set of sustainable development indicators published in 1996. The new set of around 150 indicators is referred to throughout the Strategy, and will be at the core of future reports on progress. An important new element is a subset of 14 key headline indicators, intended to focus public attention on what sustainable development means, and to give a broad overview of whether we are achieving a ”better quality of life for everyone, now and for generations to come”.
UN Commission on Sustainable Development	
Indicators of Sustainable Development The aim of the CSD with respect to ISDs is to have an agreed set of indicators available for all countries to use by the year 2001.	As part of the implementation of the Work Programme on Indicators of Sustainable Development (ISDs) adopted by the Commission on Sustainable Development (CSD) at its Third Session in April 1995, a working list of 134 indicators and related methodology sheets were developed. These were made ready for voluntary testing at a national level, by countries from all regions of the world: Africa – Ghana, Kenya, Morocco, South Africa, Asia/Pacific – China, Maldives, Pakistan, Philippines Europe – Austria, Belgium, Czech Republic, Finland, France, Germany, Switzerland, United Kingdom Americas and the Caribbean – Barbados, Bolivia, Brazil, Costa Rica, Mexico, Venezuela. The indicators developed for testing fall into four groups: economic, social, environmental and institutional. Each of the indicators from each group has its own background paper detailing reasoning behind choosing the indicator and how to use the indicator. Indicator lists and worksheets can be accessed on the world wide web on: http://www.un.org/esa/sustdev/indisd/english/english.htm
Commentary on the Pressure-State-Response model used by the NZ Ministry for the Environment and based on an OECD model. A background paper on SD Indicators prepared by the UN CSD (From Theory to Practice: Indicators of Sustainable Development; 27/08/1999) can be found on the internet at: http://www.un.org/esa/sustdev/indi6.htm	According to the UN CSD, the list should be seen as a flexible and countries can choose indicators according to national priorities, problems and targets The indicators are presented in a Driving Force - State - Response framework. “Driving Force” indicators indicate human activities, processes and patterns that impact on sustainable development. “State” indicators indicate the “state” of sustainable development and “Response” indicators indicate policy options and other responses to changes in the state of sustainable development. This can be compared with the New Zealand Pressure-State-Response framework used for the Ministry for the Environment’s Environmental Performance Indicators Programme. This framework is in turn based on an OECD model. Note that a German review of the D-S-R model concluded that “[w]hile the conceptual framework (DSR-approach) has proven to be useful for environmental issues, it is not appropriate for economic, social or institutional issues especially concerning the separation of D- and S-indicators.

WORLD BANK SUSTAINABLE DEVELOPMENT INDICATORS
(The International Bank for Reconstruction and Development)

Social Indicators of Development *1995*

"Social Indicators of Development" contains the World Bank's most detailed data collection for assessing human welfare to provide a picture of the social effects of economic development. Data are presented for over 170 economies, omitting only those for which data are inadequate.

Information is available through the internet on: http://www.ciesin.org/mep-bin/charlotte?state=START&event=start&protocol=sid&charlotte_dir-prod

Related Datasets
Other related information can be found in the following:

- Trends in Developing Economies (TIDES)
- World Development Reports
- World Tables
- World Debt Tables.

Although we do not know a better concept at hand at this time, we would like to encourage discussion within the CSD testing process on this issue". (**Interim Report on Testing UN-Indicators of Sustainable Development in Germany Germany's Participation in the Testing Phase of CSD Sustainability Indicators** http://www.un.org/esa/sustdev/indi4de.htm
The Indicators used are:
Access to health care (% of population)
Access to safe water, rural (% of population)
Access to safe water, total (% of population)
Access to safe water, urban (% of population)
Age dependency ratio
Agricultural land (% of land area)
Agricultural land under irrigation (% ag. land)
Average household size, tot (persons per hshld)
Average household size, urb (persons per hshld)
Change in agricultural land (annual %)
Child malnutrition, under 5 yrs (% age group)
Consumer price index (1987=100)
Consumer price index, food (1987=100)
Consumer price index, food, rural (1987=100)
Consumer price index, food, urban (1987=100)
Consumer price index, lower income (1987=100)
Deforestation rate, net (annual %)
Energy consumption per capita (kg of oil equiv)
Expend. on social security (% of tot gov#'t exp)
Female labor force (% of total)
Females (15-64) per 100 males, rural
Females (15-64) per 100 males, urban
Fertilizer consumption (kg/ha)
Fixed investment, housing (% of GDP)
Fixed investment, transport equip. (% of GDP)
Food aid, cereals (metric tonnes)
Food expenditure, all (% of GDP)
Food expenditure, proteins (% of GDP)
Food expenditure, staples (% of GDP)
Food imports, cereals (metric tonnes)
Food production per capita (1987=100)
Forests and woodland area (sq km)
Fuel and power expenditure (% of GDP)
GNP per capita (US$)
Gross enroll. ratio, prim, fem (% schl age pop)
Gross enroll. ratio, prim, mal (% schl age pop)
Gross enroll. ratio, prim, tot (% schl age pop)
Gross enroll. ratio, sec, fem (% schl age pop)
Gross enroll. ratio, sec, tot (% schl age pop)
Household income share, bot 20% (% of income)
Household income share, bot 40% (% of income)
Household income share, top 20% (% of income)
Households w/electricity, rur (% of rur hshlds)
Households w/electricity, urb (% of urb hshlds)
Housing expenditure (% of GDP)
Illiteracy rate, female (% of females age 15+)
Illiteracy rate, total (% of pop age 15+)
Immunized: DPT, under 12 mths (% age group)
Immunized: measles, under 12 mths (% age group)
Infant mortality rate (per thous. live births)

	Labor force in agriculture (% of total) Labor force in industry (% of total) Life expectancy at birth, fem advantage (years) Life expectancy at birth, total (years) Lower poverty line (local currency) Lower poverty line, headcount index (% of pop) Maternal mortal. rate (per 100,000 live births) Newspaper circulation (per thousand population) Oral rehydration therapy, under 5 (% of cases) Population density (population per sq km) Population growth rate (annual %) Population per hospital bed Population per nurse Population per physician Population, total Pub. expend., basic social services (% of GDP) Pupil-teacher ratio, primary Pupil-teacher ratio, secondary Pupils reaching grade 4 (% of cohort) Road length, total (km) Rural terms of trade (local currency) Share of agriculture in GDP (%) Social security coverage (% econ. active pop) Total area (sq km – incl. land & inland water) Total fertility rate (births per woman) Total labor force Transport and communication expend. (% of GDP) Under 5 mortality rate (per thous. live births) Unskilled rural wages (local currency) Unskilled urban wages (local currency) Upper poverty line (local currency) Upper poverty line, headcount index (% of pop) Urban population (% of population) Urban population growth rate (annual %)

Indicator Development in New Zealand
Examples of sustainable development indicators used internationally are given elsewhere in this paper. From a New Zealand perspective, a recent review of urban sustainable indicators has been done by **Hughes and Honeybone (2000**). The following is the executive summary from this paper.

The development and use of sustainability indicators is a commonly identified ingredient for working towards a sustainable future. The development and use of indicators can inform local communities of key sustainability issues, encourage participation and stimulate action.

This paper outlines the scope and purpose of urban sustainability indicators. It reviews progress with the development of urban sustainability indicators, both internationally and in New Zealand. It then discusses the relevance of urban sustainability indicators to New Zealand cities and communities, and identifies how further progress might be achieved.

In recent years, urban sustainability has been receiving increasing attention in New Zealand. Indicators can contribute to progressing urban sustainability by measuring progress towards identified goals, identifying trends, and assisting in interpreting the condition of the urban environment, society and economy. Indicators are valuable educational tools to communicate urban sustainability issues and potential responses across the community.

Common urban sustainability indicator groupings cover:
1. environment: water quality, water use, air quality, greenhouse gas emissions, biodiversity, open space, energy and resource use, transport, waste;
2. society: income distribution, health, education, safety, community participation, heritage and culture, housing, access to services, demographics; and
3. economy: employment, disposable income, infrastructure and business investment.

International progress with urban sustainability indicators
Although the urban sustainability indicator field is still an emerging one, there are a number of well-developed international initiatives in the United States, Canada and the United Kingdom. For example, a wide range of ‘quality of life’ indicators and indices has emerged across the United States over the past decade. A flagship programme is the work co-ordinated by the Jacksonville Community Council in Florida. Similarly, the Seattle indicators project has involved citizens choosing their own ways of measuring long-term community well-being.

