



PUBLIC ACCOUNTS AND ESTIMATES COMMITTEE
THIRTY-FIRST REPORT TO PARLIAMENT

**INTERIM REPORT OF THE
INQUIRY INTO
ENVIRONMENTAL ACCOUNTING
AND REPORTING**

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TABLE OF CONTENTS

COMMITTEE MEMBERSHIP	i
MEMBERSHIP OF THE SUB-COMMITTEE.....	iii
DUTIES OF THE COMMITTEE	v
GLOSSARY	vii
CHAIRMAN’S INTRODUCTION	vii
EXECUTIVE SUMMARY	vii
RECOMMENDATIONS.....	vii
CHAPTER 1 ENVIRONMENTAL PROBLEMS AND THEIR IMPLICATIONS IN VICTORIA.....	7
1.1 ENVIRONMENTAL PROBLEMS AND THEIR IMPLICATIONS FOR VICTORIA.....	7
1.2 VICTORIAN GOVERNMENT COMMITMENT TO SUSTAINABLE DEVELOPMENT	7
1.3 THE INQUIRY.....	7
1.4 PROCESS FOLLOWED BY THE COMMITTEE	7
CHAPTER 2 WHY IS ENVIRONMENTAL ACCOUNTING AND REPORTING ON THE AGENDA?	7
2.1 DEFINITIONS.....	7
2.1.1 ENVIRONMENTAL ACCOUNTING	7
2.1.2 ENVIRONMENTAL REPORTING	7
2.2 WHY UNDERTAKE ENVIRONMENTAL ACCOUNTING AND REPORTING?	7
2.2.1 WHY DO IT AT THE MACRO LEVEL?	7
2.2.2 WHY UNDERTAKE ENVIRONMENTAL ACCOUNTING AND REPORTING AT THE ORGANISATIONAL LEVEL?	7
CHAPTER 3 NATIONAL ENVIRONMENTAL ACCOUNTING.....	7
3.1 INTRODUCTION	21
3.2 A GREEN GDP.....	7

Interim Report of the Inquiry into Environmental Accounting and Reporting

3.3	AUSTRALIAN EXPERIENCE WITH GREEN GDP	7
3.4	SATELLITE ACCOUNTS	7
3.5	OVERSEAS EXPERIENCE WITH SATELLITE ACCOUNTS	7
3.6	AUSTRALIAN EXPERIENCE WITH SATELLITE ACCOUNTS.....	7
3.7	VICTORIA'S ROLE	7
3.8	NATIONAL ENVIRONMENTAL ACCOUNTING WITHIN LOCAL GOVERNMENT	7
CHAPTER 4 STATE OF THE ENVIRONMENT REPORTING		7
4.1	WHY HAVE STATE OF ENVIRONMENT REPORTING?	7
4.2	THE SOE MODEL	7
4.3	OVERSEAS EXPERIENCE.....	7
4.4	OTHER AUSTRALIAN SOE RELATED ACTIVITIES	7
4.4.1	COMMONWEALTH	7
4.4.2	STATE AND TERRITORIES.....	7
4.5.	OTHER AUSTRALIAN SOE RELATED INITIATIVES	7
4.5.1	NATIONAL LAND AND WATER RESOURCES AUDIT	7
4.5.2	NATIONAL POLLUTANT INVENTORY	7
4.5.3	AUSTRALIAN BEUREAU OF STATISTICS INITIATIVES	7
4.6	SOE REPORTING IN VICTORIA	7
4.7	COLLECTING AND REPORTING ON ENVIRONMENTAL INFORMATION	7
4.8	SHOULD VICTORIA HAVE SOE REPORTING?.....	7
4.9	A SUITABLE MODEL.....	7
4.10	SOE REPORT CLASSIFICATIONS	7
4.11	DATA INTEGRITY.....	7
4.12	TIMING OF SOE REPORTS.....	7
4.13	SOE AUDIENCE	7
4.14	RESOURCING FOR SOE REPORTING	7
4.15	SOE REPORTING BY LOCAL GOVERNMENT.....	7
4.16	ENVIRONMENTAL INDICATORS	7
CHAPTER 5 ENVIRONMENTAL ACCOUNTING AT THE ORGANISATIONAL LEVEL		7
5.1	INTRODUCTION	67
5.2	ENVIRONMENTAL MANAGEMENT ACCOUNTING	7
5.3	IDENTIFICATION OF ENVIRONMENTAL COSTS AND BENEFITS.....	7

5.4	MEASUREMENT OF ENVIRONMENTAL INFORMATION IN MONETARY TERMS	7
5.4.1	OVERSEAS EXPERIENCE.....	7
5.4.2	AUSTRALIAN EXPERIENCE.....	7
5.5	ENVIRONMENTAL FINANCIAL ACCOUNTING.....	7
5.6	EXISTING ACCOUNTING STANDARDS	7
5.6.1	OVERSEAS EXPERIENCE.....	7
5.6.2	AUSTRALIAN EXPERIENCE.....	7
5.7	ENVIRONMENTAL MATTERS IN EXISTING ACCOUNTING STANDARDS.....	79
5.8	ENVIRONMENTAL MATTERS EXCLUDED BY EXISTING ACCOUNTING STANDARDS.....	80
5.9	FOCUS ON FINANCIAL INFORMATION.....	7
5.10	OTHER DISCLOSURES.....	7
5.10.1	AMENDMENT TO THE CORPORATIONS LAW.....	7
5.11	A NEW FINANCIAL ACCOUNTING STANDARD FOR THE ENVIRONMENT?	7
5.12	EMERGING TREND – SOCIAL ACCOUNTING	7
	CHAPTER 6 ENVIRONMENTAL PERFORMANCE REPORTING	7
6.1	INTRODUCTION	87
6.2	MANDATORY ENVIRONMENTAL PERFORMANCE REPORTING	7
6.2.1	OVERSEAS EXPERIENCE.....	7
	ENVIRONMENTAL REPORTING LEGISLATION.....	7
	POLLUTANT INVENTORIES.....	7
6.2.2	AUSTRALIAN EXPERIENCE.....	7
	POLLUTANT INVENTORY	7
	SPECIFIC ENVIRONMENT REPORTING LEGISLATION.....	7
6.3	SUMMARY OF MANDATORY REPORTING REQUIREMENTS IN VICTORIA.....	7
6.4	VOLUNTARY ENVIRONMENTAL PERFORMANCE REPORTING.....	94
6.4.1	GUIDANCE AND PROGRAMS.....	94
6.5	OTHER VOLUNTARY ENVIRONMENTAL PERFORMANCE REPORTING.....	96
6.5.1	ECO-MANAGEMENT AND AUDIT SCHEME (EMAS)	96
6.5.2	INDUSTRY CODES OF PRACTICE.....	97
6.6	ENVIRONMENTAL REPORTING AWARDS.....	98
6.6.1	OVERSEAS EXPERIENCE.....	99

Interim Report of the Inquiry into Environmental Accounting and Reporting

6.6.2	AUSTRALIAN EXPERIENCE.....	100
6.7	UNIFORM STANDARDS FOR ENVIRONMENTAL REPORTING	100
6.8	VOLUNTARY OR MANDATORY REPORTING	105
6.9	GOVERNMENT SUPPORT FOR VOLUNTARY REPORTING	107
6.10	ENVIRONMENTAL MANAGEMENT	109
6.11	ENVIRONMENTAL MANAGEMENT SYSTEMS	109
6.12	IMPLEMENTATION OF EMS	111
6.12.1	OVERSEAS EXPERIENCE.....	112
	ISO 14001	112
	EMAS	113
6.13	COMPARING THE STANDARDS.....	114
6.14	INDUSTRY ENVIRONMENTAL MANAGEMENT SYSTEMS.....	115
6.14.1	AUSTRALIAN EXPERIENCE.....	115
6.14.2	INDUSTRY CODES OF PRACTICE.....	116
6.14.3	VICTORIA.....	116
6.15	VERIFICATION OF ENVIRONMENTAL MANAGEMENT SYSTEMS	117
	CHAPTER 7 PUBLIC SECTOR ENVIRONMENTAL REPORTING	119
7.1	INTRODUCTION	119
7.2	ENVIRONMENTAL INFORMATION THAT IMPACTS ON FINANCIAL STATEMENTS AND ANNUAL REPORTS	121
7.2.1	AUSTRALIAN EXPERIENCE.....	122
7.2.2	VICTORIAN EXPERIENCE.....	122
7.3	WHAT ENVIRONMENTAL INFORMATION SHOULD BE INCLUDED IN PUBLIC SECTOR ANNUAL REPORTS?	124
7.4	ENVIRONMENTAL PERFORMANCE REPORTING.....	125
7.4.1	OVERSEAS EXPERIENCE.....	126
7.4.2	AUSTRALIAN EXPERIENCE.....	126
7.5	EXAMPLE OF SPECIFIC ENVIRONMENTAL PERFORMANCE REPORTING.....	129
7.6	WHAT ENVIRONMENTAL PERFORMANCE REPORTING SHOULD THE PUBLIC SECTOR BE UNDERTAKING?	130
	CHAPTER 8 ENVIRONMENTAL AUDITING AND VERIFICATION	135
8.1	INTRODUCTION	135
8.2	MENTAL INFORMATION IN FINANCIAL STATEMENTS	136
8.2.1	WHY AUDIT ENVIRONMENTAL INFORMATION?	136

8.2.2	FRAMEWORK FOR THE AUDITING OF ENVIRONMENTAL INFORMATION	137
8.3	VERIFICATION OF ENVIRONMENTAL PERFORMANCE REPORTS	139
8.3.1	WHY VERIFY ENVIRONMENTAL PERFORMANCE REPORTS?	139
8.3.2	FRAMEWORK FOR THE VERIFICATION OF REPORTS.....	141
8.4	THE VERIFICATION PROCESS	142
8.5	OBJECTIVES AND SCOPE OF VERIFICATION	143
8.6	COMPARISON CRITERIA.....	145
8.7	LEVEL OF ASSURANCE	146
8.8	ENVIRONMENTAL AUDITORS AND VERIFIERS.....	7
8.8.1	AUDITORS OF ENVIRONMENTAL INFORMATION IN FINANCIAL STATEMENTS.....	7
8.8.2	VERIFIERS OF ENVIRONMENTAL PERFORMANCE REPORTS.....	7
8.8.3	AUDITORS OF PUBLIC SECTOR ORGANISATIONS.....	7
APPENDIX 1 :	LIST OF SUBMISSIONS	7
APPENDIX 2 :	LIST OF HEARINGS AND WITNESSES	7
APPENDIX 3 :	LIST OF ORGANISATIONS AND WITNESSES WHO GAVE EVIDENCE AT MEETINGS OVERSEAS	163
APPENDIX 4 :	DETAILS OF NEW ZEALAND MEETINGS	7
APPENDIX 5 :	VOLUNTARY ENVIRONMENTAL REPORTING GUIDELINES	7
APPENDIX 6 :	NEW TRENDS IN SOCIAL AND ENVIRONMENTAL REPORTING - SUSTAINABLE DEVELOPMENT AND THE ROLL OF TRIPPLE BOTTOM LINE REPORTING	173

Interim Report of the Inquiry into Environmental Accounting and Reporting

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³ Appointed 21 April 1999 in place of Mr S Bracks

⁴ Resigned from Parliament 8 July 1998

Interim Report of the Inquiry into Environmental Accounting and Reporting

MEMBERSHIP OF THE SUB-COMMITTEE

Members

This Inquiry was undertaken by:

Mr K A Wells, MP (Chairman of this
Inquiry)

Hon. R A Best, MLC

Hon. W Forwood, MLC

Mr P J Loney, MP⁵

Hon. N B Lucas, PSM, MLC

Hon. A Sheehan, MP⁶

Hon. T C Theophanous, MLC

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⁵ Appointed 3 September 1998 in place of Hon A Sheehan

⁶ Resigned from Parliament 8 July 1998

Interim Report of the Inquiry into Environmental Accounting and Reporting

DUTIES OF THE COMMITTEE

The Public Accounts and Estimates Committee is a joint parliamentary committee constituted under the *Parliamentary Committees Act 1968*, as amended.

The Committee comprises nine Members of Parliament drawn from both Houses of Parliament and all parties.

The Committee carries out investigations and reports to Parliament on matters associated with State financial management. Its functions under the Act are to inquire into, consider and report to the Parliament on:

- (a) any proposal, matter or thing connected with public administration or public sector finances;
- (b) the annual estimates or receipts and payments and other budget papers and supplementary estimates of receipts and payments presented to the Assembly and the Council;

if the Committee is required or permitted so to do by or under the Act.

As a result of recent changes to the *Audit Act 1994*, the Committee, in consultation with the Auditor-General, determines the objectives of performance audits and identifies any particular issues that need to be addressed during these audits.

Interim Report of the Inquiry into Environmental Accounting and Reporting

GLOSSARY

Activity Based Costing	A system of allocating overhead costs directly to the activity i.e. product or service creates the costs.
ANZECC	Australian and New Zealand Environment and Conservation Council.
Biodiversity	Biodiversity denotes the number of species per unit of area. It is an expression of the variety of flora or fauna. Typically, unaffected areas will have a high biodiversity.
CO ₂	Carbon dioxide. Stems from the combination of carbonaceous levels. CO ₂ is a gaseous carbon in the earth's atmosphere which contributes to the global greenhouse effect. Wood and other bio-fuels are considered CO ₂ neutral as they consume as much CO ₂ during their growth as they release during combustion.
Corporate environmental reporting	The periodic disclosure of information about a company's environmental issues arising from its activities. The information may be qualitative and quantitative, covering a range of environmental, environmental management and financial areas.
EMAS	Voluntary European Community eco-management and audit scheme for companies in the industrial sector. The scheme requires participating enterprises to publish an environmental statement and have its environmental management system validated.
Emission	Gaseous, liquid or solid substance released into the environment (the atmosphere) by industrial plant, process or products or means of transport.
Environment	The surroundings in which an organisation

operates, including air, land, water, natural resources, flora, fauna, humans and their interrelation. Surroundings extend from within an organisation to the global system.