Progress with urban sustainability indicators in New Zealand
In New Zealand there is progress at the national level and by a number of urban communities who are attempting to develop more strategic urban indicators of sustainable development (eg in Auckland, Waitakere, Manukau, Wellington and Christchurch). A national indicators project was initiated in early 1999 by the chief executives of the six largest cities. This was in response to growing pressures on urban communities, concern about the impacts of urbanisation and the effects of this on the well-being of the citizens of those centres.

‘indicate’ Canterbury
‘indicate’ is a community indicators programme that emerged outside local government in Canterbury. The project is an independent ‘quality of life’ indicators programme that aims to measure progress towards a sustainable future for all people in the region. It is a unique initiative in its development and delivery. ‘indicate’ emerged from, and is an integral part of, the Canterbury Dialogues programme to promote cross-sector discussions for a more integrated vision for the region and associated actions. It is an example of an indicators initiative that that it is supported by a solid core of stakeholders from across the community. A range of developmental issues has emerged through the first series of ‘indicate’. For example, obtaining sufficient investment and having a dedicated team of people to develop the indicators.

Discussion of progress with urban sustainability indicators
In New Zealand, the development of urban sustainability indicators is in a formative phase. Some cities, towns and communities are obviously making progress and developing urban sustainability indicators that fully address the three components of sustainability and the interactions between the components. In general however, it is still early days in developing adequate coverage of key ‘quality of life’ issues and community perception.

The development of urban sustainability indicators needs to be strongly linked to the preparation of a vision for sustainable development. With a strong relationship to a community's sense of direction and existing institutional goals, indicators become meaningful and dynamic tools that help guide progress.

The involvement of the wider community is essential in all stages of indicator development from preparing a collective vision, to developing the indicators and participating with monitoring. Indicators can illuminate problems and, because of key stakeholder and community participation, they can aid genuine political commitment to change. Of paramount importance is the process of indicator development that ensures that indicators are embedded into the local community.

An important component of any indicator project is the use of targets. Without an acceptable and challenging target, any indicator lacks context and over time the community will lose interest. The indicator will cease to be relevant. Draft indicators do need to be tested to assess if they can be monitored and appropriate information can be gathered.

Conclusions

Set in a climate of growing awareness of urban sustainability, indicators are an important tool to monitor and measure progress, change and evolution. A shift towards efforts to address urban sustainability in an urban setting are beginning to emerge in New Zealand. As this trend is in a formative phase, so is the development of urban sustainability indicators in a formative phase.

Indicators are a practical tool for assisting communities and decision-makers to make progress towards urban sustainability through their 'engagement' and 'accountability' dimensions and can advance local participative democracy. Indicators can help bring new policy, resource allocation and activity to advance 'quality of life' and sustainable development.

APPENDIX D:
SUSTAINABLE DEVELOPMENT
INTERNATIONAL DEFINITIONS AND ACTIONS

The following sections look at individual country initiatives, organisations and one multinational company to give a 'flavour' of definitions and approaches to sustainable development.

1. Sustainable Development Initiatives of Selected Countries

United Kingdom	
Department of Environment, Trade and the Regions and the Department of Trade and Industry: A draft discussion document to the **commercial sector** from the Advisory Committee on Business in the Environment 2000.	Advisory Committee chairman Chris Fay says "ACBE is committed to **helping companies realise the business opportunities presented by sustainable development.** In this regard, one of our working parties has developed this simple tool to remove the layers of complexity and confusion frequently associated with this concept. It asks a series of questions that enable companies to identify their key issues, prioritise action areas and, ultimately, achieve sustainable success. Without doubt leading businessmen achieve sustained success through managing the full range of risks and opportunities. As businesses integrate non-financial criteria into their decision making framework, they are increasingly using non-financial performance measures as well as financial to evaluate and manage their overall performance. This incorporation of environmental, social and economic considerations into all aspects of corporate strategy reflects the principles of sustainable development. Sustainable development is a complex concept with varying definitions that may cause confusion. This confusion can often lead to inactivity as companies are faced with conflicting information. Companies that overcome this complexity and respond proactively to the challenges of sustainability will gain a clearer understanding of the full range of opportunities and risks impacting on their business, providing them with a better basis for decision making. I encourage companies to use this tool both to understand and to manage their social, economic and environmental risks. This will build the momentum companies need to realise the opportunities presented by sustainable development and achieve sustainable success."
DETR: ***A better quality of life: A strategy for sustainable development for the United Kingdom*** http://www.environment.detr.gov.uk/sustainable/quality/life/index.htm Published 17 May 1999 **A strategy for SD – with explanations of principles, indicators, implementation processes, guides for local action.**	**Summary** Four main aims: • social progress that recognises the needs of everyone; • effective protection of the environment; • prudent use of natural resources; and • maintenance of high and stable levels of economic growth and employment. For the UK, priorities for the future are: • more investment in people and equipment for a competitive economy; • reducing the level of social exclusion; • promoting a transport system that provides choice, and also minimises environmental harm and reduces congestion; • improving the larger towns and cities to make them better places to live and work; • directing development and promoting agricultural practices to protect and enhance the countryside and wildlife;

A comparison between the UK situation regarding Agenda 21 (the 'blueprint' for sustainability) and New Zealand is provided below under 'UK-NZ Agenda 21 Comparison'.	• improving energy efficiency and tackling waste; • working with others to achieve sustainable development internationally. Government policy will take account of ten guiding principles set out in chapter 4: • • putting people at the centre; • taking a long-term perspective; • taking account of costs and benefits; • creating an open and supportive economic system; • combating poverty and social exclusion; • respecting environmental limits; • the precautionary principle; • using scientific knowledge; • transparency, information, participation and access to justice; • making the polluter pay. "We have developed a way of measuring progress by a system of 'indicators' which are explained in chapter 3. Headline indicators identify the key issues relating to quality of life. We shall publish the headline indicators every year and report on our actions and forward plans." Chapter 5 describes measures to build sustainable development into policies and decisions, in Government and across society. Chapter 6 looks at how to create a sustainable economy with less impact on the environment. Chapter 7 discusses how we plan to support better communities for people to live and work in. Chapter 8 describes the strategy to protect our environment and natural resources, both for their own sake and for the contribution they make to our economic vitality. Sustainable development is very much an international issue and Chapter 9 deals with international co-operation. Chapter 10 looks briefly at the progress made in the past, the priorities for the immediate future and how we shall report on the result of our actions. The Government will publish an annual review of progress, starting in 2000.
Australia	
Environment Australia http://www.environment.gov.au/psg/igu/local.html **This site provides links to councils implementing Local Agenda 21s.**	**Within Australia** • Local Agenda 21 and Sustainability - CouncilNet • Gold Coast City Council • City of Mandurah • Manningham City Council • City of Marion • Marrickville Council • Moreland City Council • City of South Sydney • Sutherland Shire Council • City of Unley

Environs Australia and the Local Government Environment Network ***Our Common Future: A guide to local Agenda 21*** **Commonwealth of Australia 1999**	This guide has been prepared to provide local councils and the communities they represent with guidance and direction in planning and implementing a Local Agenda 21 approach. The guide is aimed at • individuals and groups who want to know how to gain commitment from key decision makers to establish a Local Agenda 21 • councils that have committed to sustainable development and need guidance on how to commence a Local Agenda 21 • councils that have started to develop a strategy or who are actively working towards sustainable development but who need further direction, perhaps on a particular aspect of their work. • councils that are progressing well and want some further ideas. There are three sections to this guide. Section one details five 'Action Areas' devised from the experience of many local councils so far. Section two details the case studies used to illustrate a variety of approaches to Local Agenda 21. Section three provides further reading and useful contacts and references and includes a number of appendices. This guide offers practical guidance on how to develop a Local Agenda 21 framework to tackle issues of sustainable development. The process detailed here involves working through five 'Action Areas'.
Institute for Sustainable Futures, University of Technology Sydney (UTS) **Local government self assessment forms for compliance with (ecologically) sustainable development**	The Institute has developed an ESD Self Assessment Package in conjunction with local councils in the Australian Capital Region. The Package provides a practical self-assessment process for councils to evaluate their current activities in the context of Ecologically Sustainable Development (ESD). Undertaking this self-assessment will enable councils to meet their legislative requirements under the *Local Government (Ecologically Sustainable Development) Amendment Act 1997*, which requires councils to integrate ESD into all activities and decision making processes. The ESD Self-Assessment Package encourages local councils to document all relevant work proposed or currently being undertaken. This documentation provides a vital baseline for organisations in identifying and recognising their current contributions to ESD and in monitoring their progress towards ESD. The package also assists councils to plan future actions as part of their progress towards ESD, with progress towards ESD also able to be tracked for local government regions from year to year. The Self-Assessment Package uses ten general areas of sustainability as a basis for the assessment. Use of these 'general areas of sustainability' is designed to act as an awareness raising exercise on ESD and to expand discussion and implementation of ESD beyond existing organisational boundaries of councils. These 'areas' have been deliberately chosen so as *not* to reflect function or service areas within councils and to operate at organisation-wide, function and service levels. This approach also recognises the variety of different actions and approaches being used by councils to address the many local government challenges and issues.

Environment Australia http://www.erin.gov.au/ps/owa/ea_server_pk.list_ea_documents?subject=Sustainable+Development Sustainable Development Home Pages This column list the links available to various relevant sites regarding SD and Agenda 21.	Environment Australia - Intergovernmental Unit and ANZECC Secretariat Home Page Overview of the Intergovernmental Unit and ANZECC Secretariat of Environment Australia – Australia's National Reports to the Commission for Sustainable Development, National Strategy for Ecologically Sustainable Development, and Local Agenda 21. Ecologically Sustainable Development and Local Agenda 21 Ecologically Sustainable Development and Local Agenda 21. Our Community Our Future: A Guide to Local Agenda 21 - LA21 Manual Localising Agenda 21: A Guide to Sustainable Development in the APEC Region This guide has been prepared to provide local authorities and the communities they represent with guidance and direction in planning and implementing a Local Agenda 21 approach. National Strategy for Ecologically Sustainable Development Australia Contents Page Australia's National Strategy for Ecologically Sustainable Development Wildlife Trade and Sustainable Use Index to pages covering Biodiversity Group's responsibilities for regulating wildlife imports and exports and regulating commercial harvesting of native wildlife for export. Includes information on the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) and the National Exotic Bird Registration Scheme.
Asia-Pacific	
Environment Australia and APEC: A Guide to Sustainable Development for the APEC Region http://www.environment.gov.au/psg/igu/localagenda21/index.html **A guide for implementing local Agenda 21s for the Asia Pacific region, with case studies.** Prepared by Environment Australia for the Asia Pacific Economic Cooperation (APEC) © Commonwealth of Australia 2000	This guide has been prepared to provide local authorities and the communities they represent with guidance and direction in planning and implementing a Local Agenda 21 approach. CONTENTS • Foreword • Introduction • Introduction to the APEC Region • APEC and Local Agenda 21 • Overview: Diversity of Local Authorities • What is Local Agenda 21? • What are the Key Outcomes from a Local Agenda 21 Program? • About this Guide • Background • Where did Local Agenda 21 Come From? • Local Agenda 21 Since the Earth Summit • What does Sustainable Development Mean? • What are Some of the Key Principles of Sustainability? • Who is Promoting Local Agenda 21? • Why Should Local Authorities Implement a Local Agenda 21? • How Does Local Agenda 21 Fit with Existing Policies, Programs and Activities? **The guide says …** Local authorities in the APEC region and around the world are increasingly becoming lead agencies for sustainable development. They are developing and implementing systematic approaches to provide for our long-term future in terms of the health and well being of our communities and the environment which supports us. This guide has been prepared to provide local authorities and the communities they represent with guidance and direction in planning and implementing a Local Agenda 21 approach.

	The guide is aimed at: • individuals and groups who want to know how to gain commitment from key decision makers to establish a Local Agenda 21; • local authorities that have committed to sustainable development and need guidance on how to commence a Local Agenda 21; • local authorities that have started to develop a strategy or who are actively working towards sustainable development but who need further direction, perhaps on a particular aspect of their work; • local authorities that are progressing well and want some further ideas. There are three sections to this guide: Section one details five Action Areas. Section two details the case studies used to illustrate a variety of approaches to Local Agenda 21. Section three provides further reading and useful contacts and references and includes a number of appendices. This guide offers practical guidance on how to develop a Local Agenda 21 framework to tackle issues of sustainable development. The process detailed here involves working through five Action Areas. The Action Areas cover the basic activities of a Local Agenda 21, which include: • involving the entire community in preparing a long-term sustainable development action plan; • determining the vision, goals, targets and priorities for action, taking an integrated approach; • working in partnership with all stakeholders to achieve thosegoals; • monitoring and reporting procedures, including the use of local indicators to track progress and to allow participants to hold each other accountable to the action plan. A key element of a Local Agenda 21 is improvement of the frameworks and systems used for planning, policy making and implementing because they can be more influential and enduring than specific actions, which will change regularly. There is obvious overlap between this report and the 'Our Common Future: a guide to local Agenda 21' report noted above.
Canada	
Environment Canada is currently updating its SD Strategy. http://www.ec.gc.ca/sd-dd_consult/discussion/index_e.cfm **A discussion document has been released and the results are to be published by December 2000.**	This Discussion Paper is intended as a means of soliciting input both from Environment Canada employees and from people outside the department, as to what broad strategic priorities should be pursued throughout 2001-2004. In connection with the development of Genuine Progress Indicators (see the section of the PRISM report *Summary of Selected Initiatives on Developing Sustainable Development Indicators*) in 1994 Statistics Canada sponsored an international conference on the measurement of unpaid work, and the following year produced its own extensive valuations of household work. The agency is now developing a Total Work Accounts System, which includes both paid and unpaid work. Every six years, an extensive time use survey is now part of Statistics Canada's General Social Survey, and questions on unpaid work were included for the first time in the 1996 census. In addition, Human Resources Development Canada recently issued an Index of Social Health for each province and for the country as a whole.

Statistics Canada released, in December 1997, its new Canadian System of Environmental and Resource Accounts, which consists of natural resource accounts linked to the national balance sheets, material and energy flow accounts linked to the input-output tables, and environmental protection expenditure accounts that can be used to calculate a "green GDP" or "net" domestic product that factors out pollution costs.

This report continues:
Based on an internal review of implementation of our 1997 SDS, an issue scan of EC's departmental activities and their impacts on sustainable development, and an understanding of the broader inter-departmental context in which efforts are currently underway to coordinate planning on sustainable development, we have put forward for discussion four broad issues that could constitute the focus of our next SDS:

- environment and human health;
- sustainable communities;
- knowledge for decision making; and
- managing for sustainable development.

There is increasing scientific evidence of linkages between environmental hazards and the health and well-being of Canadians. EC could focus more directly on the human health aspects of our work on clean air and water and climate change, improving our scientific understanding, developing a more comprehensive response to the health issues across government and ensuring the public is better informed. Particularly vulnerable populations like children and Aboriginal people could also provide an appropriate focal point.

While we have been working to enhance community sustainability through our programs and services for some time at EC, there are opportunities to build a more coherent and cooperative approach to working with communities both across the department and government-wide. Better communication and outreach and more effective capacity and partnership building could help communities to better meet their sustainability goals.

Knowledge is essential to good decision making. Canada's current sustainable development information and knowledge base is inadequate to provide the foundation for informed public debate and knowledge-based decisions. Efforts could focus on a number of different issues, including science and technology issues, the development of SD indicators and reporting processes, measures to enhance adoption of eco-efficiency tools and practices, and steps to enhance our capacity for social and economic analysis within EC.

Finally, with regard to managing for SD, we put forward for discussion possible work in three areas: further steps in greening our operations and implementing our environmental management system; exploring the issue of sustainable development accounts, where traditional financial information systems are linked to environmental management systems to provide a more complete understanding of the internal and external costs and benefits of activities; and considering what human resource strategies are needed to enable EC to deliver on SD commitments.