Environmental accounting	Traditional accounting records only items that have a market value; many environmental resources are “free goods” and do not appear in organisational accounts. Environmental accounting attempts to rectify this situation by including in financial statements the environmental benefits and costs imposed on society – for example costs of remediating the environmental damage caused by pollutant emissions.
Environmental disclosure	The release of information to stakeholders on environmental issues arising from company and government activities.
Environmental indicator	A parameter selected as being characteristic of an important environmental issue for an enterprise and which is regularly measured in terms of volume. The parameter should be a meaningful tool in the day-to-day operation of the company or organisation and its environmental effects should be clearly specified.
Environmental management system	The parts of the overall management system that includes organisation, planning, responsibilities, practices, procedures, and resources for developing, implementing, achieving reviewing and maintaining environmental policy.
Environmental reporting	The voluntary public disclosure of information about an organisation’s impacts on the environment, its performance in managing those impacts and its contribution to ecologically sustainable development.
Full cost accounting	The identification, evaluation and allocation of conventional, environmental and social costs

	arising from an organisation's activities.
Greenhouse effect	Impact on the atmosphere whereby heat radiation from the earth is absorbed by the atmosphere and transmitted back to earth, causing the average temperature at the earth's surface to rise. The most common greenhouse gases are CO ₂ , methane, halon and CFC's. The effect of the rising temperatures will be increased evaporation and precipitation, but not distributed evenly around the earth. Dry areas will become more dry, while low-lying areas may experience flooding. Major melting of the ice caps at the earth's poles may also occur, leading to increased water levels in the oceans.
ISO 14001	The International Organisation for Standardisation's standard for an environmental management system.
LCA	Abbreviation of Life-Cycle Assessment. A tool used to evaluate the environmental burdens associated with a product from the extraction and processing of raw materials to the production, use and disposal or recycling of the product.
Life cycle	The life of a product from extraction and processing of raw materials to the production, use and disposal or recycling of the product.
Population-Environment-Process	Framework for SoE reporting where emphasis is placed on the relationships between human activity and the stock of natural assets rather than the state of the environment at any point or time. This model has been used by the ABS in their publication <i>Australians and the Environment</i> .
Pressure-State-Response	Based on the principal of causality: human activities exert pressure on the environment and change its state or condition; society responds to

the changed state by implementing strategies which influence those human activities and so modify or change the pressures.

SERIEE European System for the Collection of Economic Information on the Environment developed by the European Union (EUROSTAT)

Stakeholder An individual or group concerned with or affected by the organisation.

Sustainable development Meeting the needs of the present without compromising the ability of future generations to meet their needs. Four core elements:

- integrating environment and the economy;
- long-term planning;
- equitable use of resources; and
- protecting environmental assets.

UNSTAT SEEA United Nations Statistical Division (UNSTAT) developed in 1993, the System of Environmental and Economic Accounting (SEEA)

CHAIRMAN'S INTRODUCTION

This is a complex but very interesting and timely inquiry. The idea of an inquiry into environmental accounting and reporting was first suggested by a previous member of the Committee, the Honourable Tony Sheehan, who believed that it would be to Victoria's long term advantage to consider these matters.

This has been a ground-breaking Inquiry for this Committee. While most of our Inquiries review aspects of public policy and administration, this reference involved the Committee considering conceptual issues which are at an early stage of development throughout Australia and, in most cases, not yet part of the public policy platform.

As our inquiry revealed, environmental accounting and reporting has the potential to deliver enormous benefits to the government, business and the community. If the government accepts the notion of the evidence, environmental accounting and reporting will position Victoria as a 'clean and green' state providing competitive advantage and improved access to emerging markets both within Australia and overseas. This will allow Victoria's continued economic development to be ecologically sustainable.

While environmental accounting and reporting is further advanced in Europe and America, there is still controversy about key definitions and the appropriate model. Some recommendations contained in the report may be viewed as far reaching. However, the Committee's main objective is to stimulate extensive debate on the many issues raised.

Implementation of environmental accounting and reporting will involve a challenge, particularly for government and industry. But it is a challenge that must be tackled.

The Committee intends to report further because the issues to be considered as part of this Inquiry are so broad that it was not possible to consider some matters in the detail that we would like. The Committee intends to seek feedback from government, industry, and the community on the matters in this report.

Interim Report of the Inquiry into Environmental Accounting and Reporting

I would like to acknowledge the capable leadership of the Chairman of the Sub-Committee, Mr Kim Wells, who has managed this Inquiry. I would also record my personal thanks to the other members of the Sub-Committee for the time and energy they contributed to this Inquiry.

The Committee benefited from the technical advice provided by Professor Craig Deegan and other consultants. They contributed immeasurably to our understanding of the issues. The Committee also wishes to acknowledge the comprehensive research support provided by Ms Joanne Saleeba. As always the production of the report is a team effort, and the Committee records its appreciation to the secretariat for their exemplary assistance. As usual, I record my personal thanks to Michele Cornwell and Frances Essaber.

I commend the report to Members.

Bill Forwood
Chairman

EXECUTIVE SUMMARY

Chapter 1: Introduction

Australia is faced with a number of environmental problems. Some of these problems, such as greenhouse gas emissions, ozone depletion and pollution of oceans, are shared with the international community. However, other problems such as biodiversity loss, salinity and deforestation are local problems. Victoria faces a challenge in dealing with these and other environmental issues.

Concern over environmental damage and degradation is mounting. To address this concern there has been widespread adoption of the concept of Ecologically Sustainable Development. A guiding principle of Ecologically Sustainable Development is that decision making should effectively integrate economic, environmental and social factors. The availability of environmental information is a prerequisite for its integration into decision making. Two aspects of establishing a strong information base are environmental accounting and environmental reporting.

Against this background the Committee resolved to conduct an inquiry into environmental accounting and reporting. As emphasised by many witnesses during the Inquiry, environmental accounting and reporting are relatively new concepts but growing in importance.

Chapter 2: Why is Environmental Accounting and Reporting on the Agenda?

Environmental accounting is essentially about the generation, analysis and preparation of useful information about the environment and the impact of human activities on the environment. The importance of environmental accounting is that it provides information that can be incorporated into decision making at a number of levels.

Environmental accounting can be in physical or monetary terms. At present environmental accounting is generally in physical terms due to the difficulties with valuing environmental information in

monetary terms. Environmental accounting can take place at a macro level (national/state/regional) or at an organisational level.

Environmental reporting is the public disclosure of information about the environment and aims to assist with decision making at a number of levels. A number of stakeholders, including government; industry; environment groups; investors; consumers; and the community, are increasingly demanding information on the condition of the environment and on the environmental impacts of public and private sector activity.

This Inquiry focuses on state of the environment (SoE) reporting which is the public disclosure of comprehensive information about the condition of the environment, aggregated to a regional, state or national level.

The Inquiry also focuses on environmental reporting by public and private sector organisations. Environmental reporting at the organisational level is the disclosure of information about an organisation's environmental activities and impacts on the environment, its performance in managing and minimising those impacts and its contribution to sustainable development.

Environmental reporting can have internal and external reporting components. Internal reporting within an organisation is primarily concerned with management information. External reporting is concerned with public disclosure.

Chapter 3: National Environmental Accounting

Australia's national accounts, such as Gross Domestic Product (GDP), provide measures of economic performance. Such national accounts tend to be considered as an indication of national progress and even to some extent quality of life. However, quality of life is affected by more than economics, for instance, the state of Victoria's environment impacts significantly on the quality of life of the community.

Therefore there is a demand for a measure of national progress which includes environmental as well as economic performance.

There are two methods for incorporating environmental considerations in national accounts. The Green GDP consolidates economic and environmental performance into a single figure. The

alternative approach, satellite accounts, provides a set of physical environmental accounts that exist as adjuncts to existing national accounts.

Due to a number of conceptual and practical difficulties with Green GDP, witnesses to the Inquiry supported the adoption of the satellite accounts approach.

There was broad support for the development of satellite accounts at the national level and the work of the Australian Bureau of Statistics (ABS) in developing physical accounts for water, fish, energy, forests and minerals and accounts on environmental protection expenditure. There were alternate views as to whether Victoria should develop its own satellite accounts.

Chapter 4: State of the Environment Reporting

State of the Environment (SoE) reporting was first proposed in the 1970s by the OECD, however, its popularity, overseas and within Australia, has increased substantially. The Commonwealth and all states and territories in Australia, except Victoria and the Northern Territory, are regularly producing SoE reports.

SoE reporting is essential to improving the information base on which natural resource management and environment protection decisions are made. SoE reporting provides a snap-shot of the condition of the environment which can be compared with later reports. This provides vital information to government and the community about whether the environment is improving or deteriorating.

While not producing an SoE report, the Department of Natural Resources and Environment and Environment Protection Authority generate a significant information on the environment and the condition of the environment. This information is supplemented by information collected by other government and non-government agencies, including Catchment Management Authorities, the Environment Conservation Council, the National Parks Association and community groups such as Landcare.

The Committee is concerned that the information is not presented in one consolidated document which is publicly available.

The advantage of adopting an SoE model is that it would help identify benchmarks, goals and data gaps which would enable comparison of current performance against benchmarks and goals. It would also assist with identifying new strategies to help address any negative trends.

There was widespread support for the resumption of SoE reporting in Victoria. Witnesses to the Inquiry were firmly of the opinion that the Victorian SoE model should be based on the Pressure-State-Response model which is used, in a modified form, by the Commonwealth and most other states and territories.

An SoE report will also engender improved communication within the government and the community on a broad spectrum of environmental issues. The report will act as a focus for developing a partnership between Environment Protection Authority, the Department of Natural Resources and Environment and the community in environmental monitoring and improve understanding of goals and values leading to Ecologically Sustainable Development.

To minimise costs and to make effective use of existing data, the Committee believes that SoE reporting in Victoria should be coordinated with the regional reporting required by Victorian Catchment Management Authorities.

Chapter 5: Environmental Accounting at the Organisational Level

To date environmental impacts have largely not been incorporated into accounting practice. Many witnesses emphasised that environmental accounting and the accounting profession have an important role in identifying environmental issues for incorporation into management and reporting systems.

One approach that can be used to identify environmental costs and impacts is Activity Based Costing (ABC). This system records costs by different activities. For example, components of maintenance costs such as clean up of spills or collection and separation of recyclable materials can be identified and measured.

The move towards identifying, quantifying and incorporating into decision making all environmental costs and benefits is gaining

momentum in several European countries and many international companies are now experimenting with full-cost accounting.

Professional accounting bodies are taking an interest in this emerging area. Some major companies in Victoria have been experimenting with methods for identifying and incorporating environmental costs into business management systems.

At present there are few general environmental reporting requirements and no accounting standards and few guidelines covering disclosure of environmental information for financial reports. There are also several limitations with the existing financial reporting framework.

Chapter 6: Environmental Performance Reporting

Over the last decade there has been an increased interest by stakeholders in companies reporting on their environmental performance.

There are various types of environmental performance reporting, from very specific reports to meet legislative requirements, to more comprehensive company environmental performance reports. The latter is often provided in a separate stand-alone environmental report or included within a company's annual report.

The increasingly popular stand-alone reports are being produced voluntarily by companies world wide. Numerous guidance documents have been developed to assist companies in preparing these environmental performance reports.

Witnesses to the Inquiry highlighted the need for standardisation of reports to allow for consistency and comparability. Two of the most recent guidance documents on environmental performance reporting, Discussion Paper Towards a Generally Accepted Framework for Environmental Reporting and the Global Reporting Initiative Sustainability Reporting Guidelines highlight the need.

Due to the plethora of guidelines available there were mixed views as to whether Victoria should develop its own environmental performance reporting standards.

Chapter 7: Public Sector Environmental Reporting

All government departments and agencies impact on the environment. They are therefore responsible for operating consistently with government policies aimed at protecting and enhancing the environment, including the National Strategy for Ecologically Sustainable Development, the National Greenhouse Strategies, the Victorian Industrial Waste Strategy and environmental policy and legislation at national and state levels.

There was an emphasis in submissions to the Inquiry that government departments and agencies should be leading by example in environmental reporting.

As in the private sector, public sector accounting standards do not specifically cover disclosures of environmental information in the financial statements. While some environmental information, such as environmental contingent liabilities, is included in financial statements, most is specifically excluded due to the narrow disclosure requirements of existing accounting standards.

Witnesses to the Inquiry supported greater environmental disclosures in the financial statements of public sector agencies.

Also there is limited and *ad hoc* environmental performance reporting by public sector agencies and departments. Again there was support for increased reporting in this area.

Chapter 8: Environmental Auditing and Verification

The law requires the financial statements of public companies and large proprietary companies to be audited by registered company auditors. Therefore, environmental issues that impact on the financial statements also need to be audited. Auditors are required to provide assurance that the picture given by the financial statements is accurate.

Laws in relation to the auditing of financial information are fairly well defined. However, there are no audit standards dealing with environmental information in financial statements. Various accounting and auditing bodies have taken initiatives to address auditing of environmental information in financial statements.

As the auditing of financial statements is well defined, the extension of financial auditing procedures to cover environmental information has been less controversial than the verification of environmental performance reports. A common criticism of many early environmental performance reports is that information provided did not represent an accurate picture.

Verification is seen as important for assuring both preparers and users of environmental reports that the reporting process is transparent and the information is credible. However, the lack of standards for the verification of these reports including the wording of verification statements and lack of regulation over who conducts the verification, has created considerable difficulties.

As a result, the extent to which verification adds to the credibility of an environmental performance report is questionable. Most witnesses supported the development of standards for the verification of environmental performance reports and encouraged some regulation over who conducts the verification.

Interim Report of the Inquiry into Environmental Accounting and Reporting

RECOMMENDATIONS

Chapter 3: National Environmental Accounting

The Committee recommends that:

Recommendation 3.1:

Page 32

The Victorian Government support the development of a national system of satellite accounts by the Australian Bureau of Statistics.

Recommendation 3.2:

page 34

The Victorian Government consult with the Australian Bureau of Statistics and other relevant stakeholders on the feasibility of developing satellite accounts for Victoria.

Recommendation 3.3:

Page 34

The government ensure that data collected for Victorian satellite accounts is comparable with data collected by the Australian Bureau of Statistics relating to other states.

Chapter 4: State of the Environment Reporting

The Committee recommends that:

Recommendation 4.1:

page 53

The government reintroduce State of the Environment reporting for Victoria on a statewide basis.

Recommendation 4.2:

page 54

Victoria's State of the Environment report should be based on the OECD pressure-state-response model. The Victorian SoE report should be similar to the SoE reports of the Commonwealth and other states and territories.

Recommendation 4.3:

page 56

The government develop core environmental indicators for State of the Environment reporting which are based on the Victorian Catchment Indicators Project and consistent with the Core Environmental Indicators developed by ANZECC and the core indicators included in the Commonwealth State of the Environment report.

Recommendation 4.4:

Page 56

A data verification process should be built into the State of the Environment process.

Recommendation 4.5:

page 57

A State of the Environment report for Victoria be produced on a regular cycle of five years.

Recommendation 4.6:

page 58

The State of the Environment report should be primarily provided through an Internet site and a concise report printed and tabled in the Parliament.

Recommendation 4.7:

page 59 **To maximise the efficiency of resources the State of the Environment report should be based, as far as possible, on existing information and any additional data collection processes should be integrated, as far as possible, with existing environmental investigations.**

Recommendation 4.8:
page 62 **To ensure efficient and effective environmental reporting, Catchment Management Authorities' reporting should be consistent with the Victorian State of the Environment reporting.**

Recommendation 4.9:
page 63 **Whilst State of the Environment reporting should be encouraged at the local council level, it should not be mandatory; resources should be focused on SoE reporting at the state level and on the collection of necessary data.**

Chapter 5: Environmental Accounting at the Organisational Level

The Committee recommends that:

Recommendation 5.1:
page 75 **The government encourage the accounting profession to develop, as a future project, methodologies to incorporate environmental costs into the prices of goods and services.**

Recommendation 5.2:
page 75 **The government provide funding to develop an Internet site containing information on environmental management accounting.**

Recommendation 5.3:

page 85

The government encourage the professional accounting bodies and the accounting standards setting board and other relevant stakeholders to consider a revised concept of materiality and revised definitions of assets, liabilities, revenues and expenses appropriate for environmental accounting.