Environment Canada Sustainable Development Indicators There is strong emphasis on environmental monitoring.	Through its Green Lane website system, Environment Canada lists biophysical environmental indicators (http://www.ec.gc.ca/ind/English/Home/default.htm) and sustainable community indicators (http://www.ec.gc.ca/scip-pidd/English/indicators.cfm) but there appears to be no 'sustainable development indicators' site nor links to local Agenda 21s/SD initiatives in Canada. However, this needs to be investigated further.
Environment Canada Sustainable Development Information System http://www.sdinfo.gc.ca/SDinfo/Eng/what.cfm **Last updated 08 2000**	The Sustainable Development Information System (SDinfo) is a new electronic information system developed by Environment Canada for the World Wide Web. It is designed to provide one-window access to sustainable development knowledge in the Government of Canada. **EC describes the system as follows:** The system will grow as federal departments and agencies contribute information on programs and activities, products, services, expertise, and other sources related to sustainable development. Links to other sectors involved in sustainable development initiatives across Canada will be added as the development of the site continues. SDinfo features keyword and free text searching, full text searching, embedded images, input forms, hypertext links, and download capabilities. Searches can be conducted at the following pages: • "What is Sustainable Development?" This page provides a definition of sustainable development, sustainable development objectives, an historical path of events influencing the evolution of sustainable development in Canada, and descriptions and Web site addresses of international institutions involved in sustainable development. • "Search the SDinfo Site." This page accesses and enables you to search Canadian federal government programs and activities, products and services, expertise, and other sources of SD knowledge, the historical path, international institutions, sustainable development objectives, and publications, including: General Reference Documents: • A Guide to Green Government • Directions on Greening Government Operations • Sustainable Development Strategy (Environment Canada) International conventions/protocols/agreements: • Agenda 21 • Agreement on Environmental Cooperation Between the Government of Canada and the Government of the Republic of Chile • Convention on Biological Diversity • Forest Principles • Kyoto Protocol to the United Nations Framework Convention on Climate Change • North American Agreement on Environmental Cooperation Between the Government of Canada, the Government of the United Mexican States and the Government of the United States of America • Rio Declaration on Environment and Development • United Nations Framework Convention on Climate Change

The Netherlands	
The accompanying text outlines policy approaches through to 2002. (The policies themselves cover a period through to 2010). **For an introduction to The Netherlands approach:** http://www.netherlands-embassy.org/fn_hltenv.html **and for the Third National Environmental Policy Programme:** http://www.netherlands-embassy.org/fn_hltenv.html **The Netherlands government has concluded:** "…that in important respects environmental policy is entering a new phase, that of 'environmental management'. After a period in which the focus was on clean-up (tackling existing problems) the main job is now shifting more towards ensuring an absolute decoupling of economic growth and environmental pressure and the sustainable use of natural resources." The Netherlands Environmental Ministry can be accessed through: http://www.minvrom.nl/minvrom/pagina.html?id=1308	**The Netherlands Government states**: In seeking sustainable development - the main objective of environmental policy - it becomes apparent that concern for the environment is part of a wider concern aimed at well-being and living standards. **The Netherlands gives no absolute definition of SD, but notes**: "Sustainable development requires not only that the environment is clean and free of pollution and nuisance, but also that good-quality natural resources are available for all, both now and in the future. It is vital that the distribution of and access to natural resources are fair, not only within The Netherlands but also globally. The government sees energy, biodiversity and physical space as the critical resources for present and future human needs. At the global level, water and food resources also need urgent consideration. In the global perspective, it is imperative that the resources needed to satisfy human needs are carefully husbanded. A sustainable development can only be achieved in The Netherlands in an international context, recognizing that The Netherlands forms part of a larger whole in social, economic and ecological terms." **The Government continues**: A sectoral approach is inadequate. Beginning in the late 1970s and continuing to the present day, a series of governmental reports, policy initiatives and legal reforms have addressed the twin problems of achieving integration in regulation/administration and in the overall policy approach. The key problem is a lack of connection between the entire environmental policy chain (development, implementation and enforcement) and the daily activities of other ministries and the economic sectors for which they were responsible. This lack of connection was partly due to the relatively weak position of the (at that time) Ministry for Health and Environment in Cabinet. The solution devised, which became the basis of the National Environmental Policy Plan's (NEPP) strategy, is a 'twin track' policy which focuses both on *effects*, defined in terms of quality objectives for environmental themes and regions, and *sources*, defined in terms of the actors who are responsible for environmental pollution through their economic activities. Key groups of actors were designated as target groups of environmental policy. The task of government is to establish quality objectives at national level (general quality) and more specifically at regional level, for example where sensitive or rare habitats need special protection. Government must make clear in broad terms (for example, size of emission reductions) what must be done by target groups in order to reach a high quality environment. Policy makers must also devise effective packages of instruments (regulation, economic, information) appropriate to stimulate changes in production and consumption patterns in different economic sectors.

	Responsibility for developing and implementing environmental measures is largely devolved from government to the major polluters such as industry, agriculture and transport. Economic actors themselves are best placed to decide the most efficient and effective means of reducing environmental impacts in their own sphere of activity. Government remains involved in a consultative, facilitating and (ultimately) a regulating role. Sectoral ministries (representing economic interests), regional authorities and spatial planning (land use and infrastructure) are all involved. **The Third National Environmental Policy Programme** Detailed state of the environment monitoring is used to feed back into policy development. The fourth Environmental Survey demonstrates that the Netherlands has succeeded in reducing its environmental burden while enjoying economic growth. The emissions of the greenhouse gas carbon dioxide form an exception to this, however. Other objectives also still remain to be met, and where we are getting close, success may be jeopardised by economic growth unless additional measures are taken. The Netherlands' third NEPP sets forth the broad policy to be pursued for the period 1999 to 2002 inclusive, taking as its horizon the year 2010. Partly as a result of Agenda 21 and the Treaty of Maastricht the international activities of the Netherlands were characterised by **'active environmental diplomacy'**. Under this heading, specific policy objectives were formulated and results achieved, particularly in the traditional areas of environmental policy, mainly as a result of the creation of international treaties and the strengthening of EU environmental policy. In new areas such as the promotion of sustainable development and 'external integration' the results are difficult to measure.

UK-NZ Agenda 21 Comparison

Factors influencing progress with Local Agenda 21:
a comparison between the United Kingdom and New Zealand.

The UK is used as a comparison because as of 1999 around 67% of local authorities were preparing an LA21 (Adapted from Hughes 2000).

Abbreviations: I&DeA - UK Improvement and Development Agency (formerly the Local Government Management Board); DETR - UK Department of Environment, Transport and the Regions; LGA - UK Local Government Association; LA 21 - Local Agenda 21; MFE - NZ Ministry for the Environment)

The United Kingdom	New Zealand
Some central Government support and leadership: Initially limited under the previous Conservative Government. This changed in 1997 with the Labour Government and the Prime Ministerial challenge to all local authorities to complete a strategy by 2000. The proposed new statutory duty for community planning will further require local authorities to address sustainable development. A second national sustainable development strategy has been developed by the Government. Major Government documents and reform proposals recognise the value of LA 21.	**Little central Government support or leadership.** No national sustainable development strategy. Limited understanding of how to apply and integrate Agenda 21 throughout central and local government. Some good community initiatives in accordance with the principles of Agenda 21. Limited integration of the two levels.
A number of identified champions from local government associations, local government and NGOs. These champions initially promoted the concept and have brought sustained widespread action and response.	**Few champions** apart from a number of well-known councils and personalities, and the Christchurch Agenda 21 Forum.
A number of small central and local government partnerships to fund the production of guidance material, best practice notes and other information (eg the development of sustainability indicators).	**Few partnerships and little finance:** In 1994 MfE formed a trial partnership with the then Local Government Association and five local authorities to develop Agenda 21. Little has occurred since this trial.
More than 65 % of local councils have made a formal commitment to LA 21. The approach has been actively supported by all local government associations.	**Limited number of councils formally identifying themselves as LA 21 councils.** No formal commitment from Local Government New Zealand.
Vast range of guidance material prepared by the I&DeA (formerly the LGMB). Other material available from the LGA and DETR and various NGOs.	**Limited guidance material** except for the 1994 Agenda 21 implementation guide produced by MFE.
The I&DeA conducts regular surveys of progress. The I&DeA, LGA and DETR are developing methods to evaluate LA 21 strategies and processes.	**Limited independent monitoring and review.** LGNZ is currently surveying local authorities on responses to LA21 and sustainability issues.
Considerable networking: Annual conferences for LA 21 co-ordinators and interested parties have been held for eight years. A range of training programmes has been provided.	**Little formal networking:** Limited and mainly informal networking. Two exceptions have been an Agenda 21 workshop at the 1998 local government conference and a short session on Agenda 21 as part of the 1999 social & environmental sustainability research seminar. Recent new initiative to form a Sustainable NZ Association.
Newsletters: The I&DeA has produced a monthly newsletter on LA 21 guidance, issues, and events. The Environment Resource and Information Centre (ERIC), University of Westminster produces a monthly local environment news journal.	**Newsletters:** No regular information sources.
Websites: A number of dedicated websites eg the I&DeA site, the DETR sustainable development site, the ERIC site.	**Websites:** No dedicated websites.

2. Sustainable Development Definitions - International - Non Governmental

The following table briefly summarises definitions, goals and actions of selected international organisations involved in sustainable development. Details of particular programmes of these organisations are available from PRISM on request. **Describing goals and/or actions establishes a more accurate assessment of what is meant by SD than relying on general definitions.**

Organisation and Comment	Definition(s) and Objectives	Sources
The Wuppertal Institute for Climate, Environment and Energy	Tends to emphasise sustainability rather than sustainable development. Defines sustainability as '… a composite and thus ambitious policy target. It comprises environmental, economic and social criteria with equal importance - neither environmental degradation nor violating human dignity by poverty or other threats, nor public or private bankruptcy can be acceptable elements of a sustainable society.	Spangenberg, J.H. and O. Bonniot. 1998. Sustainability Indicators: A Compass on the Road Towards Sustainability. In: OECD 1998 pp116-143.
The Natural Step The Natural Step (TNS) is a non-profit environmental education organisation working to build an ecologically and economically sustainable society. TNS offers a framework that is based on science and serves as a compass for businesses, communities, academia, government entities and individuals working to redesign their activities to become more sustainable.	The Four System Conditions 1. Nature cannot withstand a systematic build up of dispersed matter mined from the earth's crust (e.g. minerals, oil); 2. Nature cannot withstand a systematic build up of persistent compounds made by humans (e.g. PCBs); 3. Nature cannot take a systematic deterioration of its capacity for renewal (e.g. over-harvesting fish); 4. Therefore, if we want life to continue, we must (a) be efficient in our use of resources, & (b) promote justice – because ignoring poverty will lead the poor, for short-term survival, to destroy resources that we all need for long-term survival (e.g. the rainforests).	**An introduction to TNS can be found on the internet at:** http://www.naturalstep.org/what/index_what.html
The Natural Step ~ Aotearoa New Zealand	***Aims of TNS Aotearoa*** **To provide a coherent philosophical framework for sustainability within which:** • all members of our community can apply the basic TNS principles & help secure a sustainable future for themselves & future generations; • ongoing environmental initiatives can be enhanced; • business & community leaders can work together with the wider community to develop strategies for a sustainable New Zealand.	Professor John Craig, SEMS, Tamaki Campus, Auckland University

	Mission: • to create a shared understanding of our interdependence with the environment, and • to promote change leading to sustainable environmental, economic and social development for future generations. **Environmental Issues:** **Accumulation of hazardous chemicals** • Organochlorides - DDT, PCBs; CFCs - Ozone, Greenhouse gases - global warming **Pollution of air, water & land** • Brown haze over Auckland? • Auckland beaches **Loss of biodiversity** • NZ worst example ~ NZ's greatest environmental problem	
Organisation for Economic Co-operation and Development (OECD) The OECD has previously **highlighted the need for far greater advancement among member states in establishing effective policy on sustainable development**. A 1997 high level advisory report noted government policies dealing with the economy, the environment and with equity are badly disconnected and often in direct conflict. It said global ecosystems were being steadily eroded and part of the problem was chronically poor monitoring of the links between ecological , business and social health (Knight 1997b). In 1999 the OECD Director General Don Johnston noted: ' With a strong, three-year mandate from the OECD Ministerial Meeting in 1998,	**The 1999 Interim Report states**: Sustainable development calls for an integrated set of policies that maximise human welfare within an intertemporal framework. The [1987] Brundtland Report defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". This definition raises important challenges for policy making and for economic analysis, with three features worth highlighting. First, this definition implies a reference to "needs" in a broad sense, not only economic needs but also needs for a clean environment, for a secure and cohesive society and for ample employment opportunities. Second, implicit in this definition is a focus on "inter-generational" equity, implying that the next generation should be secured opportunities similar to those available to the current one. Third, this definition puts an emphasis on "intra-generational" equity. This intra-generational perspective applies both across and within countries. It suggests that preservation of the environment should be a joint responsibility of developed and developing countries, and implies that all individuals should benefit from the opportunities created by globalisation and technology, and have a stake in the progress of society.' The Interim report then goes on to detail the complex implications arising from this apparently simple definition. The extent of the complexity is reflected in the **1999 Framework report** which notes: '[w]hile the workshop did not dwell on … definition[s] of sustainable development, the workshop confirmed that sustainable development must refer to a broad set of issues, going beyond the relationship between the economy and the environment to encompass human and social concerns. Although the extension to social issues is	The accompanying notes are from three recent OECD reports on SD and SD indicator development: 1. The Interim Report on the OECD Three-Year Project on Sustainable Development. 1999. 2. Framework to Measure Sustainable Development: an OCED expert workshop. Paris 2-3 September 1999. 3. The OECD Initiative on Sustainable Development: Progress Report to the 2000 Ministerial Council Meeting.

sustainable development is now a key priority for the Organisation … [Member Country] Ministers largely endorsed our work so far and our plans for the next two years' (Johnston 1999). This year 2000 update continues that theme. A key OECD aim is to establish **principles for policy-making** that better integrate concerns regarding economic development over the medium and longer term. Most OECD Directorates and affiliates – the International Energy Agency (IEA), the OECD Nuclear Energy Agency (NEA), the European Conference of Ministers of Transport (ECMT), and the OECD Development Centre – are involved in this organisation-wide project. Access to OECD information on SD can be made through the internet at: http://www.oecd.org/subject/sustdev/	difficult such extension is valid and necessary. Measuring sustainable development is an attempt to represent the totality of stocks, flows and relationships which exist. However, no single indicator, no framework and no set of indicators currently covers the full range of issues required by this overall scope' (p7). From these two documents it is apparent that the OECD sees sustainable development in terms of 'a set of boundary conditions which economic development should respect' (1999 Interim Report p20). The 2000 Progress Report says the OECD approaches sustainable development from an **economic development** perspective, while at the same time recognising social and environmental dimensions often lose out to economic requirements. The OECD says that "while market forces and public policies promote economic development, as measured by GDP, these forces may also, for example, interfere with the climate system, over exploit some natural resources and cause undesirable social consequences." It then goes on to refer to the problem of benefits of economic growth accruing inequitably to the few while the risks and impacts are shared by the many; but it reverses the emphasis by saying: "benefits from improving the sustainability of development often have the nature of public goods, accruing to more than one country and one generation, while their costs may be more narrowly concentrated. Providing these public goods requires balancing the role of markets with public provision. "Markets can do most of the job when there are appropriate economic incentives, for instance, to take the full costs of environmental degradation into account. But public provision may be necessary, for example, in cases when co-ordination problems make market solutions difficult to achieve." A report **analysing the status of SD internationally** is due out in the last quarter of this year (2000) (eg Chapter 1 will review trends and prospects in the economic, social and environmental fields – both globally and in OECD countries – which may enhance or threaten the sustainability of current patterns of economic development). And in 2001 a **Policy Report for the OECD Ministerial Council due in 2001** is due. This aims to raise key policy questions and provide concrete recommendations for Ministerial consideration. It will aim to identify areas where governments in OECD countries – working with business and non-governmental organisations as appropriate – could use economic and institutional instruments to further sustainable development.	