Recommendation 5.4:

page 85

The government encourage the professional accounting bodies and the accounting standards setting board and other stakeholders to develop a new accounting standard that specifically deals with environmental issues.

Recommendation 5.5:

page 86

The government consider sponsoring a series of workshops on environmental accounting and reporting specifically targeted at the needs of different industries and stakeholder groups.

Chapter 6: Environmental Performance Reporting

The Committee recommends that:

Recommendation 6.1:

page 93

The Environment Protection Authority ensure consistency in reporting requirements under EPA licenses, EPA accredited licences and the Prescribed Waste Regulations.

Recommendation 6.2:

page 94 **The Environment Protection Authority liaise with the National Environment Protection Council to ensure consistency between EPA reporting requirements and National Pollutant Inventory requirements.**

Recommendation 6.3:
page 94 **The Environment Protection Authority liaise with the Australian Securities and Investments Commission and other relevant stakeholders to ensure consistency between EPA reporting requirements and requirements under the Corporations Law.**

Recommendation 6.4:
page 104 **The government support the development by Environment Australia of National Guidelines for Public Environmental Reporting.**

Recommendation 6.5:
page 106 **The government encourage voluntary environmental reporting by publicly listed companies and the public sector (not already subject to mandatory reporting requirements) with the intention of mandating, within 10 years, disclosure of environmental information through the Environment Protection Act and require more detailed reporting under the Corporations Law.**

Recommendation 6.6:
page 108 **The government give consideration to financially supporting and promoting environmental reporting awards.**

Recommendation 6.7:

page 108

The Victorian Government support the Federal Government incentives to industry groups to assist their members to implement the National Public Environmental Reporting Guidelines.

Recommendation 6.8:

page 118

Within the next 10 years all Victorian businesses, over a certain size (to be determined in consultation with the business community) be required to adopt an environment management system (based on ISO 14001, or EMAS, or an industry best practice model) to a certifiable standard.

Chapter 7: Public Sector Environmental Reporting

The Committee recommends that:

Recommendation 7.1:

page 125

The government encourage the accounting profession and the accounting standards setting board and other stakeholders to develop a new accounting standard for public sector reporting on environmental issues.

Recommendation 7.2:

page 132

The government establish a core set of environmental performance measures applicable to all departments and agencies eg. energy and vehicle usage, including those under the National Greenhouse Strategy (Measure 3.1).

Recommendation 7.3:

page 132

Each government department and agency should identify environmental performance measures specific to their department or agency.

Recommendation 7.4:

page 132

The government require all Victorian departments and agencies to implement an environment improvement plan which includes the core environmental performance measures and any specific measures identified and include targets for each environmental performance measure.

Recommendation 7.5:

page 133

The government develop an integrated environmental and financial reporting framework for the public sector, which will:

- **use physical indicators to convey useful information to decision makers; and**
- **present a balanced perspective of the Victorian Government's environmental performance.**

Recommendation 7.6:

page 133

The government publicly report annually on environmental performance across the whole of government.

Chapter 8: Environmental Auditing and Verification

The Committee recommends that:

Recommendation 8.1:

page 148

The government establish a taskforce, with representatives from the professional accounting bodies and the accounting and auditing standard setting boards and relevant stakeholders, to develop basic standards for verification of environmental performance reports for publicly listed companies.

Recommendation 8.2:

page 148 **To ensure a degree of consistency in future environmental reporting, auditors be required to audit and accredit industry best practice reporting models.**

Recommendation 8.3:
page 151 **The government should encourage the certification of verifiers of environmental performance reports through the Quality Society of Australasia.**

Recommendation 8.4:
Page 152 **The government pursue the development of standards for auditors of environmental information in public sector annual reports and public sector environmental performance reports.**

CHAPTER 1 ENVIRONMENTAL PROBLEMS AND THEIR IMPLICATIONS IN VICTORIA

1.1 Environmental problems and their implications for Victoria

Australia shares a number of global environmental problems including ozone depletion and pollution of oceans and the atmosphere. Increasing worldwide emissions of greenhouse gases are resulting in global warming and climate change and Australia's emissions (per capita) are among the highest in the world.

Australia also faces a number of local environmental issues. Australia: The State of the Environment highlights the deterioration of inland water quality, salinity and deforestation as some of Australia's most pressing environmental problems. The loss of biodiversity is another serious environmental issue. The destruction of habitat, including wetlands, bushlands, inland creeks and estuaries, is a major contributor to biodiversity loss and continues at an alarming rate⁷.

Pressure from changes in the use of land has resulted in an increase in salinity, soil erosion, nutrient decline, changes in soil pH balance and a general decrease in productivity of crops and pastures.⁸ Other pressures such as vegetation clearance, the subsequent fragmentation of remaining vegetation and the introduction of pest plants and animals have resulted in significant challenges to native vegetation and wildlife.⁹ A number of animal species in Victoria are declining or under threat.

Problems on the land are linked to the deterioration of Victorian waterways. Streams and wetlands reflect the impact of increased run-off of salts, nutrients and suspended soil and water regulation

⁷ Commonwealth of Australia. *Australia: State of the Environment 1996*. CSIRO Publishing Canberra, p. ES-8

⁸ Department of Natural Resources and Environment, Victorian Catchment and Land Protection Council and Environment Protection Authority. 1997. *Know Your Catchment: An Assessment of Catchment Condition Using Interim Indicators*. DNRE. p. 24

⁹ Department of Natural Resources and Environment, Victorian Catchment and Land Protection Council and Environment Protection Authority. 1997. *Know Your Catchment: An Assessment of Catchment Condition Using Interim Indicators*. DNRE. p. 82

and diversion.¹⁰ Along the coast, the marine environment has to contend with discharges such as sewerage outfall, dredging, ballast water and hull clearing.

Victoria also faces environmental pressures within urban areas, particularly in Melbourne. Stormwater, sewage and waste disposal are persistent problems. Transport systems are placing significant stress on the environment, causing noise and air pollution.

Despite the many improvements in environmental protection through concerted efforts by government, industry and the community, Victoria faces a challenge in dealing with environmental issues.

The Committee is aware that concern for the environment is increasing both internationally and in Australia¹¹, though the concerns differ between geographical regions. For example, air quality is a major concern for Melburnians.¹²

Most Australians feel that the quality of the environment has declined over the past ten years and expect the environment to become the most important issue in the next decade.¹³

1.2 Victorian Government commitment to sustainable development

Successive Victorian Governments have responded in a variety of ways to the environmental issues and concerns of the community. Since the publication of *Our Common Future*, the 1987 report of the United Nations World Commission on Environment and Development (the 'Brundtland Report'), sustainable development has become a central issue for national, state and local governments.

Sustainable development is defined in the Brundtland Report as:

¹⁰ Department of Natural Resources and Environment, Victorian Catchment and Land Protection Council and Environment Protection Authority. 1997. *Know Your Catchment: An Assessment of Catchment Condition Using Interim Indicators*. DNRE. p. 52

¹¹ Australian Bureau of Statistics. *Environmental Issues: People's Views and Practices*. March 1998. 4602.0, p. 5

¹² Environment Protection Authority 1998. *Annual Report 1997/98*. p. 18

¹³ Australian Bureau of Statistics. *Environmental Issues: People's Views and Practices*. March 1998. 4602.0, p. 3

development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The Victorian Government and all states, territories and the Commonwealth have endorsed the National Strategy for Ecologically Sustainable Development. A guiding principle of the strategy is:

*the need for decision making processes to effectively integrate long term and short term economic, environmental and social considerations.*¹⁴

This Inquiry has highlighted that information is a prerequisite for integrating environmental considerations into decision making. Only when environmental information is available can it be considered alongside economic or financial information in decision making.

The first step to sustainable development must be the establishment of a strong information base. Two aspects of this base are environmental accounting and environmental reporting.¹⁵ These two matters are the subject of this Inquiry.

1.3 The Inquiry

As the private and public sectors strive to become more competitive, the government and managers are being asked to provide financial and strategic information that is more relevant and comprehensive. These changes require the application of principles and practices to areas that were not previously considered to be the preserve of the accounting profession. Environmental accounting and reporting are examples of this trend and have both business and public policy dimensions.

Business is attempting to cope with increasing demands from government and the community for accountability in relation to the environment. The cost of environmental impact studies, new business practices related to the environment and rehabilitation of the environment when business activity has ceased, need to be

¹⁴ Productivity Commission. *Implementing Ecologically Sustainable Development by Commonwealth Departments and Agencies, Draft Report*. 1999. p.xvii

¹⁵ Sydney Morning Herald. *Efforts so far just a drop in the rust bucket*. 3 February 1999. p.11

understood and factored into business decisions. Business increasingly has to demonstrate that it cares for the environment.

The government is also facing challenges from business and the community. Business needs to be convinced of the benefits of protecting the environment. The community wants to be assured that the government is acting in the best interests of the environment and the community, when making decisions about development and access to natural resources.

It is against this background that the Committee resolved to conduct an Inquiry into environmental accounting and reporting.

The Terms of Reference for the Inquiry required the Committee to:

- (1) review and seek advice on international and national developments in environmental accounting and reporting;
- (2) consider the current application of these developments for both private and public organisations in Australia and overseas;
- (3) investigate the implications of these developments for Victorian public sector accounting and reporting; and
- (4) review the extent to which public and private sector organisations in Victoria and in Australia should be required to disclose information about the negative impacts of their activities on the environment and the positive outcomes of their efforts to protect the environment, control pollution and remediate environmental damage.

In addressing the terms of reference the Inquiry aims to:

- enhance the importance of environmental accounting and reporting;
- encourage the use of environmental accounting and reporting as policy objectives;
- establish an ongoing relationship between government and stakeholders to actively implement

and promote environmental accounting and reporting in Victoria; and

- promote general awareness of environmental accounting and reporting.

1.4 Process followed by the Committee

In March 1998, the Committee released an issues paper which canvassed the major issues contained in the terms of reference. Comments were sought on a number of matters including the following:

- is there a case for developing measures of the standard of living of Victorians which incorporate references to those aspects of the quality of life in Victoria which are attributable to the state of the natural environment?
- is there any merit in the development of composite measures to provide a single indicator of environmental quality?
- is there a case for continuing periodic assessments of the state of the environment in Victoria - independently of any further Commonwealth initiatives?
- what role can Victoria play in encouraging the development of area-specific or other indicators, in order to assist local councils or other agencies develop consistent policies in reporting on the state of the environment?
- what process should be followed to produce State of Environment reports to ensure that the material produced is comprehensive and that the data have integrity?
- under what circumstances would it be appropriate for government agencies to report on items of financial expenditure which could reduce pollution or other environmental impacts, or remediate environmental damage?
- is there a case for intervention to ensure that government departments and agencies include

within any performance information presented in annual reports some performance indicators relating to the impact of major programs on the environment (where applicable)?

- are there grounds to require auditors of Victorian public sector agencies to report to Parliament on breaches of environmental laws, evidence of which has been encountered in the course of an audit? and
- should uniform standards be developed for corporate environmental reporting? If so, should they be backed by legislation? If voluntary, should there be issued best practice guidelines or an Australian standard? Should standards be generic or industry specific? Who should develop reporting standards – government, industry or stakeholders?

The issues paper was widely distributed and advertisements inviting submissions were placed in national and metropolitan newspapers.

Forty-two written submissions were received. A list of submissions appears at Appendix 1 of this report. Among these was a whole of government submission prepared by the Department of Premier and Cabinet on behalf of all Victorian Government agencies, which was received on 23 December 1998. In addition, submissions were received from federal agencies, professional bodies, academics and members of the community.

The Committee also took evidence at a number of public hearings and private briefings held in 1998 and 1999. A list of the hearings and the witnesses appears at Appendix 2.

The following Sub-Committee was appointed to conduct this Inquiry:

Mr K A Wells, MP (Chairman of this Inquiry)
Hon. R A Best, MLC
Hon. W Forwood, MLC (Chairman of the Public Accounts
and Estimates Committee)
Mr P J Loney, MP¹⁶
Hon. N B Lucas, PSM, MLC
Mr B. Mildenhall¹⁷
Hon. A Sheehan, MP¹⁸
Hon. T C Theophanous, MLC

As environmental accounting and reporting has been practiced in Europe and the UK for some time, the Committee resolved that a Sub-Committee (consisting of Messrs Wells, Best, Lucas and Theophanous) should take evidence from key officials in the five countries¹⁹ which are considered to be at the leading edge of developments in this area.

This provided a valuable insight and a solid foundation of information which considerably enhanced the Committee's understanding of the many technical and complex issues to be addressed during the Inquiry.

A copy of the report on the Committee's overseas meetings can be obtained from the Public Accounts and Estimates Committee secretariat. A list of witnesses who gave evidence at meetings overseas appears at Appendix 3.

As part of the framework for environmental accounting and reporting, a number of European countries have introduced a range of measures aimed at promoting:

- (a) environmentally sound consumer behaviour;
- (b) environmentally efficient use of resources by companies and producers;
- (c) community awareness about impacts of economic activity on the environment; and

¹⁶ Appointed 3 September 1998 in place of Hon A Sheehan

¹⁷ Appointed 18 May 1999 to the Sub-Committee on Environmental Accounting and Reporting

¹⁸ Resigned from Parliament 8 July 1998

¹⁹ UK, Germany, Denmark, The Netherlands and Scotland

- (d) shared responsibility through partnerships between government, industry and the community and greater use of market instruments such as eco-taxes.

In addition, the Sub-Committee met with a number of government and business officials and academics in New Zealand in February 1999. Appendix 4 contains details of the meetings.

In researching and preparing the issues paper it became apparent that there were significant issues that were not going to be easily resolved as environmental accounting is still evolving and environmental reporting is still relatively new to Australia.

The Committee has therefore resolved to produce an interim report which outlines our preliminary findings. The Committee will be seeking feedback on the suggestions and recommendations contained in this report and intends in the next Parliament to report in greater detail on a systematic accounting and reporting system for making sustainability work.

CHAPTER 2 WHY IS ENVIRONMENTAL ACCOUNTING AND REPORTING ON THE AGENDA?

2.1 Definitions

2.1.1 Environmental Accounting

Environmental accounting is the process of bringing information about the environment, and the impact of human activities on it, to account in such a way as to provide information that can be incorporated into decision making at a number of levels.

Environmental accounting can be in physical or monetary terms. At present environmental accounting is generally in physical terms, due to difficulties with valuing environmental information in monetary terms.

Environmental accounting can take place at a macro level (national/state/regional) or at a micro organisational level. At the macro level, environmental accounting is primarily concerned with information about the environment in aggregate. At the micro level, environmental accounting tends to focus on information on specific environmental activities, and the impact of public and private sector organisations on the environment.

Environmental accounting covers all areas of accounting that may be affected by the business response to environmental issues²⁰.

Examples include:

- accounting for liabilities, provisions and contingencies;
- costing in key areas such as energy, waste and environmental protection;
- development of new accounting and information systems; and
- assessment of environmental costs and benefits.