World Business Council for Sustainable Development "Our members are drawn from 30 countries and more than 20 major industrial sectors. The WBCSD was formed in January 1995 through a merger between the Business Council for Sustainable Development (BCSD) in Geneva and the World Industry Council for the Environment (WICE), an International Chamber of Commerce (ICC) initiative, in Paris." Available from this website: An Overview of WBCSD: **Trade and Environment** Climate and Energy Sustainability through the Market Natural Resources Eco-efficiency Corporate Social Responsibility Innovation and Technology Global Compact Scenarios	The World Business Council for Sustainable Development (WBCSD) is a coalition of some 140 international companies united by a shared commitment to sustainable development, i.e. *environmental protection, social equity and economic growth.* **Objectives**: **Business leadership** To be the leading business advocate on issues connected with the environment and sustainable development; **Policy Development** To participate in policy development in order to create a framework that allows business to contribute effectively to sustainable development; **Best Practice** To demonstrate progress in environmental and resource management in business and to share leading-edge practices among our members; **Global Outreach** To contribute through our global network to a sustainable future for developing nations and nations in transition.	http://www.wbcsd.ch/aboutus.htm
Triple Bottom Lines #1. SustainAbility and John Elkington (see below). This revolves around establishing indicators for and monitoring the following: **Economic/ environmental shear zone** where some companies already promote eco-efficiency. But there are greater challenges ahead, e.g.	Triple Bottom Line requires a new way of accounting. A rapid overview of the literature shows little hard evidence of how it actually works in practice. However, PRISM has asked for updated material on case studies. Part of the problem is the undeveloped nature of accountancy in this area. In 1998, SustainAbility scored the current state of development of different types of triple bottom line accounting on a scale of 1-10: • **financial accounting** comes in around 8 (but it does not capture all the economic impacts associated with a business);	http://www.sustainability.co.uk/triple/Triple-bottom-line-1-name.htm and http://www.sustainability.co.uk/triple/triple.htm

environmental economics and accounting, shadow pricing and ecological tax reform. **Social/ environmental shear zone** where business is working on environmental literacy and training issues, but new challenges will be sparked by e.g. environmental justice, environmental refugees, and the inter-generational equity agenda. **Economic/social shear zone** where some companies are looking at the social impacts of proposed investment, but bubbling under are issues like business ethics, fair trade, human and minority rights, and stakeholder capitalism.	• **environmental accounting** might come in at around 3-4; and • **social and ethical accounting** would be hard pressed to score 1-2.	
Triple Bottom Lines #2: Australia Institute of Chartered Accountants in Australia **The ICAA says**: The ICAA's Triple Bottom Line Issues Group is the new name of the group formerly called the Environmental Accounting Task Force (EATF). The change in name is intended to align the group and its activities with the terminology that is now most commonly recognised by the corporate community. Along with the change of name, new terms of reference have been set for the group from the beginning of 1999. Since the original terms of reference were set for the EATF in 1995, the debate on environmental accounting has moved on. Rather than the focus being on accounting per se, for those companies taking action in this area it is social and environmental accountability that is relevant. The mission of	Many companies and analysts have integrated the concept of "triple-bottom line" reporting into their language and practices. The triple-bottom line is a term coined by John Elkington (see below), author and management consultant, which refers to the three prongs of social, environmental, and financial accountability. It is a term that is finding increasing and widespread international acceptance within the corporate community and one that is informing and transforming corporate reporting practises. As the EATF, the group produced two leadership publications: *Corporate Reporting – The Green Gap* (addressing corporate reporting of environmental information based on a survey of annual report users and preparers) and the 1998 discussion *paper The Impact of Environmental Matters on the Accountancy Profession.* In addition, the EATF prepared numerous submissions and articles on environment accounting issues, including responding to the 1995 IFAC discussion paper on The Audit Profession and the Environment. As detailed in the EATF's 1998 discussion paper, environmental accounting is a specific subset of a wider field of inquiry that includes social and environmental performance evaluation, reporting and auditing.	http://www.icaa.org.au/ICAA/triple/CentreSet.htm

the ICAA Triple Bottom Line Issues Group (TBLIG) is to enhance the understanding of triple bottom line (economic, environmental and social) reporting, including its relevance to business, and develop techniques for practitioners to apply it.		
International Chambers of Commerce #1: **The Business Charter for Sustainable Development** (Full text available from PRISM on request.)	**1. Corporate priority** To recognise environmental management as among the highest corporate priorities and as a key determinant to sustainable development; to establish policies, programmes and practices for conducting operations in an environmentally sound manner. **2. Integrated management** To integrate these policies, programmes and practices fully into each business as an essential element of management in all its functions. **3. Process of improvement** To continue to improve corporate policies, programmes and environmental performance, taking into account technical developments, scientific understanding, consumer needs and community expectations, with legal regulations as a starting point; and to apply the same environmental criteria internationally. **4. Employee education** To educate, train and motivate employees to conduct their activities in an environmentally responsible manner. **5. Prior assessment** To assess environmental impacts before starting a new activity or project and before decommissioning a facility or leaving a site. **6. Products and services** To develop and provide products or services that have no undue environmental impact and are safe in their intended use, that are efficient in their consumption of energy and natural resources, and that can be recycled, reused, or disposed of safely. **7. Customer advice** To advise, and where relevant educate, customers, distributors and the public in the safe use, transportation, storage and disposal of products provided; and to apply similar considerations to the provision of services.	http://www.iccwbo.org/home/environment/charter.asp

	8. Facilities and operations To develop, design and operate facilities and conduct activities taking into consideration the efficient use of energy and materials, the sustainable use of renewable resources, the minimisation of adverse environmental impact and waste generation, and the safe and responsible disposal of residual wastes. **9. Research** To conduct or support research on the environmental impacts of raw materials, products, processes, emissions and wastes associated with the enterprise and on the means of minimising such adverse impacts. **10. Precautionary approach** To modify the manufacture, marketing or use of products or services or the conduct of activities, consistent with scientific and technical understanding, to prevent serious or irreversible environmental degradation. **11. Contractors and suppliers** To promote the adoption of these principles by contractors acting on behalf of the enterprise, encouraging and, where appropriate, requiring improvements in their practices to make them consistent with those of the enterprise; and to encourage the wider adoption of these principles by suppliers. **12. Emergency preparedness** To develop and maintain, where significant hazards exist, emergency preparedness plans in conjunction with the emergency services, relevant authorities and the local community, recognising potential transboundary impacts. **13. Transfer of technology** To contribute to the transfer of environmentally sound technology and management methods throughout the industrial and public sectors. **14. Contributing to the common effort** To contribute to the development of public policy and to business, governmental and intergovernmental programmes and educational initiatives that will enhance environmental awareness and protection. **15. Openness to concerns** To foster openness and dialogue with employees and the public, anticipating and responding to their concerns about the potential hazards and impacts of operations, products, wastes or services, including those of transboundary or global significance. **16. Compliance and reporting** To measure environmental performance; to conduct regular environmental audits and assessments of compliance with company requirements, legal requirements and these principles; and periodically to provide appropriate information to the Board of Directors.	

International Chambers of Commerce #2: **Tools for delivering Sustainable Development** The notes in the next column are from a 1998 statement on Corporate Responsibility and Sustainable Development from the ICC. It emphasises key tools the use of Environmental Management Systems (EMSs) and Life Cycle Analysis (LCA). See below for more detail.	ICC and WBCSD have emphasised the introduction and development of environmental management practices and systems within enterprises as an essential contribution to sustainable development. **They say**: Business firmly believes that the first step to improved environmental performance of business is to bring environmental considerations into the daily process of decision making and operations, as the principal objective of an environmental management system. Without this foundation of an environmental management system (EMS), there is little chance an enterprise can promulgate sustainable development to other stakeholders, joint venture partners, and society as a whole.	http://www.iccwbo.org/home/statements_rules/statements/1998/final_management_tool.asp
International Chambers of Commerce #3: Further web searches required. **Recommendation**: further in-depth searching through the various links provided by the ICC site should be carried out. This is particularly so given the case studies apparently available through the site.	There are a large number of documents related to sustainable development and environmental monitoring on the ICC website. A search using the following phrase: *Business Charter for Sustainable Development w*ill generate a large number of links worth investigating. For example, the site http://www.iccwbo.org/index_sdcharter.asp lists examples of companies applying aspects of environmental management. Or the site http://www.iccwbo.org/sdcharter/features/company_showcase/menu_company_showcase.asp links to 'showcase' companies (mainly multinationals) that provide 'cutting edge environmental and sustainable development sites of pioneering companies'.	http://www.iccwbo.org/search/query.asp

3. Shell's Approach to Sustainable Development

Following on from the identification by the UK based consultancy, SustainAbility, of its association with Shell Oil, PRISM approached Shell UK and identified the following as indicative of the company's approach to SD. This includes identifying and tracking indicators of the company's performance regarding SD.

Summary Position
The following is an edited description of Shell's approach to Sustainable Development. (http://www.shell.com/royal-en/content/0,5028,25545-51045,00.html)

Many still question the wisdom of striving to integrate the principles of sustainable development into the way we do business, saying the ideas are either silly or too difficult to explain. We have found just the opposite. More than three years down the road we believe more than ever that this is the right approach because values and principles are important to us, and it makes good business sense.

We use the Brundtland Commission definition of Sustainable Development "meeting the needs of the present without compromising the ability of future generations to meet their own needs" within Shell. It requires us to think about more than just how much money we will make today, but to take a broader view and balance the long term and the short term. We place the emphasis on the balance between the short term and long term, as well as on the integration of the economic, environmental and social aspects of our business. For us sustainable development applies to everyday choices we make, like how we dispose of our waste as well as to large regional projects.

Because sustainable development means taking a broader, more integrated approach to our business it opens up exciting business opportunities in emerging markets and new customer groups. Sustainable development is a way of developing and safeguarding our reputation and it will help us develop our businesses in line with society's needs and expectations.

Society is still exploring exactly how to put sustainable development into practice but it is clear that we are on a journey and not aiming at a known end point. For Shell this journey is part of our transformation to become 'top performer of first choice'.

Our chairman Mark Moody-Stuart expressed it in a recent speech:

> *As you seek to build your business, standing – as it were – on the stool, each leg must be in place if you are to build on a sustainable foundation. The truly sustainable development of a society depends on three inseparable factors: the three-legged stool.*
> *The first leg is the generation of economic wealth, which companies deliver better than anyone else. The second is environmental improvement, where both government and the company have to play their role. The third leg is social equity. Companies have a role to play here, but the main responsibility rests with civil society as a whole, including government.*
> *The balance between these three legs is the key. Excellent environmental performance is meaningless if no wealth is created. Wealth in a destroyed environment is equally senseless. No matter how wealthy, a society fundamentally lacking in social equity cannot be sustained.*

As an expression of values
Our core values of honesty, integrity and respect for people are at the heart of our Business Principles, the basis on which we do business. In these Principles we undertake to contribute to sustainable development. Sustainable development offers a means of tackling some of society's most pressing concerns – extremes of poverty and wealth, population growth, abuses of human rights, environmental destruction, climate change and loss of biodiversity.

We recognise that Shell is part of society. We share the same agenda. As people we all breathe the same air and have the same basic hopes and concerns for the welfare of our children and their future.
Our success as an organisation is intimately linked to that of society. We wish to play our part responsibly – by maintaining and enhancing natural and social capital, as well as contributing to the global economy's capacity to generate and distribute wealth. Sustainable development provides the best model to see these elements together in an integrated way while creating business value.

As a creator of business value

Our sustainable development management framework (SDMF) is designed to help us achieve the necessary integration and create the conditions for building long-term value and a strong brand in line with our Business Principles and society's expectations. Engagement is a critical activity and driver of the SDMF. Other elements ensure that we can derive value through four key levers:

- Reducing costs – in the short term by becoming more eco-efficient (doing more with less) and in the long term working with others to ensure that nothing is wasted
- Creating options – anticipating new markets driven by people who want a more sustainable world, and evolving business portfolios and supply chain relationships to match
- Gaining customers – enhancing the brand by providing services and products built on sustainability thinking to create customer loyalty and market share
- Reducing risk – managing risks better by understanding what represents responsible behaviour. Focusing on managing existing assets in the short term and evolving the business portfolio longer term. Achieving recognition from financial institutions for success in this area.

We believe that matching these levers to the strengths of our businesses, in ways that show commitment and responsible performance, will enhance our reputation and in turn attract and retain talent and capital. By these actions – which are aligned with and support the wider conditions required for sustainable development – we will generate short-, medium- and long- term financial value, not just for shareholders but for society at large.

Enough words – show us the performance

We know that translating our sustainable development aspirations and commitments into the way we do business will take time. That is why we developed a Road Map showing our plans to guide us in our actions and for stakeholders to chart our progress.

In the Impact and Performance section we present evidence of our performance. Data are catalogued under the three elements of sustainable development: economic, environmental and social. Our progress in integrating these elements into our standards and systems and in promoting awareness across the organisation is shown in 'Managing our Business'.

In each performance section we discuss relevant issues and present case studies to illustrate some of the challenges we face – and successes we have had – in striving to make sustainable development part of daily business.

Following a query to Shell from PRISM re. updates on where Shell is at since the 1998 report referred to above, the following reply was received from Mark Wade, Sustainable Development Group, on 31 August 2000:

Stephen,

Thank you for your enquiry. I believe the report you are referring to was The Shell Report 1998 entitled 'Profits and principles does there have to be a choice?'. In it we made commitments to sustainable development and John Elkington of SustainAbility made reference to our association. In fact we have been working closely with them and the management consultants ADL ever since to devise ways of operationalising our commitments to bring sustainable development thinking into our strategy, day-to-day operations and the culture of Shell.

Important milestone have been the:

- Road Map outlining our strategy for achieving this (Shell Report 1998)
- Sustainable Development Management Framework (SDMF)a tool for aligning business processes with SD principles (summarised in Shell Report 1999)
- Key Performance Indicator(KPI) set to drive continuous improvement in the three elements of SD (economic, environmental, social and the underlying values and governance) – currently under development (summarised in Shell Report 2000)

Throughout that time we have evolved the Shell Report considerably to better reflect the overall economic, environmental and social impact the Group has on the world and how we are going about meeting the expectations of stakekholders. The Shell Report now incorporates our previously stand alone HSE report.

The Reports are all available on the web at www.shell.com and www.shellreport.com. I'll be pleased to send you hard copies if you would find this useful and we have a booklet on the SDMF and a report back to stakeholders who were consulted on the KPI development work.

Best regards
Mark Wade (SI-PXR)
Sustainable Development Group
Shell International
Shell Centre
London
SE1 7NA
Tel: +44 (0) 207 934 3208
Fax: +44 (0) 207934 7668
Email: mark.m.wade@si.shell.com

The SustainAbility contact for this work is:
Seb Beloe,
SustainAbility Ltd.,
11-13 Knightsbridge,
London SW1X 7LY
beloe@sustainability.co.uk
Tel. 020 7245 1116
Fax. 020 7245 1117

Shell Report 2000
This includes reference to SD and SD monitoring from a company perspective. Access is through: http://www.shell.com/shellreport-en/0,6268,,00.html

The report (in part) repeats the statement given under As a creator of business value above.

Measures of Progress
Shell offers the following (grouped in sectors) as indicators of progress towards SD. http://www.shell.com/royal-en/content/0,5028,31920-56964,00.html

Exploration and Production
Meeting society's energy needs lies at the heart of our business. Society expects us to produce finite oil and gas resources while caring for people and protecting the environment – only then we will maintain our right to grow.

The Group's Exploration and Production (EP) business is responsible for finding oil and gas and getting it out of the ground. In 1999 EP focused on translating the Group's sustainable development aspirations into something that people throughout the organisation could relate to and use.

A document known as 'The Way Forward' was published to complement the Group's sustainable development management framework (SDMF) and provide additional guidance for EP companies. The cornerstone of the approach is a set of six sustainability principles to be applied in daily business. These are to:
- respect and safeguard people
- engage and work with stakeholders
- minimise impact on the environment
- use resources efficiently
- maximise profitability
- maximise benefits to the community.

For each principle a description of the types of activity that might be undertaken and indicators to measure progress are suggested.

Many EP companies have been contributing to sustainable development as a normal part of their business for some time and examples from a range of companies are included in the publication. EP companies are

now using 'The Way Forward' to promote a more consistent approach and to develop plans assessing their own course and contribution to sustainable development reflecting their particular position in the market, environment and society.

EP has established a dedicated website to share experiences and ideas. It includes, for example, EP's initiatives in the Philippines where a number of activities are underway to ensure that the Malampaya gas project is fully aligned with sustainability objectives.

Elsewhere, in countries as diverse as Brunei, Kazakhstan and The Netherlands, EP companies have been holding workshops to look at ways for employees to address sustainable development issues. In October 1999, a global workshop was held, involving over 60 representatives from some 25 EP companies.