²⁰ R. Gray, J. Bebbington & D. Walters. *Accounting for the Environment*, Chartered Association of Certified Accountants and Paul Chapman Publishing London, 1993, p. 6

From this explanation, environmental accounting may seem straightforward and something that most people would support. Yet submissions indicated that there is no clear understanding of exactly what environmental accounting is, how it can be undertaken and who should implement it. Early attempts at environmental accounting have raised as many questions as they have answered.

Some of the difficulties with environmental accounting are due to the following:

- the definition of the environment - there is a great deal of debate about what is included in the term “environment”;
- accounting has not traditionally covered most areas that would be considered to be part of the environment. There is debate about whether accounting practices and standards can or should be extended to cover the environment, or whether measurement is best left to scientists or geographers;
- accountants are not experienced in accounting for the environment and are not sure what it entails; and
- environmental accounting involves using non-financial measures and values in addition to financial measures and values.

Given these difficulties, the question arises, “Why are so many people worldwide continue to persevere with environmental accounting?”. The answer is that unless decision makers can identify and measure environmental attributes, they cannot know if decisions and actions are improving the environment or degrading it.

2.1.2 Environmental Reporting

Environmental reporting can be defined as the public disclosure of information about the environment. It aims to assist with decision making at a number of levels. Specific environmental information

reported can depend on a number of factors, in particular, what information is required by decision makers.

This Inquiry focuses on two types of environmental reporting:

- State of the Environment Reporting, which is the public disclosure of comprehensive information about the environment, aggregated to a national, state or regional level; and
- Public and Private Sector Environmental Reporting, which is the disclosure of information about an organisation's environmental activities and impacts on the environment, its performance in managing and minimising those impacts and its contribution to sustainable development.²¹

An organisations' environmental reporting can have both internal and external reporting components. Internal reporting within an organisation is primarily concerned with management information. External reporting is concerned with public disclosure.

2.2 Why undertake Environmental Accounting and Reporting?

A number of stakeholders including government; industries; companies; environmental groups and individuals are increasingly demanding information on the state of the environment and on the environmental impacts of public and private sector activity in order to assist in decision making. The way environmental accounting and reporting can assist in decision making is evidenced below.

2.2.1 Why do it at the Macro Level?

A number of activities are currently being conducted by government, non-government organisations and conservation and community groups, which fall under the broad heading of environmental accounting and reporting.

²¹ Adapted from NSW Environment Protection Authority, *Corporate Environmental Reporting – Why and How* 1997, p.1. Environmental Task Force of the European Federation of Accountants (FEE), *Discussion Paper Towards a Generally Accepted Framework for Environmental Reporting*. FEE. January 1999

In particular, national environmental accounting and state of the environment reporting at the macro level have gained momentum throughout this decade. Both these initiatives are viewed by many as essential to providing the type of information that will enable sound environmental policy development and accountability within government and sound decision making within the private sector.

According to the Victorian Government submission:

*the key purpose of these activities is to provide information about the Victorian environment which will help guide the decision making of government, industry and the community.*²²

Australia: State of the Environment 1996, identifies that:

*State of the Environment reporting is an important step in the essential process of refining the knowledge base on which decisions about the environment are made.*²³

Government needs information about the environment to guide decision making in a number of areas including environmental and resource management. For example, it needs to make funding allocations to various programs for environmental improvement. This was highlighted in evidence given by the Department of Natural Resources and Environment (DNRE):

*strategic planning, the information that we gain about land, water and vegetation management and environmental variables is important in determining improved ways of tackling some of the problems we face in environmental degradation. So we are identifying and analysing that data to develop new approaches, assess management options and identify future directions.*²⁴

The government also needs to assess the effectiveness of such programs. According to DNRE, information is required to:

²² Submission by Department of Premier and Cabinet dated 23 December 1998, p. 1

²³ Commonwealth of Australia. *Australia: State of the Environment 1996*. CSIRO Publishing Australia, p. ES-5

²⁴ Transcript of evidence. Mr Sutherland, DNRE. 11 March 1999

*evaluate the effectiveness and efficiency of programs, whether they be related to management of national parks, state forests, fire suppression programs, minerals and petroleum, primary industries or catchment management.*²⁵

In addition, in order to determine whether particular outcomes are being achieved, the government needs to be able to measure the condition of the environment.

Government also needs environmental information for policy and regulatory development.

There are also political reasons why a commitment to macro level environmental accounting and reporting is important. Australia has a commitment through the National Strategy for Ecological Sustainable Development, the Intergovernmental Agreement on the Environment, Agenda 21 and Local Agenda 21.

Different sectors of industry need different information on the environment to assist with decision making. For example, farmers need specific information about salinity to sustainably manage their properties. Fish farmers and the aquaculture industry need information about water quality so that they can appropriately manage their productive stocks.

Industry may also want environmental information at the macro level to lobby government for more funding in problem areas such as nutrient management.

The environment is a prime concern to a large proportion of the community who need to know, and have a right to know, whether the environment is improving or deteriorating and which aspects are improving or deteriorating. To determine this, the community needs to know about the state of the environment at a point in time and, probably more importantly, the changes in condition over time.

The community may need state of the environment information to make a variety of decisions. Environmental information may assist the community to take action to protect the environment or a particular aspect of the environment. Alternatively, the

²⁵ Ibid

community may need the information to make decisions relating to health and quality of life. For example, parents want to know that they are bringing their children up in an unpolluted environment where they can breathe the air and swim in the water.

2.2.2 Why undertake Environmental Accounting and Reporting at the Organisational Level?

While environmental accounting and reporting by organisations is still emerging, there is increasing evidence that the information is valuable and is being used by internal and external stakeholders.

For example, a 1995 survey²⁶ of representatives of six stakeholder groups – shareholders, stockbrokers and research analysts, accounting academics, financial institutions, and organisations performing a general review or oversight function²⁷ – found that the majority of respondents consider environmental information to be material to their various decisions and that they seek the disclosure of environmental information.

Business managers need environmental information to assist with decision making on resource use, production processes, investment and other areas. Professor Mathews of Massey University, New Zealand advised the Committee that the lack of environmental cost information results in:

*mythical income figures which in turn affect further investment decisions.*²⁸

Environmental accounting and reporting provides companies with environmental information that they can integrate in business management systems and decision making processes. Companies are then in a better position to improve their resource efficiency and reduce the costs of energy use and waste disposal.

The Department of Environment sees environmental accounting and reporting as a tool for use by industry and

²⁶ Craig Deegan and Michaela Rankin, *The materiality of environmental information to users of annual reports*. Accounting, Auditing & Accountability Journal. Vol 10, No 4, 1997

²⁷ Including the Australian Council of Trade Unions, environmental lobby groups, industry associations and consumer organisations

²⁸ Submission by Professor Mathews, Department of Accounting and Business Law, Massey University dated 15 February 1999

*business, which will assist them to become eco-efficient, ie, doing more with less.*²⁹

According to Mr Bjorn Stigson, President of the World Business Council for Sustainable Development:

*companies that are more eco-efficient will gain more market share from those that aren't.*³⁰

The Committee was informed that environmental reporting assists companies to improve environmental management and performance by providing a rigorous and comprehensive review of the adequacy and appropriateness of environmental management systems and data.

Further, disclosure of environmental information may improve a company's relationships with regulators and the community. Given better relationships, companies can establish a 'licence to operate' and achieve community acceptance of development projects. Disclosure of environmental information also enables the company to market itself as environmentally responsible, which has benefits in terms of corporate image and marketing. Where firms compete in markets that are price competitive and where there is little product differentiation, environmental responsibility may become an important marketing tool.

Consumers need information to make purchasing decisions. Increasingly consumers are demanding goods and services that are produced in an environmentally responsible manner and that have minimal environmental impacts, both during the life of the product and at the end of its useful life. To access these consumers, companies need to demonstrate their environmental credentials to the market.

Entire markets may demand environmentally friendly goods and services. For example, European and some Asian countries are considering requiring producers and products to be environmentally sound. The European Union is currently working on a directive in this area.

²⁹ Transcript of evidence. Ms Smith, Department of Environment and Heritage. 25 November 1998

³⁰ The Australian. 1999. *Concern for the bottom line makes it easier being green*. March 23. p. 32. Eco-efficiency is a term coined by the World Business Council for Sustainable Development and essentially means doing more with less (ie. less resources and less waste)

The Department of Natural Resources and Environment advised the Committee that being environmentally responsible will become an important part of companies obtaining market access. A number of land holders, producers and companies are already involved in environmental reporting:

*so they can present their products to the marketplace based on sustainable practices and maximising their ability to capitalise on the clean, green image of their produce.*³¹

Individuals and community groups require information on environmental activities and impacts within their locality. Increasingly companies are required to demonstrate their commitment to good environmental performance. They need to obtain a 'licence to operate'³² from their local communities.

Environmental information assists non-government organisations (NGOs) in making decisions in respect of action to protect communities and the environment. NGOs often operate as a watchdog over industry in order to protect the community and the environment. For example, the World Wide Fund for Nature (WWF) is using the environmental reports of mining companies in a benchmarking exercise to measure the extent to which they are meeting their environmental reporting obligations as signatories to the Australian Minerals Industry Code for Environmental Management.

*WWF's Scorecard reveals, through analysis of the environmental reports, that a number of the Code's principles appear not to have been adequately addressed.*³³

Sustainable development and the environment is an emerging area for the banking and insurance sector. Increasingly bankers and insurers are demanding information on the environmental activities and environmental impacts of organisations to assist them to make financing and insurance decisions.

³¹ Transcript of evidence. Mr Sutherland, DNRE. 11 March 1999

³² 'License to operate' essentially means that businesses are implicitly sanctioned by the community, including suppliers of raw materials and capital, to operate. To continue to receive this sanction by the community business need to demonstrate that they are adding value to society, including acting in an environmentally responsible manner

³³ WWF 1999. *Mining Environmental Reports Scorecard: Ore or Overburden*. May 1999

These sectors need to be able to adequately assess the environmental risk of a company in order to make appropriate decisions. Companies that provide evidence of acceptable environmental performance are likely to obtain easier access to finance and insurance, possibly at a discounted rate.³⁴

Environmental information is also important for investment decision making. Investors are becoming increasingly concerned with corporate environmental performance,³⁵ with many individual and institutional investors choosing to invest in environmentally responsible companies.

There is growing evidence which suggests that financial performance is positively related to environmental performance.³⁶ Good environmental performance can indicate to capital markets that a company is well managed and has adequately addressed environmental risks. According to one academic:

*adopting a more environmentally proactive posture has a significant and favourable impact on the firm's perceived risk to investors and accordingly, its cost of equity capital and value in the marketplace.*³⁷

Investment analysts are increasingly taking environmental issues into account when they make investment decisions. Mr Temby, J.B Were and Sons, stated that:

*it [environmental performance] is an important issue that analysts must look at and that environmental risk is one of the factors we take into account, along with other risk factors.*³⁸

The importance of environmental reporting was highlighted in various submissions:

when a company signals to the marketplace the changes it is putting into place, stock analysts are much more likely to

³⁴ UNEP Financial Institutions Initiative. Proceedings from the Fifth Round-Table on Finance and the Environment. September 1997

³⁵ M. Rankin. *Corporate Reporting – The Green Gap*. Institute of Chartered Accountants.

³⁶ Submission by Chris Fayers, Monash University Working Paper Number 39: *Corporate Environmental Reporting, Investment Decisions, and ESD in Australia: A Discussion*, November 1997

³⁷ P. Fries. 1999. Value of good environmental practices. *The Australian Financial Review*. 23 April 1999, p. 16

³⁸ Mr C Temby, Resource Analyst, J B Were & Sons, transcript of evidence, 11 March 1999, p. 90

*notice and use the information in their analysis of company financial performance.*³⁹

This was reinforced by Mr Fayers who informed the Committee:

*firms that communicate relevant and comprehensive information about their environmental management programs and performance are generally perceived by investors as not only having lower risk compared to similar firms that provide no information in this area, but also are more morally and ethically appealing.*⁴⁰

Corporate environmental performance information can allow environmentally conscious investors to make informed choices. A 1996 UK survey found that ninety-five per cent of people want their investment to benefit companies that are helping rather than harming the world⁴¹.

The rapid growth in environmental and ethical investment funds is an indication of the growing concern of investors about the environment and the need for companies to demonstrate good environmental performance. The UK survey noted above found that ethical funds are probably the fastest growing sector in the UK investment market⁴². Ethical investment funds are also growing rapidly throughout Europe and the US.

Another indication of investors taking environmental responsibility seriously is the direct action of shareholders in relation to environmental performance of companies. Investment Company Morgan Stanley was the target of a shareholder protest at its annual general meeting in the United States in April 1999. Shareholders protested over efforts by Morgan Stanley's Chinese joint venture to finance the damming of the Yangtze River (Three Gorges Dam) which environmentalists have criticised for its impacts on the Yangtze's ecosystem⁴³. A number of Australian

³⁹ P. Fries. 1999. Value of good environmental practices. *The Australian Financial Review*. 23 April 1999. p. 16

⁴⁰ Submission by Mr Fayers, Centre for Environmental Management, Monash University p. 8.

⁴¹ Financial Times Magazine May 1996 quoted in submission by Mr Fayers, Centre for Environmental Management, Monash University p. 7

⁴² Ibid, p. 7

⁴³ Australian Financial Review. *China calls in foreigners for Yangtze dam*. 22 April 1999. p. 17

listed companies including Boral, Amcor and BHP have also been the target of shareholder protests over environmental issues⁴⁴.

Companies which provide information on their environmental impacts and environmental performance will increasingly gain easier access to capital markets. The above evidence indicates that investors do value environmental information and use it in their investment decision making.

A number of organisations and individuals require environmental information. According to Dr Robinson, Chairman, EPA, Victoria:

*the information contained in environment reports has value to all sectors of the community. It provides accountability and transparency relating to environmental activities. The public, financial institutions and shareholders would be the key audience for the information. Their reaction is capable of changing the environmental activities of companies and agencies.*⁴⁵

⁴⁴ P. Fries. Green Power Plays. *The Australian Financial Review*. 23 April 1999. p. 16

⁴⁵ Submission by Dr Brian Robinson Chairman, Environmental Protection Authority. 13 May 1999

Interim Report of the Inquiry into Environmental Accounting and Reporting

CHAPTER 3 NATIONAL ENVIRONMENTAL ACCOUNTING

3.1 Introduction

The financial pages of the daily newspapers are full of measures of economic activity, such as Gross Domestic Product (GDP), consumer price index, balance of payments, which tell the community whether Australia's performance as a nation is improving or declining. Measures such as GDP are derived from the system of national accounts.

The community tends to focus on these measures of economic activity as an indication of national progress and even to some extent 'quality of life'. One submission highlighted that:

*GDP seems to be mistakenly used as a measure of standard of living by many.*⁴⁶

However, it is obvious that 'quality of life' is affected by more than economic activity. The state of Victoria's environment and community issues impact significantly on our quality of life. Therefore, concerns are being raised that the focus on economic activity as the measure of national progress or quality of life is inadequate and inaccurate.

As identified over a decade ago:

*A country could exhaust its mineral resources, cut down its forests, erode its soils, pollute its aquifers, and hunt its wildlife and fisheries into extinction, but measured income would rise steadily as these assets disappear.*⁴⁷

In addition, the principle of sustainable development, which recognises that the environment and the economy are intrinsically

⁴⁶ Submission by Mr Martin. 30 June 1998

⁴⁷ Repetto, R 1986 *Natural Resource Accounting for Countries with Natural Resource-Based Economies* Ministry for Planning and Environment, Melbourne. Note that this statement was proffered in the context of a discussion of the GDP

linked, implies that it is impossible to consider economic progress without considering environmental impacts.

Therefore, Australia's national accounting system, which at present provides only economic measures such as GDP, needs to incorporate environmental information. The identification and incorporation of environmental information into national accounts is known as national environmental accounting.

While still an emerging concept, national environmental accounting is important as it will provide a more accurate measure of quality of life, and enable improved decision making at a number of levels.

According to Mr Taber:

*Without more accurate measures of the state of the Australian environment, including our resource and energy use and our pollutant and waste generation, we are unable to have informed public debate, nor make sound policy decisions which integrate ecological sustainability into economic decision-making. Up-to-date environmental accounts will enable us to measure progress towards ecological sustainability.*⁴⁸

This view was reinforced by Professor Mathews, Massey University:

*before environmental matters can consistently figure in decision making and reporting, data must be captured by the accounting system.*⁴⁹

As outlined to the Committee, the national accounting system needs to be modified to incorporate environmental information to:

- provide a more adequate and accurate measure of quality of life;
- enable a more accurate determination of national economic value (as considered in sustainable development);

⁴⁸ Submission to the Inquiry, dated 29 June 1998, A. Taber, Research Officer at RMIT University Centre for Design

⁴⁹ Professor M R Matthews, Department Accounting and Business Law, Massey University, Submission to the Inquiry, dated 15 February 1999

- assist with decision-making; and
- ensure that government is accountable for achieving commitments to environmental improvement.

The Committee was advised that there are two major approaches for the implementation of a national environmental accounting system:

- Green National Accounting or a Green GDP; and
- modified System of National Accounts (SNA) by the provision of complementary reports (Satellite Accounts).

The essential question which needs to be answered is: “How can environmental information, such as changes in natural capital, be best reflected in the current system of national accounts?”

3.2 A Green GDP

Green GDP includes environmental information in monetary terms in the traditional GDP. Supporters of this approach suggest that an environmentally-adjusted GDP is the best approach because economic indicators must be as accurate as possible.

However, a number of concerns have been raised about a Green GDP including:

- modifying GDP for environmental pollution and degradation may disturb the System of National Accounts coherence and usefulness for analysing the monetary economy⁵⁰;
- the methodology of a Green GDP has not been developed;
- the Green GDP is a composite measure and as such could hide environmental aspects within economic aggregates;
- the Green GDP does not include societal aspects which impact on quality of life; and

⁵⁰ While the GDP has been criticised as failing to recognise the role of environmental health on economic growth, it is largely accepted that it is successful in fulfilling its role as a measure of the level of market-based economic activity (Trewin D 1998 *Development of Sustainability Indicators in Australia. Proceedings of the Joint IASS/IAOS Conference* p2)

- a methodology for assigning a monetary value to environmental assets or environmental damage or degradation has not yet been developed⁵¹.

The Committee was advised that the most widely debated issue is that of valuing environmental aspects in financial terms. Some environmental costs and benefits have monetary values which can be relatively easily estimated (based on market prices) such as water usage, loss of productive land, reduction in fish stocks and water treatment. Where this is the case these monetary values may be incorporated into national accounts quite simply.

However, most environmental costs and benefits are not so easily estimated. There are a number of so-called environmental valuation methods which have been developed to estimate the value of environmental costs and benefits. For example, UNSTAT SESA guidelines suggest measuring the cost of repairing environmental damage (an approach similar to the Deprival Valuation Method which is based on the legal notion of compensation for loss⁵²). Numerous other techniques exist for valuing natural resources in monetary terms, including:

- Replacement Cost Method - only applicable to tradeable assets;
- Hedonic Pricing Method - limited to valuations of environmental attributes (such as noise and air pollution) that are likely to be incorporated into the price of housing or land;
- Travel Cost Method - applicable only to evaluating recreational sites; and
- Contingent Valuation Method - limited by the hypothetical nature of the results.

Many attempts have been made to use these environmental valuation techniques to estimate the monetary value of environmental attributes. For example, in 1997, Robert Costanza from Maryland University, estimated a value of the world's

⁵¹ Commission of European Communities, June 1996 *Environmental Indicators and Green Accounting* p4

⁵² Coleman M 1996. *Valuation of Public Sector Assets - Where are we at? The Valuer and Land Economist* pp 236-243

natural resources and the services of the biosphere such as clean air, waste assimilation and cultural values at more than \$US33 trillion compared to a global gross national product of \$US18 trillion.⁵³

However, it is widely recognised that it is difficult to measure the monetary value of environmental assets⁵⁴. A number of submissions to the Inquiry agreed that there is considerable difficulty and uncertainty with current methodologies for valuing natural resources in Australia and around the world.

The difficulty of attaching a monetary valuation to environmental assets was highlighted in the following media article:

*Some assets, such as timber, may have a market value, but that value does not encompass the trees' role in harbouring rare beetles, say, or their sheer beauty. Methods for valuing such benefits are controversial. To get round these problems, the UN guidelines suggest measuring the cost of repairing environmental damage. But some kinds of damage, such as extinction, are beyond costing, and others are hard to estimate.*⁵⁵

A number of submissions highlighted that the very notion of financial valuation is not necessarily useful or relevant for many environmental costs and benefits. The community may be relatively indifferent to a financial representation of the natural environment but they would understand very well quantitative data on more tangible matters such as changes in the area of old growth forest, loss of agricultural land to salination, volume of emissions to the atmosphere and discharges to waterways.

In addition, the problem with financial valuation techniques is that, as mentioned above, some kinds of environmental assets are beyond costing. Therefore attempting to place a monetary value on, for example, ecosystems or biodiversity is difficult, as these attributes are priceless. The monetary valuation of environmental

⁵³ R. Costanza et al *The value of the world's ecosystem services and natural capital*, *NATURE*, Vol 387, May 1997 pp.253-258

⁵⁴ ICCA, Environmental Accounting Task Force, *The Impact of Environmental Matters on the Accountancy Profession: Discussion Paper*, 1998, p. 11. and S Pimm *The Value of Everything*, *Nature*, Vol.387, May 1997, pp231-232

⁵⁵ *The Economist*, An invaluable environment. 18 April 1998 p 77

assets may also reinforce society's narrow focus on financial values and market-based transactions.

The potential application of the internationally recognised Precautionary Principle should be noted in this respect. The Precautionary Principle holds that where there are threats of serious irreversible damage to the ecosystem, the lack of scientific certainty shall not be used as a reason for postponing cost-effective measures.⁵⁶ This would presumably extend to a lack of certainty in valuation techniques. The implication is that where the value of a resource is uncertain, a precautionary higher value should be preferred.

Another difficulty with the Green GDP is that it is a composite measure. The majority of submissions contended that composite measures would not adequately represent the complexity of environmental-economic interactions.

The major criticisms of composite measures are:

- they are too simplistic;
- they can be misleading (ie what do increases and decreases mean?); and
- they inevitably give rise to problems in determining what weight to give to the various contributing indicators.

3.3 Australian Experience with Green GDP

Several initiatives have attempted to incorporate environmental information in monetary terms into the economic accounts. These involve environmental attributes that can be relatively easily estimated in monetary terms. For example, accounting standards were released in 1998 covering accounting for self-generating and re-generating assets.

Recent national balance sheets have incorporated environmental information. The latest national balance sheet (dated June 1996, issued January 1998) recognised land, subsoil and native forests as non-producing assets.

⁵⁶ See Principle 15 of the Rio Declaration Environment and Development (1992) 31 ILM 874

Similarly in Victoria, systems exist that allow for the valuation of natural resources. In 1995 and 1996 the Victorian Department of Treasury and Finance released two key documents concerning the principles, policies and methods of asset valuation to be adopted by the Victorian public sector.⁵⁷

Under these policies, an asset will be valued if it is tangible (ie. has a physical nature) and if it has a useful life beyond the current accounting period. To qualify for financial reporting purposes an asset must have:

*service potential or future economic benefits.*⁵⁸

While these policies focus on assets with an economic benefit, the challenge remains to develop a system which recognises the other values, including intrinsic value, of natural resources.

3.4 Satellite Accounts

The alternative approach is to develop a set of physical environmental accounts that exist as adjuncts to (but not modifications of) existing national accounts and purely financial indicators such as the GDP.

The most widely known satellite framework is the System of Environmental and Economic Accounting (SEEA), developed in 1993 by the United Nations Statistical Division (UNSTAT). The SEEA framework is an extension of the United Nations System of National Accounts (SNA). Under SEEA, there are four flow accounts:

- environmental protection expenditure;
- natural resources use and management;
- repercussions of environmental activities; and
- related eco-activities.

Financial or non-financial (or physical) measures can be used. The separate accounts are consolidated into an environmental balance

⁵⁷ These documents are (1) *Recognition and Valuation of Non-Current Physical Assets* (released January 1995) and (2) *Asset Management Series - Principles, Policies and Practices: Catalogue of Reference* (released January 1996)

⁵⁸ Statement of Accounting Concepts 4 'Definition and Recognition of the Elements of Financial Statements'

sheet which depicts change to natural capital stocks. SEEA recommends that the environmental balance sheet remains a separate (or satellite) account.

An alternative approach, developed by the European Union (EUROSTAT), is the European System for the Collection of Economic Information on the Environment (SERIEE). SERIEE has focused on the development of a European environmental protection account and a related eco-activities account.

The Commission of the European Communities has identified the following information as necessary for inclusion in satellite accounts:

- expenditure for the protection of the environment by industries, governments and households;
- value of the economic activities and employment linked to environmental protection;
- value of economic instruments for environmental protection;
- value and quantity of natural resources; and
- flows of materials through the economy showing how and where natural resources are used in the economy and their final disposal back into the environment⁵⁹.

Due to the many difficulties associated with Green GDP the use of satellite accounts seems to be favoured at this time as a means of linking environmental information to the national accounts.

Faced with such objections [to the Green GDP] government statisticians in Europe and Canada have concentrated on a different approach, advocated by Mr Keuning⁶⁰ and by Eurostat, the statistical arm of the European Union. The idea is to relate economic activity, measured in cash terms, to environmental magnitudes measured in physical units... This describes the relationship between the economy and the

⁵⁹ Commission of the European Communities, June 1996 *Environmental Indicators and Green Accounting* pp 8-9

⁶⁰ Mr Keuning is head of the Dutch National Accounts Department

*environment, but it does not adjust economic figures to take account of the degradation of environmental assets*⁶¹.

3.5 Overseas Experience with Satellite Accounts

Apart from the UNSTAT SEEA approach and the EUROSTAT SERIEE initiative, a third widely accepted system has been developed by Statistics Netherlands (NAMEA). These have some alignment with the System of National Accounts but at this stage no international standard has been accepted. Individual countries are investigating and adapting these three approaches for their particular circumstances.

Over a decade ago France began modifying its national accounting system to recognise the value of the environment. The current system involves a central accounting framework and several satellite accounts, each representing different aspects of national health. The satellite account of the environment describes the stock of natural assets and their changes resulting from both natural phenomena and from the impact of human activity⁶². This system allows for links to be made between the central framework and the satellite accounts.

The Federal German Statistical Office is endeavouring to develop an information system in which all the statistics on the environment, covering both ecological and economic aspects, are combined into a unitary accounting framework. This project is to include a satellite account, and will not attempt to create an environmentally-adjusted NDP (National Domestic Product)⁶³.

Canada has also made some progress, with wealth accounts including the value of natural resources. Other countries experimenting and undertaking similar initiatives include the UK, Denmark, Finland, Japan, the Netherlands and Sweden. None of the existing systems has successfully incorporated all of the information identified as relevant by the Commission of the European Communities.

⁶¹ The Economist, An invaluable environment. 18 April 1998 p 77

⁶² Constantino C 1996 *First report of the Commission...* IN Musu I & Siniscalco (eds) 1996 National Accounts and the Environment Kluwer Academic Publishers

⁶³ *ibid* p 3

Approaches that measure physical flow of natural resources are also becoming popular. Examples of such approaches are Eco-budget and material flow accounting. The idea behind this type of measurement is that the impact of production, consumption and the flow of goods on the environment are measured. This measurement can also be done for a household.

3.6 Australian Experience with Satellite Accounts

The United Nations Conference on Environment and Development (UNCED) held in 1992, recommended that countries develop a national system of integrated economic and environmental accounting.

While Australia has agreed to accept and act on the UNCED recommendation, as yet little progress has been made. However, initiatives in several areas indicate that systems are beginning to be developed and tested for incorporating changes in natural capital into the national accounting framework.

The Australian Bureau of Statistics (ABS) has expressed its desire to play a lead role in developing a system which effectively integrates environmental information into the national accounts. It does, however, identify the difficulties in achieving this:

As the concepts surrounding environmental accounting are still in their infancy, it is important to recognise that all jurisdictions and countries are grappling with the question of how to incorporate these views into existing reporting.⁶⁴

As mentioned previously, the ABS has been working on a project for several years based on the UNSTAT SEEA approach.

The advantage of adopting an internationally recognised approach is that Australia does not have to re-invent the wheel but can take advantage of a framework that has already been tested and accepted.

To date the ABS has prepared national physical accounts for energy, water, forests, fish and minerals. The focus of the ABS work is consistent with the purpose of environmental accounting,

⁶⁴ Submission by the Australian Bureau of Statistics dated 24 June 1998, p. 2

as the Federal Minister for the Environment, Senator Robert Hill, has pointed out:

*Physical accounts are currently being developed by the ABS for water, fisheries, land use, minerals, energy and forests, biodiversity and emissions. In time these national satellite accounts will assist in better understanding how the economy as a whole relates to the Australian environment.*⁶⁵

The ABS has also produced statistics on Environmental Protection Expenditure.⁶⁶ The statistics describe expenditure by governments (at all levels), businesses and households to protect the environment. The SERIEE approach is being used as the basis for these statistics.

Many witnesses indicated widespread support for the ABS satellite accounts project.

One potential shortcoming of the satellite accounts approach is the necessity to adequately link environmental information with the national accounts:

*lack of integration between the different contributing data sets often hinders the study of the interaction between economic development and environment or social change.*⁶⁷

Lack of integration of the environmental accounts into economic accounts may cause the environment to continue to be considered as outside mainstream government decision making.

Submissions indicated broad support for the development of a national measure of standard of living which includes non-economic factors. A number of submissions stated that development of a measure should be the responsibility of the Australian Bureau of Statistics or the Federal Government.