While good progress has been made, there is clearly more to do. Some of the issues that will be addressed in 2000 and beyond require a business-wide approach, and include:

- management of greenhouse gases, including participation in the Group emissions trading programme
- biodiversity and operating in socially or environmentally sensitive areas
- increased focus on stakeholder engagement through a series of dialogue sessions on EP-specific issues.

Cavite training farm – coffee is one of the crops grown by SPEX scholars for the Pilipinas Shell Foundation's agricultural programme. A case study is available through this website.

Oil Products

Oil Products recognises that sustainability affects the core of its business: the behaviour of consumers, the way technology develops, changes in regulation and shifts in the way society judges corporate behaviour. Oil Products (OP), the business that makes, distributes and markets fuels, lubricants, bitumen and associated services, published its commitment during 1999 to include sustainability considerations into its key business processes, consistent with the Group's sustainable development management framework (SDMF).

OP recognises that sustainability affects the core of its business: the behaviour of consumers, the way technology develops, changes in regulation and shifts in the way society judges corporate behaviour. How it responds to such developments influences the success of the Shell brand and therefore OP's commercial performance.

This is why OP is working to integrate environmental and social considerations more consistently into all its decision-making (including investments) and engaging more widely with stakeholders, particularly its customers. In this way it intends to improve the sustainability of its overall approach to business, its products and its operations.

One of its goals is to develop, in dialogue with customers and with the help of wide-ranging alliances, a new generation of enhanced products, services and technology focused on sustainable mobility and energy. In 1999 it launched new fuels, such as Shell PuraTM, Shell OptimaxTM and Shell V-PowerTM, which offer significantly enhanced consumer benefits, including reduced emissions and more efficient engine performance. MTBE will also be phased out in California.

In the wider arena, OP will be actively supporting a working group on sustainable mobility, which Shell will co-chair with Toyota and General Motors, set-up under the auspices of the World Business Council for Sustainable Development (WBCSD). Amongst other things, this working group will seek to identify strategic options for enabling future personal mobility in a sustainable way.

OP is contributing to the Group's commitments on climate change, by looking to become ever more energy efficient and by participating in the carbon emissions trading system (STEPS).

It sees high health, safety and environment (HSE) standards as fundamental to its success and the use of structured HSE management systems as central to continuous improvements in HSE performance, particularly the reduction of accidents in road transport.

Members of the OP Executive – its top decision-making body – have specific responsibilities to ensure that sustainability commitments are carried out. These include setting objectives, monitoring and reporting on

progress. The review of 1999 highlighted encouraging progress in OP's three key areas of focus: sustainability of the overall approach, of products and of operations.
Plans for 2000 include the provision of further practical guidance to assist operating countries in planning how to incorporate sustainability considerations into business management in a more structured way. OP will also participate in the development of the Group's key performance indicators (KPIs) for sustainable development.

Shell's fuel cell research – developing practical, clean and efficient alternatives to conventional vehicles. Find out about the Californian fuel cell partnership

Chemicals

The concept of sustainable development helped us to change fundamentally the way we think about our business. It is at the core of our business strategy.

Despite a difficult year focused on restructuring the portfolio, globalisation and cost reduction, steady progress was made in Chemicals' drive to integrate sustainable development throughout its planning and operations. A sustainable development panel was established to promote the programme and provide guidance to all parts of the business.

The Chemicals business framework, which is used as the basis for running its businesses, has been updated to fully incorporate sustainable development thinking. The Higher Olefins business unit has elected to be the first to gain experience in applying the framework and will share learning with other business units. Sustainable development principles have been built into guidelines for capital investment proposals to ensure decision-making is aligned. Chemicals is also developing key performance indicators that are consistent with the Group initiative to drive improvement and measure progress against clearly defined goals.

To stimulate even greater dialogue within Chemicals an interactive website dedicated solely to sustainable development is being created. This will provide a forum for the free exchange of best practice, experience and learning through the contributions of sustainable development 'champions' from across the global enterprise. It will promote understanding and learning throughout the business while encouraging contributions from the expert and interested.

As part of Chemicals' commitment to dialogue it holds regular workshops with external sustainable development experts on plans and progress. Chemicals' people have learnt through these contacts of the need to be clearer on how sustainable development principles will be included in business processes. More focus will be placed on this and Chemicals will report progress while seeking further feedback.

The emphasis in 2000 will be to build on early experiences as aspirations are translated into practical and tangible actions. Chemicals will continue to build supply chain relationships with companies sharing its vision of the future such as Interface and learn together in the process.

Shell Chemicals will also continue to participate in Project Better World. This allows staff to gain experience in a broader arena and gain valuable two-way exchange of competencies and learning. In 1999 staff worked with Earthwatch in construction of solar ovens in Indonesia and a sustainable management project for Lake Naivasha in Kenya.

The Higher Olefins business is built around the production of versatile chemical intermediates that enhance the properties of consumer products such as plastic films, synthetic lubricants and biodegradable detergents. Higher olefin derivatives are found in homes throughout the developed world.

"The concept of sustainable development helped us to fundamentally change the way we think about this business. It is now at the core of our business strategy," says Bill Colquhoun, Product Vice President of Higher Olefins.
"It is teaching us to look at our business in a much wider context and to understand the role we play in the entire value chain. This shift in thinking altered our aspirations and vision for the future, leading us to search for ways to dramatically reduce the resources required to deliver the ultimate value of our products all the way to the consumer.
"The key is to work with others in the supply chain and to create whole systems solutions for the benefit of

people and the environment. The conventional wisdom that trade-offs are required between development and the environment no longer limits our thinking. The reverse can be true and will provide sustainable growth opportunities for enterprises that can innovate."

Gas and Power

The practicalities of dealing with the social and environmental issues raised by the pipeline taught us far more than paper studies would ever have done.

In 1999, Downstream Gas and Power (GP) was confronted by some of the practical challenges of sustainable development, raising awareness through the Business of the need to actively engage with its stakeholders.

Gas is a convenient, clean, low-carbon fuel. The demand for natural gas is expected to grow. Shell is forcing the pace of growth in this part of its business. Diversification into power generation and downstream gas marketing is aimed at meeting the needs of the increasing worldwide use of natural gas. Early in the year all staff received a letter explaining the significance of the Group SDMF and the importance of sustainable development to the business. The approach is one of incorporating the SDMF within existing business processes.

This recognises that many of GP's projects – some running for over 30 years – already conform in many ways to the principles of sustainable development. This approach has allowed these long-term major projects to operate harmoniously in local communities and with the support of the national governments. The significance of such an approach was underlined during 1999 with some projects under development. For example a joint venture in which GP participates met objections to building a gas pipeline across environmentally and socially sensitive regions of Bolivia and Brazil. "The practicalities of dealing with the social and environmental issues raised by the pipeline taught us far more than paper studies would ever have done," says Nick King, HSE and Sustainable Development Manager at Shell International Gas.
In a further example, in Oman a US$ 2 billion gas project now nearing completion has created many social and economic benefits.

Over 200 permanent jobs have been created in the project in Oman in which Shell is a shareholder (30%) and technical advisor. Over half of the new positions are held by Omanis and the target for 2008 is for local people to hold almost all of the jobs. Local indirect employment will also be created.

The joint venture project has established a local forum of business and government representatives to advise and assist in community initiatives. The project has built a number of much-needed roads and donated US$ 45 million to help in the construction of a local hospital. The project has committed to contribute up to 1.5% of net income annually on community projects – depending on suitable proposals being submitted.

Shell, together with the national and local governments, intends to commission a study of the Sharqiya regions of Oman to enhance the project's current sustainable development initiatives for the region.
As part of its global social investment programme Shell also sponsors business training for local entrepreneurs.

Environmental and social impacts need to be taken into account long before projects are committed to, even before all the parties are signed up. This is so in Venezuela where these considerations are already being built into the planning of a potential LNG plant.

Renewables

We are in the third year of a US$ 500 million five-year investment plan to make a profitable business from renewable resources. Success depends on finding enough economically viable projects.

Shell Renewables, which supplies energy and wood from renewable sources, contributes to a more sustainable world through the very nature of its business. It has adopted six sustainable development principles like those used by Exploration and Production in line with the sustainable development management framework SDMF and is applying this thinking to all its business decisions, no matter how small. It is also installing certifiable health, safety and environment management systems to ensure it works to the same standards world-wide.