According to PricewaterhouseCoopers:

⁶⁵ Opening of the Conference, *Australian Academy of Science Fenner Conference on the Environment*, 30 September 1996

⁶⁶ Australian Bureau of Statistics, *Environmental Protection Expenditure, Australia*. Catalogue No. 4603.0

⁶⁷ Trewin D 1998 *Development of Sustainability Indicators in Australia* Proceedings of the Joint IASS/IAOS Conference p4

*ABS should be the custodian of this information to ensure that a common national approach is adopted.*⁶⁸

However the ABS does not see itself as having the only role in this area:

*Other organisations and people have roles, particularly in the identification of key issues, what indicators are relevant to those issues and what are the targets or goals for the various indicators that would help to determine the performance of programs and policies towards sustainable development or national progress. They also have a role in interpreting the indicators, particularly their implication for public policy.*⁶⁹

Victoria has a role in working with the ABS in this area. The Victorian Government submission notes that Victorian agencies including the Department of Treasury and Finance, the Department of Natural Resources and Environment and the Environment Protection Authority have had input to the ABS proposals.⁷⁰

In addition, the success of the ABS project relies on the availability of sufficient statistical information across Australia. Accordingly, Victoria should assist in gathering this data, and processing it into useable forms.

The Committee recommends that:

Recommendation 3.1

The Victorian Government support the development of a national system of satellite accounts by the Australian Bureau of Statistics.

3.7 Victoria's Role

While the majority of submissions supported a national measure of standard of living which includes non-economic factors, there was some support for the development of a measure for Victoria.

⁶⁸ Submission by PricewaterhouseCoopers. 15 February 1999

⁶⁹ Submission by ABS. 29 June 1998

⁷⁰ Submission by Department of Premier and Cabinet. 22 December 1998

Several submissions stated that Victoria should develop a measure of standard of living either unilaterally or in conjunction with the Australian Bureau of Statistics and Federal and State governments. Support for a unilateral approach was on the basis that it could provide Victoria with greater accountability and leadership. For example, Dr Thomas advised the Committee:

*the Victorian government needs to be responsible from the point of accountability.*⁷¹

AVTEQ Consulting Services also supported this view:

*There is a strong case for developing measures of the standard of living for Victorians which included quality of life issues. This is necessary to ensure that the standard of living of Victorians remains comparable with those living in other Australian States.*⁷²

Other submissions were opposed to Victoria developing its own measure of standard of living. For example, Mr Drerup, Association of Liquidpaperboard Carton Manufacturers stated that:

*any measure developed by an individual state in Australia is almost fatally handicapped.*⁷³

According to PricewaterhouseCoopers, the potential value of the measure would be diminished if it were solely a Victorian initiative as it may result in the emergence of different standards in different jurisdictions.⁷⁴

Victoria could initiate the inclusion of additional environmental information in its financial accounts. As mentioned, Victoria has developed a method to value natural assets if they are tangible (ie have a physical nature) and if they have a useful life beyond the current accounting period. To qualify for financial reporting

⁷¹ Submission by Dr Thomas, Department Landscape, Environment and Planning RMIT, 2 June 1998

⁷² Submission by Mr Rogers, AVTEQ Consulting Services. 30 April 1998

⁷³ Submission by Mr Drerup, Association of Liquidpaperboard Carton Manufacturers. 24 April 1998

⁷⁴ Submission by PricewaterhouseCoopers. 15 February 1999

purposes an asset must have service potential or future economic benefits.⁷⁵

By extending this approach Victoria could begin to integrate environmental information into its accounts. However, as mentioned above there are various problems associated with including environmental information within financial accounts. These problems would need to be addressed.

The Committee recommends that:

Recommendation 3.2

The Victorian Government consult with the Australian Bureau of Statistics and other relevant stakeholders on the feasibility of developing satellite accounts for Victoria.

Recommendation 3.3

The government ensure that data collected for Victorian satellite accounts is comparable with data collected by the Australian Bureau of Statistics relating to other states.

3.8 National Environmental Accounting within Local Government

The Committee understands that the Australian Bureau of Statistics (ABS), in collaboration with the Australian Centre for Regional and Local Government Studies at the University of Canberra, has been investigating the use of the SEEA approach by local government. Environmental expenditures for local government classified using a SEEA framework can now be produced annually by the ABS.

While SEEA recommends that governments provide an environmental balance sheet as a separate (or satellite) account, the approach being taken by local government is to incorporate the environmental balance sheet within the conventional balance sheet. This is consistent with the view that the environment must

⁷⁵ Statement of Accounting Concepts 4 'Definition and Recognition of the Elements of Financial Statements'

become a factor in mainstream decision making or else the government is not meeting its responsibility to the community.

Another benefit of incorporating this information is that it ensures that the environmental information is audited. Auditing of the environmental balance sheet gives credibility to the information and ensures that local government meets its accountability requirements.

Another ABS project has been the recent Environment and Natural Resources Survey at local government level. The ABS used the SERIEE framework for the environmental protection account for the survey (both data collection and reporting).

The survey was based on an assumption that local government should learn how to develop and report environmental transactions in their monetary accounts. Local government would use financial data to decide how to respond to environmental issues that were highlighted through reporting.

The Committee understands that at present very few local councils have been able to provide the ABS with the information required by the survey. Even fewer have been able to combine their environmental information with their financial reporting to assist with decision making. However, many local councils throughout Australia are making a start in this area and change is happening rapidly.

As the link between physical resource information and economic statistics is improved, environmental accounting should show how economic activity in different areas has an environmental impact and how economic decisions can take the environment into account.

The relationship between the environment and economic activity will be more transparent as national environmental accounting is increasingly linked to State of the Environment reporting (discussed in the next chapter). The integration of environmental accounting and reporting at the national, state or regional level will provide better information on the condition of the environment, the impacts of economic activity and the

Interim Report of the Inquiry into Environmental Accounting and Reporting

effectiveness of expenditure on reducing and eliminating those impacts.

CHAPTER 4 STATE OF THE ENVIRONMENT REPORTING

4.1 Why have State of Environment Reporting?

Environmental reporting is defined as the public disclosure of information on the environment. This can take a number of forms, from detailed reporting on a specific issue to more comprehensive reporting. State of the Environment (SoE) reporting is the public disclosure of comprehensive information about the environment, aggregated to a national, state or regional level.

Broadly, SoE reporting provides information on environmental conditions and trends in the environment. SoE reporting has been established as an important methodology for understanding and evaluating ecosystem change and human interaction with the ecosystem.

Since SoE reporting was first proposed back in the 1970s by the OECD, its popularity, overseas and within Australia, has increased substantially. All OECD members have agreed to produce regular SoE reports; most have now done so.⁷⁶

Recently the significance of SoE reporting has taken stronger hold as technological innovation has increased the ability to monitor and measure changes to the environment, and indeed reduce impacts on the environment. The following extract from the SoE report of Scotland illustrates this:

In collating the information for this [SoE] Report it has become clear that concerns over the environment are changing and becoming even more subtle and detailed. Now that we can monitor the environment in more comprehensive ways and detect more chemicals in ever smaller concentrations we can find impacts in areas previously thought unaffected. Our predecessor bodies eliminated soot and smoke but now ozone, benzene and oxides of nitrogen have replaced them as air

⁷⁶ Commonwealth of Australia. *Australia: State of the Environment 1996*, CSIRO Publishing Australia, Chapter 1

*quality concerns in our cities. Our rivers have been cleaned to the state where salmon can return to the Clyde, but now we are concerned that minute traces of hormone-like chemicals can cause damage to aqueous ecosystems. There appears to be no end to the impacts that human activity can have on the environment.*⁷⁷

SoE reporting has a number of objectives, as highlighted in the 1991 OECD SoE report:

- to assist member countries in the definition, implementation and evaluation of environmental policies;
- to help those countries incorporate environmental concerns in economic decision making in order to progress toward ecologically sustainable development; and
- to provide environmental information to the public.

In addition, SoE reporting assists the OECD review the environmental performance of individual member countries in meeting their domestic policy goals and international commitments.

One of the major benefits of SoE reporting is increasing the knowledge base on which decisions are made. Australia: State of the Environment Report 1996, states:

*Australia lacks the integrated national systems and databases to measure environmental quality, manage it, and evaluate the effectiveness of that management. Until these deficiencies are rectified, we will remain unable to truly answer the question of whether our pattern of development is genuinely sustainable.*⁷⁸

The Committee believes that it is vital that accurate and accessible information is available to assess threats to the environment, and to manage them in a sustainable manner.

Nearly all witnesses to the Inquiry indicated a number of benefits of conducting SoE reporting including:

⁷⁷ Foreword to the Scotland State of the Environment Report 1996

⁷⁸ Commonwealth of Australia. *Australia: State of Environment 1996* CSIRO Publishing Chapter 1

- increasing understanding about the environment;
- assessing conditions and trends in the environment;
- identifying important issues in the environment;
- tracking progress towards environmental goals;
- identifying and monitoring environmental or sustainability indicators;
- providing a measure of the effectiveness of environmental policy and policy implementation;
- rendering government, industry and the public more accountable in their stewardship; and
- determining and adjusting policy directions.

For environmental reporting to be valuable it must meet the information needs of the users. Therefore, it is important to determine who the users of the information are and their particular needs.

The Committee took evidence from PricewaterhouseCoopers which highlighted several issues of importance for environmental reporting, including:

*determining whose information needs will be satisfied by an environmental report... [which] requires clarification of the target group. Who are the stakeholders?, what types of information do they need?, what purpose will the information serve.*⁷⁹

The primary audience for SoE reporting tends to be the community. According to *Australia: State of the Environment Report 1996*, SoE reporting:

*is one of the most powerful tools for informing the public about their environment.*⁸⁰

Similarly, the Victorian State of the Environment Report 1988, aimed to:

*raise public awareness of environmental trends and issues by providing information in a readily understandable style.*⁸¹

⁷⁹ Submission by PricewaterhouseCoopers. 15 February 1999

⁸⁰ Commonwealth of Australia. *Australia: State of Environment 1996* CSIRO Publishing p. 1-4

The audience for SoE reports also includes environment and community groups; government decision makers; cultural and natural resource planners and managers; scientists; educational institutions; industry groups; the media and international agencies.

Due to the high level of aggregation of environmental information, i.e. regional, state or national, it is argued that SoE reporting is not necessarily the most appropriate information set for a number of decision makers. For example, according to the EPA:

*resource managers typically require detailed, tailored information systems.*⁸²

4.2 The SoE Model

While there is widespread adoption of SoE reporting no internationally accepted model exists. The differences between models adopted throughout the world relate to:

- the types of environmental data that are considered relevant to the report;
- the frequency of reporting;
- the indicators used to assess the state of the environment; and
- the consideration of human influences on the state of the environment.

One model for SoE reporting is the Pressure-State-Response (PSR) model developed by the OECD in 1990. The model is based on the principal of causality: human activities exert pressures on the environment and change its state or condition; society responds to the changed state by implementing strategies which influence those human activities and so modify or change the pressures.

The PSR framework places emphasis on describing the state or condition of the environment. It encourages the development of indicators that are measures of the state or changing state of the environment.

⁸¹ Office of the Commissioner for the Environment, *State of the Environment Report – Victoria's Inland Waters*, 1988, p. i

⁸² Submission by Dr Robinson, Chairman, EPA. 13 May 1999

There have been criticisms of the PSR model. In particular, some claim it gives a simplistic view of the interaction between human activity and the environment. This simplistic view risks obscuring the complexities of ecological relationships.⁸³

To reflect such shortcomings the Commonwealth modified the PSR framework for Australia: State of the Environment 1996:

*to include cultural aspects of the environment, to recognise the inherent variability and lack of knowledge about the Australian environment, and to allow for an interactive rather than linear world.*⁸⁴

All Australian states, excluding Victoria and the Northern Territory which do not produce SoE reports, have also adopted the PSR model with some modifications.

For the publication *Australians and the Environment*⁸⁵ the Australian Bureau of Statistics adopted the Population-Environment-Process (PEP) model developed by Statistics Canada. This model provides a stronger link between human activity and the environment.

4.3 Overseas Experience

At the national level, numerous countries have prepared SoE reports including Australia, Canada, Kuwait, New Zealand, United Kingdom, China, and Norway. A number of states within countries have also prepared SoE reports including Alberta, British Columbia, Manitoba and the Yukon in Canada, New Hampshire, Tennessee and Washington in the United States.

4.4 Other Australian SoE Related Activities

Currently, SoE reporting programs are in place nationally, and within all states apart from the Northern Territory and Victoria (see Table 1 below). Environmental reporting cycles among the Commonwealth, States and Territories vary from two to five years, and are not synchronised.

⁸³ Commonwealth of Australia. *Australia: State of Environment 1996* CSIRO Publishing p. 1-6

⁸⁴ Commonwealth of Australia. *Australia: State of Environment 1996* CSIRO Publishing ES-6

⁸⁵ ABS *Australians and the Environment* Catalogue No. 4601.0 1996

4.4.1 Commonwealth

The Commonwealth Government has established a State of the Environment Reporting Unit under the Department of the Environment and Heritage (Environment Australia). Environment Australia is aiming to produce an SoE report every four to five years. The first report was released in 1996. The next national SoE report is due for release in September 2001.

At the Commonwealth level, SoE reporting is a powerful tool for informing the public about the environment. The guiding principles behind Commonwealth SoE reporting, which form part of the National Strategy for Ecologically Sustainable Development are:

- rigour – to use the best available scientific information, methods and advice, and to present accurate data and information in a balanced and accessible way;
- objectivity – to present data and information without bias or modification;
- openness – to prepare the report cooperatively, and to use a range of data sources;
- cooperation – to ensure open access to information about Australia's environment;
- global perspective – wherever possible, to present information in a comparative manner, seeking to place local and regional information in national and international contexts; and
- ecological sustainability – to assess environmental information and issues against the principles of ecologically sustainable development.

There are some structural problems with Commonwealth SoE reports. The Australian Science and Technology Council found that Australia lacks the following:

- an integrated national system to measure environmental quality;
- a national data set of sufficient calibre to assess and manage environmental quality; and

- appropriate national baseline data to evaluate the effectiveness of strategies.⁸⁶

Many of the recommendations contained in this report will go some way towards addressing these issues.

The aims of SoE reporting at the national level are to:

- describe the Australian environment;
- monitor and report on changes in environmental quality over time;
- identify the agents responsible for change;
- monitor and report on the effectiveness of policies and programs; responding to change, including progress towards achieving targets; and
- report on future implications of any identified trends.

A State of the Marine Environment Report was published in 1995 by the Great Barrier Reef Marine Authority, on behalf of the Department of the Environment, Sport and Territories, Ocean Rescue 2000 Program. This report was a one-off report providing the first comprehensive description of Australia’s marine environment, its uses and values, the issues and threats affecting it and its management.

Table 1 State of Environment Reporting in Australia.

	Current SoE Reporting	Past Reports	Next Report	Model	www	Responsible Authority	Mandate
Aust	Yes	1985, 1986, 1996	2001	PSR	Yes	Independent Advisory Council	Policy
Vic	Partial	1986, 1988, 1991,	-	-	-	-	None

⁸⁶ Commonwealth of Australia, *Australia: State of the Environment*. CSIRO Publishing pp.1-7

Interim Report of the Inquiry into Environmental Accounting and Reporting

		1997*					
NSW	Yes	1993, 1995, 1997	1999	PSR	Yes	Environment Protection Authority	Legislation
SA	Yes	1988, 1993, 1998	2003	PSR		Environment Protection Authority	Legislation
WA	Yes	1992, 1998		PSR	Yes	Report released by Cabinet, prepared by community Reference Group	Policy
QLD	Yes	-	1999	PSR	Not yet	Department of Environment	Legislation
ACT	Yes	1994, 1995, 1997	2000	PSR		Commissioner for the Environment	Legislation
TAS	Yes	1997	2002	PSR	Yes	Resource Planning and Development Commission	Legislation
NT	No	-	-	-	-	-	None

* Victoria: Know Your Catchment

4.4.2 State and Territories

The current status of SoE reporting within Australia is shown in Table 1, above. In NSW, *the Protection of the Environment Administration Act 1991* requires the EPA to prepare a report for Parliament on the state of the NSW environment every two years. The most recent New South Wales State of the Environment Report was released in 1997.

SoE reporting is required in the ACT every three years under the *Commissioner for the Environment Act 1993*. The ACT produced its third SoE report in 1997 and the next ACT SoE report is due in the year 2000. The report covers the Australian Capital Region which includes the ACT and seventeen local government authorities in southern NSW.

In Tasmania, the *State Policies and Projects Act 1993* requires an SoE report to be produced every 5 years. The first Tasmanian report was completed in 1997, and the second report is due in 2002.

Western Australia recently produced its second SoE report Environment '98, six years after releasing the first report.

The first SoE report from Queensland will be produced within the latter part of 1999. It is a requirement under *the Environmental Protection Act 1994* that an SoE report be produced every four years.

Some of the earlier state SoE reports were strongly criticised as they took large amounts of time and money to prepare and their usefulness was not always apparent. To address this problem many of the more recent reports have included substantial stakeholder involvement.

For example, Western Australia opted for focusing on key issues and sustainability of key natural resource sectors. A regionalised approach was adopted so that each region could focus on issues of regional importance. Therefore, the centralised state SoE report reflected decentralised regional views.

Regional focus groups were established to identify regional environmental priorities and to report back to a reference group. Each regional group was required to consider its environmental priorities in terms of the pressure-state-response model.

This approach has the advantage of raising environmental awareness at the regional level, where environmental management occurs. The regional approach allows communities to get involved in the management of their own environment. The decision to involve communities in this manner has not been limited to WA.

After producing two SoE reports the NSW Environmental Protection Authority released *The Future of NSW State of the Environment Reporting: Discussion Paper*.⁸⁷ The Discussion Paper sought feedback on future environmental reports including monitoring needs and core indicators to ensure that SoE reporting can better provide the government, community and industry with the information needed to protect and enhance the environment.

Other states, including the ACT and Victoria, use information generated by local community groups such as Waterwatch,

⁸⁷ NSW EPA. *The Future of NSW State of the Environment Reporting: Discussion Paper*. EPA. 1996

Dunewatch and Beachwatch. These groups collect samples and conduct supervised scientific experiments on a regular basis to monitor such things as water quality, pollution levels, vegetation conditions, etc. The Victorian EPA has established the Community Access to Air Monitoring (CAAM) pilot project which involves community participation in the operation of two air quality monitoring stations:

*This pilot will provide grass-roots community involvement with local and regional air quality issues, and ready access to air monitoring data. It is expected that the CAAM group will help increase local awareness about air quality issues...local community involvement will also provide better on-the-ground local information.*⁸⁸

Apart from enabling members of the community to become involved in these environmental monitoring and recording projects, this approach is cost effective.

4.5 Other Australian SoE Related Initiatives

4.5.1 National Land and Water Resources Audit

Another important initiative at the national level is the National Land and Water Resources Audit. The purpose of the audit is to provide nationwide assessments of Australia's land, vegetation and water resources to support sustainable development. The audit will concentrate on rural areas, and will not collect information on Australia's marine environment.

It is intended that the Audit will link closely with federal SoE reporting. The Audit's activities are planned under seven categories:

- water availability;
- dryland salinity;
- vegetation management;
- rangeland monitoring;
- productivity and sustainability of rural land use;
- capacity for change; and

⁸⁸ EPA Annual Report 1997/98 p. 21

- ecosystem health.

The information gathered by the Audit will be developed into an Australian Natural Resources Atlas. It is a two stage program, the first stage built upon Australia-wide information and the second stage involving state and territory agencies willing to develop such a system within their own jurisdictions.

The Audit will collect and collate existing data from the natural resource management agencies and research institutions of the Commonwealth and the states.

4.5.2 National Pollutant Inventory

The National Environment Protection Council (NEPC) was established as a result of the Inter-Governmental Agreement on the Environment (1992). A primary function of the NEPC is to establish National Environmental Protection Measures (NEPMs). A significant development with relevance to SoE reporting is the development of the National Pollutant Inventory (NPI) under this program. This is a program being implemented cooperatively by the Commonwealth, state and territory governments and will provide the community, industry and government with information on the types and amounts of certain chemicals being emitted to the environment. A trial database has already been established, the first national database will be available in early 2000.

4.5.3 Australian Bureau of Statistics Initiatives

The ABS established an Environment and Natural Resources Unit in 1991. Recently two significant summary publications, both of which are arguably SoE reports, have been produced by the ABS. The first, *Australia's Environment*, was released in 1992⁸⁹ and *Australians and the Environment* was released in 1996.⁹⁰

Australians and the Environment is a statistical publication, presenting data which highlights the relationship between the environment, the economy and society. As mentioned above, this publication uses the Population-Environment-Policy (PEP) Model rather than the Pressure-State-Response (PSR) Model used by

⁸⁹ ABS, *Australia's Environment* 1992 ABS Catalogue No. 414.0

⁹⁰ ABS, *Australians and the Environment* 1996 ABS Catalogue No. 4601.0

national and most recent state SoE reports. This publication complements the national SoE report.

4.6 SoE Reporting in Victoria

In 1987 the Office of the Commissioner for the Environment was established in Victoria to provide regular environmental reports. Two reports were prepared by this Office, a 1988 report assessing activities and impacts in Victoria's inland waters⁹¹ and a detailed report produced in 1991 titled State of the Environment Report 1991, Agriculture and Victoria's Environment.

These were the first SoE Reports to be produced by a state government. However, in 1992 the Office of the Commissioner for the Environment was abolished.

These early SoE reports focused on single issues, inland waters and agriculture, respectively. The emphasis of SoE reporting in Australia has now changed to be a comprehensive overview of the main environmental issues across the state.

Victoria's most recent environment reporting initiative, Victoria: Know Your Catchment 1997, was instigated by the Victorian Catchment and Land Protection Council (now the Catchment Management Council). The Catchment Management Council is required by the *Catchment and Land Protection Act 1994* to report annually on the condition and management of Victoria's land and water resources.

The value of preparing this report was highlighted by the responsible Ministers:

Monitoring and assessment of our catchments allows us to understand how their condition is changing and is the key information base of good catchment management. Know Your Catchments has distilled the significant information resources of DNRE and EPA to provide an overview at both statewide and Catchment Management Authority Level. It is a trial of potential indicators for future continued monitoring and the inclusion of social and economic indicators reflects the

⁹¹ Office of the Commissioner for the Environment, *State of the Environment Report, Victoria's Inland Waters*, Government of Victoria, 1988 Melbourne

*importance of viable enterprises in achieving sustainable catchment management.*⁹²

It reports against thirty-five indicators, covering many aspects of catchment condition including biophysical resources, management practices and economic and social indicators.

4.7 Collecting and Reporting on Environmental Information

Victoria arguably leads all states in Australia in the quality and extent of reporting environmental information. However, the Committee is aware that the information currently being collected is not consolidated into a single state SoE report.

The Department of Natural Resources and Environment and the Environment Protection Authority collect a large amount of environmental information. This information is supplemented by information collected by other government and non-government agencies, including Catchment Management Authorities, the Environment Conservation Council, Parks Victoria and the National Parks Association and community groups such as Landcare, Coastcare and Saltwatch.

Much of the information collected on Victoria's natural resources and their management is held in the Corporate Geospatial Data Library.⁹³ The Data Library contains over 120 data sets covering topography; climate; hydrology; geology and soils; flora and fauna; land use; forestry; roads; pest plants and animals; and mining and exploration.

The information collected is published in a variety of reports. EPA produces a number of reports, including the Air Emissions Inventory for Port Phillip Region and the Environmental Health of Streams in the Western Port Catchment. EPA also produces a number of Information Bulletins.

Publications by the Department of Natural Resources and Environment also contain current information. The Biodiversity Strategy uses a number of databases from the Corporate Geospatial Data Library. The Department of Natural Resources

⁹² Foreword by the Hon. Marie Tehan, MP and the Hon. Patrick McNamara, MP *Victoria: Know Your Catchment*, Department of Natural Resources and Environment, 1997

⁹³

and Environment also has much of the information available through Land Channel on the Department's Internet site.

Environmental information currently collected in Victoria also feeds into the Commonwealth SoE report. The information collected provides valuable data sets for any future SoE initiatives.

The Committee is concerned that while Victoria produces significant amounts of information about the environment, the information is not presented in a single consolidated report. This means that it is difficult for the government and the community to assess the overall condition of the environment and whether it is improving or deteriorating.

Not only would an SoE report assist with benchmarking and identifying gaps in knowledge it would also help with identifying these strategies to address any negative findings or increased pressures, it would also contribute to increased awareness of issues and lead to improved partnerships between EPA, the Department of Natural Resources and Environment and the community in environmental monitoring and improved understanding of goals and values leading to Ecologically Sustainable Development.

According to the EPA:

*The reporting under the Catchment and Land Protection Legislation has led to increased consolidation and consistency as evidenced by the Know Your Catchments report of 1997. This report is a very practical and useful state of the environment report.*⁹⁴

The Committee believes that consolidation and consistency would best be achieved through a state SoE report.

4.8 Should Victoria Have SoE Reporting?

As mentioned, while Victoria has extensive environmental information and produces a variety of reports, no consolidated SoE report is produced. The majority of submissions supported the production of such a report. The Victorian Auditor-General's Office commented that:

⁹⁴ Letter from EPA 13 May 1999

*The issues raised by this Office in Reports to the Parliament on environmental matters support the need for periodic independent assessments to be made of key aspects of the state of environment in Victoria. However it is recognised that these assessments will be inconclusive until acceptable criteria are established against which such results can be measured to enable the impact of unfavourable outcomes to be understood.*⁹⁵

A submission by the Shell Company of Australia was also supportive of SoE reporting in Victoria:

*We are strongly supportive of the State of Environment Reports at the State level, as they provide data for sound policy development at the State level.*⁹⁶

Also supporting SoE reporting in Victoria, Environment Victoria in its submission stated that:

*It is crucial that State of the Environment Reporting is undertaken on a regular basis in Victoria - at least every five years - and supported by legislation to ensure that it occurs to an adequate standard. This is needed if the State Government is to keep track of the cumulative impacts of threats to our natural environment and if it is to be informed about how it should act to prevent major irreversible damage.*⁹⁷

The PricewaterhouseCoopers submission identified four reasons why Victoria should have an SoE report:

- multiple agencies are involved with managing aspects of the environment in Victoria - potentially resulting in areas and impacts not being adequately examined. At present these agencies appear to be managing according to their own objectives rather than in a consolidated manner. There are both benefits and concerns with this style of management. An exercise which brings them all together may reduce the risk of micro-management;
- the Commonwealth has limited responsibilities *vis a vis* the management of the environment in Victoria.

⁹⁵ Submission by the Victorian Auditor-General's Office dated 30 June, 1998, p. 3

⁹⁶ Submission by Shell Company of Australia limited dated 30 June, 1998, p. 2

⁹⁷ Submission by Environment Victoria dated 2 September, 1998, p. 3

They may not represent the issues adequately as well as provide the policy makers with an appropriate background on issues which need further examination and monitoring;

- we currently have no baseline reporting to help us understand whether we are progressing in the management of Victoria's environment. The general public (and probably policy makers) do not have an understanding of key issues and how these are being managed; and
- the current framework does not provide the general public with an update on the progress on government bodies in managing the environment. External reporting requires rigour and accountability, which is consistent with initiatives undertaken by industry.⁹⁸

However the Public Land Council took a different view and argued that SoE should be conducted solely at the national level, since past SoE initiatives had not made any difference to the ecological health of Victoria.

*This Council is not aware of any situation in which a State of Environment report has resulted in a change in policy decisions or made any difference to the ecological health of Victoria.*⁹⁹

Many organisations and individuals making submissions disputed this viewpoint. Although there is a significant base of information about Victoria's environment and many data collection programs are being undertaken, SoE reporting and the development of core environmental indicators can be expected to identify significant information gaps which can be used to refocus priorities and provide a benchmark to assess progress.

As a matter of constitutional law, the responsibility for management of relevant areas like land, agriculture, forestry, inland waters and urban development has been largely left to the states. Accordingly, it is likely that the government will have

⁹⁸ Submission by PriceWaterhouseCoopers dated 12 February 1999, pp. 6 & 7

⁹⁹ Submission by the Public Land Council of Victoria Inc. dated 14 July 1998, p 6

existing infrastructure and databases necessary for the preparation of SoE reports.

It could be argued that Victoria's current state of the environment initiatives are targeted towards providing information of direct application and relevance to resource management decisions. However, a number of core reasons for SoE reporting are not fully addressed by this approach, including understanding the environment, providing the community with an overview of the health of the Victorian environment and identifying important issues in the environment.

Whilst some programs that can be considered important for SoE reporting are in place, the Committee believes that Victoria would benefit from a coordinated and comprehensive approach to statewide SoE reporting.

The Committee recommends that:

Recommendation 4.1:

The government reintroduce State of the Environment reporting for Victoria on a statewide basis.

4.9 A suitable model

There was majority support that the PSR model was the preferable basis for Victorian SoE reporting. The majority of submissions supported the view that Victoria should broadly follow this model for the purpose of consistency, since it is the most popular model in current use. This was highlighted by one witness:

*with OECD and the Australian 1996 SoE report using pressure-state-response we do not want to introduce another minor variation.*¹⁰⁰

In another submission it was suggested that the PSR model could be varied similar to New Zealand and include a public perception element, so that the model becomes Pressure-State-Response-Perception¹⁰¹.

¹⁰⁰ Submission by Dr Ian Thomas, Department of Landscape, Environment and Planning, RMIT University, 29 May 1998, p. 2

¹⁰¹ Submission by Stan Rodgers, AVTEQ Consulting Services, 28 April 1998

The Committee recommends that:

Recommendation 4.2:

Victoria's State of Environment report should be based on the OECD pressure-state-response model. The Victorian SoE report should be similar to the SoE reports of the Commonwealth and other states and territories.

4.10 SoE Report Classifications

Submissions favoured the classification of regions largely based on environmental factors (i.e. atmosphere, land, inland waters, marine etc) rather than public use (i.e. urban, rural, public land etc).

It was also suggested that it would be preferable for the classification of regions to be based around a national approach. The Australia: State of the Environment Report 1996 is based predominantly on an environmental classification with ten chapter headings as follows:

- Introduction
- Portrait of Australia
- Human Settlements
- Biodiversity
- The Atmosphere
- Land Resources
- Inland Waters
- Estuaries and the Sea
- Natural and Cultural Heritage
- Towards Ecological Sustainability

While there is some variation, most of the recently published state SoE's are broadly consistent with this national model.

4.11 Data Integrity

A number of suggestions were made to the Committee to ensure that the data are comprehensive and have integrity. These included obtaining external verification of the information

incorporated in the report. This is a process that has been used effectively with corporate environmental reporting. However, the task would be much more complex for a state SoE report.

An alternative mechanism for ensuring objectivity and independence is used in the national SoE reporting process. That process relies on an independent panel to prepare the report. This is an effective mechanism for ensuring a degree of independence from government in the preparation of SoE reports.

Another important aspect of ensuring data integrity is consistency in the type of data collected. Establishing core environmental indicators at a catchment and state level and methodologies for data collection are important in achieving this. The Committee believes that Victoria should build upon existing initiatives (i.e. Catchment Condition Indicators Project) and the initiatives developed by ANZECC in the development of core environmental indicators.

The Committee recommends that:

Recommendation 4.3:

The government develop core environmental indicators for State of the Environment reporting which are based on the Victorian Catchment Indicators Project and consistent with the Core Environmental Indicators developed by ANZECC and the core indicators included in the Commonwealth State of the Environment report.

Recommendation 4.4:

A data verification process should be built into the State of the Environment process.

4.12 Timing of SoE Reports

Most witnesses indicated that comprehensive SoE reporting in Victoria should be conducted regularly. A suggested time interval

was between three to five years although it was suggested by some that the frequency of reporting should be based on the rate of change in the environment. The frequency of reporting used by most states in Australia and at the federal level is three to five years.

One view was that state SoE reporting should be timed so that it feeds into national and international SoE reports. It was also suggested that:

*SoE reports could be aligned with the political process, for example, every 4 years at either the beginning or the end of the parliamentary term, as this would encourage greater political accountability for environmental performance.*¹⁰²

It has been argued that a 5 year cycle of SoE reporting lacks the timeliness of economic reporting practices. A shorter time span of one to two years for SoE reporting is likely to stretch financial resources and may also be too frequent to identify and report on trends in a meaningful manner.

Past experience indicates that groups attempting to prepare detailed SoE reports within a timeframe less than four or five years often encounter resourcing difficulties.

The Committee recommends that:

Recommendation 4.5:

A State of the Environment report for Victoria be produced on a regular cycle of five years.

4.13 SoE Audience

SoE reports often identify their audience as public and private sector decision makers and the community. Balancing the different requirements of these stakeholders has to be overcome when addressing the content and level of detail in SoE reporting.

While a number of submissions suggested that the SoE report should be targeted at a broad readership, it was indicated in many

¹⁰² Submission by PricewaterhouseCoopers dated 12 February 1999, p. 8

submissions that technical information targeted at scientists and technical experts should be included since:

*It is important that technical data be collected so that it can be analysed by scientists, however it must also be accessible in a summarised form by the general public.*¹⁰³

Several witnesses suggested that a summarised version of the SoE report should be prepared for the community. This is consistent with many of the recent SoE reports, for example the NSW State of the Environment Report 1997.

The Committee is aware that many other jurisdictions are using the Internet to encourage public use of the information collected in their SoE reports. This initiative is seen as a positive development in meeting the objectives of SoE reporting and should be encouraged in any Victorian SoE initiatives. This is consistent with the Victorian Government's drive to make environmental reporting information increasingly accessible via the Internet.

Most Members were of the opinion that only a concise summary of the report should be published and tabled in the Parliament. Other Members expressed the view that by only tabling an abridged version it could set a precedent and they emphasised the importance of the Parliament receiving a comprehensive report on the state of the environment.

The Committee recommends that:

Recommendation 4.6:

The State of the Environment report should be primarily provided through an Internet site and a concise report printed and tabled in the Parliament.

4.14 Resourcing for SoE Reporting

The issue of resourcing for SoE reporting in Victoria was also raised with the Committee.

According to Mr Maganov, the NSW EPA has a staff of approximately 850 people and a \$70 million budget. There are

¹⁰³ Submission by PricewaterhouseCoopers dated 12 February 1999, p. 6

about five or six people responsible for producing the environment report for the state. Mr Maganov contrasts this with the Victorian situation:

*In Victoria you have got an EPA of 200 or 300 people and a lot less money, and ... [so it is important to] keep in mind the resourcing that will be necessary to have any sort of environmental reporting instigated in Victoria ... [whether from the EPA, Department of Natural Resources and Environment or local government] ... I would say that the culture is there to do the environmental reporting ... but the resourcing is not. The amalgamation of councils knocked out 70 conservation officers virtually down to a very small dozen or so across the state and there is no real impetus, incentive, or interest or ability to have the level of environmental reporting that might be possible within NSW, without some extra resource.*¹⁰⁴

It is important that any SoE initiative in Victoria has sufficient resources to enable rigorous reports to be prepared.

As Victoria already collects significant amounts of information on the environment the preparation of an SoE report should largely be a consolidation of this information.

To maximise the efficiency of resources used for SoE, the Committee believes that any additional data collection processes should be integrated with existing environmental investigations as far as possible.

The Committee recommends that:

Recommendation 4.7:

To maximise the efficiency of resources, the State of the Environment report should be based, as far as possible, on existing information and any additional data collection processes should be integrated, as far as possible, with existing environmental investigations.

¹⁰⁴ Transcript of evidence from Mr Maganov, NSW EPA, 24 November 1998

4.15 SoE Reporting by Local Government

Several countries around the world encourage or require SoE reporting by local government. The most advanced framework for this is in Canada where there are various guides and evaluation documents so that local government can evaluate the usefulness of SoE Reporting as a management tool.

The Committee was informed that SoE reporting at a local government level is a small but growing trend in Australia. A number of local councils throughout Australia have prepared or are currently preparing SoE reports. The standard and content of these reports vary.

In 1991, Shoalhaven City Council in NSW produced an SoE Report which was viewed at the time as innovative and ground breaking for a local government.

The Committee was advised that the NSW *Local Government Act* 1993 requires local councils to produce comprehensive SoE reports every four years and update them annually. They are also required to produce rolling environmental audits and management plans that feed into their SoE reports. Some of the areas covered in local government SoE reporting are:

- Polluted areas;
- Contaminated sites;
- Restoration of the environment;
- Waste management policies (solid, liquid, gaseous waste);
- Unique flora and fauna;
- Endangered flora and fauna;
- Development proposals;
- Wildlife corridors;
- Environmental protection measures; and
- Biodiversity (including biodiversity conservation indicators).

Since local government has a considerable role in managing and protecting the environment, the Committee believes that there are

advantages in encouraging the use of SoE reporting to sustain local environments.

Only a small number of councils are well advanced in environmental decision making. Eurobodalla Shire Council and Lake Macquarie Shire Council in New South Wales and Gold Coast City Council in Queensland, for instance, are leaders in this area.

These, and some other local councils were involved in a joint project between the Bureau of Statistics and the University of Canberra to develop model integrated SoE reporting and financial management systems and use SoE reporting as a basis for decision making. This example is at an early stage of development and should not be considered representative.

However, their experience shows that value is added to local council environmental decisions when they have access to comprehensive SoE reports, to financial accounting systems that allow them to easily identify environmental expenditures, and when they learn how to use SoE reporting and the financial accounting system in tandem to make environmental decisions.

In addition, local government can benefit from the information provided in state SoE reports. A result for the local councils covered by the Australian Capital Region SoE Report, was that Eurobodalla Council has more detailed and better quality environmental information than it could produce on its own. This suggests that there is an important role for state governments in coordinating and producing SoE Reports that provide high quality information for local government, where most of the environmental expenditure occurs.

An analysis of the submissions received indicated that there was agreement that local government should be encouraged or required to produce SoE reports. In other submissions it was suggested that local councils should be required to report on their environmental performance annually with this information feeding into regular SoE reports.

In January 1998, the Local Government and Shires Association published a Discussion Paper on the role of local government in

natural resource management. It stated that the constraints on SoE reporting at local government level were:

- resource constraint;
- lack of available information; and
- difficulty in obtaining information from state agencies.

The reality is that it can take a lot of time and money to prepare an SoE report. The issue of lack of resources was identified in a number of submissions to the Inquiry as being a barrier to comprehensive and effective local council SoE reporting.

Therefore, access by local government to state or regional SoE reports, as with the Australian Capital Regions SoE Report, will be important in assisting the effective and efficient production of SoE reports.

To pursue this option successfully will require a uniform approach to reporting on the state of the environment. Perhaps the most important aspects to be addressed are the development and use of consistent environmental indicators and the prioritisation of data collection.

Many of the submissions received by the Inquiry supported regional SoE reporting as a worthwhile activity, although the comment was made that detailed reports on activities within regions were less important than SoE reporting at the state level. A common viewpoint was that SoE reporting at a state level would have the benefit of providing a comprehensive understanding of the entire state so that resources can be prioritised.

Catchment boundaries were identified as appropriate regional boundaries in a number of submissions. One submission suggested that bioregions based on ecological characteristics of particular regions should be used with catchment management areas integrated into such bioregions.¹⁰⁵

The Committee recommends that:

Recommendation 4.8:

¹⁰⁵ Submission by Stan Rodgers, AVTEQ Consulting Services, dated 28 April, 1998, p. 2

To ensure efficient and effective environmental reporting, Catchment Management Authorities' reporting should be consistent with the Victorian State of the Environment reporting.

Recommendation 4.9:

Whilst State of the Environment reporting should be encouraged at the local council level, it should not be mandatory; resources should be focused on SoE reporting at the state level and on the collection of necessary data.

4.16 Environmental Indicators

The use of environmental indicators in SoE reporting has gained momentum over the last decade on the basis that they provide a more consistent and comparable means of identifying and communicating environmental change and allow for priority areas for environmental data collection to be identified.

The OECD identified the importance of using indicators when it first recommended SoE reporting. It reiterated this view in its 1994 report on environmental indicators.

Development of indicators is a difficult task which the Commonwealth acknowledges will take years to complete. In 1998 the Australian and New Zealand Environment and Conservation Council (ANZECC) published a draft set of core environmental indicators applicable across national and state/territory jurisdictions¹⁰⁶. Environmental indicators are key measures that help track significant changes to the environment. For example, the concentration of ozone depleting substances in the atmosphere is an indicator of the health of the stratospheric ozone layer.

ANZECC identified 72 draft core indicators grouped under six themes:

- the atmosphere;
- biodiversity;
- the land;
- inland waters;
- estuaries and the sea; and
- human settlements.

¹⁰⁶ *Core Environmental Indicators for Reporting on the State of the Environment. Discussion Paper for Public Comment*, ANZECC, 1998

Indicators for a seventh theme, natural and cultural heritage, are being developed separately. Core indicators were selected on the basis that they should:

- reflect a valued element of the environment or an important environmental issue;
- be useful for tracking environmental trends at a range of spatial scales from the local to the continental;
- be scientifically credible;
- be cost effective;
- serve as a robust indicator of environmental change;
- be readily interpretable;
- have relevance to policy and management needs;
- be monitored regularly, either by existing programs or by new programs that might be established in the future at reasonable cost; and
- reflect national programs and policies.

The Committee understands that many of the ANZECC core indicators represent measures for which complete data is currently not available or for which data is not consistent across state and territory boundaries.

Victoria is also developing environmental indicators for state of the environment reporting. The Catchment Condition Indicators Project, which followed on from Victoria: Know Your Catchments 1997, is aimed at developing an agreed set of catchment condition indicators, and is currently in progress. The project is being led by DNRE in conjunction with the Catchment Management Council and regional catchment management authorities.

In a further initiative, the Australian Institute of Urban Studies in conjunction with the City of Melbourne recently produced a short report on environmental indicators for Inner Metropolitan Melbourne.¹⁰⁷ This is part of a program for the development of a SoE database for metropolitan Melbourne.

¹⁰⁷ *Environmental Indicators for Inner Metropolitan Melbourne* - Bulletin 1, Australian Institute of Urban Studies, 1998

The Committee believes that the development of agreed environmental indicators is critical to adopting a common approach to SoE reporting.

Interim Report of the Inquiry into Environmental Accounting and Reporting

CHAPTER 5 ENVIRONMENTAL ACCOUNTING AT THE ORGANISATIONAL LEVEL

5.1 Introduction

*Environmental issues are business issues.*¹⁰⁸

Environmental legislation and changes in the market place are just some of the pressures forcing businesses to consider their environmental impacts.

To date environmental impacts have tended not to be recognised by accounting practices. The Committee was advised that the failure to recognise environmental issues distorts decision making by business management and external stakeholders.

Many witnesses emphasised that environmental accounting and the accounting profession have an important role in identifying and incorporating environmental issues into management and reporting systems.

It is convenient to categorise those areas of accounting affected by environmental issues into management accounting and financial accounting

5.2 Environmental Management Accounting

In 1992, the European Commission recognised that:

*Accounting must change its most basic concepts and practices if full environmental information is to be a central element in management organisational decision-making.*¹⁰⁹

Environmental management accounting essentially involves the identification or recognition of environmental impacts and environmental costs and benefits. Environmental information can be provided in physical or monetary terms. Where environmental

¹⁰⁸ R. Gray, J. Bebbington & D. Walters. *Accounting for the Environment*, Chartered Association of Certified Accountants and Paul Chapman Publishing London, 1993, p.3

¹⁰⁹ Ibid, p.xi

information is to be provided in monetary terms, measurement or valuation of environmental costs and benefits is necessary.

In recent years the profile of environmental management accounting has increased with the realisation of the importance of identifying and incorporating environmental information into mainstream business management systems, including budgetary and planning processes. This allows management decisions to be based on improved information and ensures environmental information is taken into consideration.

According to one witness¹¹⁰, it is critical that environmental information be linked to the planning and control processes and in particular, the budgeting process, because these processes drive decision-making. For integration of this information into overall management systems it is essential that existing accounting systems be modified.

Additional information that may need to be incorporated into the management information systems and financial information systems includes:

- data on the physical inputs and outputs of activities;
- environmental costs and benefits;
- business plans in terms of new costs, capital items and revenue projections;
- investment appraisals to evaluate environmental costs and benefits;
- cost/benefit analyses of environmental improvement; and
- cost/benefit analyses of efficiency improvement programs.¹¹¹

¹¹⁰ Submission by Roger Burritt. Australian National University. 11 September 1998

¹¹¹ Based on R. Gray, J. Bebbington & D. Walters. *Accounting for the Environment*, Chartered Association of Certified Accountants and Paul Chapman Publishing London, 1993, p.7. and ICAA, Environmental Accounting Task Force, *The Impact of Environmental Matters on the Accountancy Profession: Discussion Paper*, 1998, pp.14-15

5.3 Identification of Environmental Costs and Benefits

Often environmental costs are hidden within traditional accounting systems. For example, the costs of cleaning up a chemical spill around a factory may be incorporated within maintenance or general cleaning costs, and not be readily apparent.

When environmental costs or environmental impacts are hidden within traditional accounting systems businesses may not be aware of them and their impact on the operating results may not be fully understood. This lack of awareness of the environmental costs or impacts means that due attention may not be given to their reduction or elimination.

The Committee was informed that the identification of environmental information depends on having an adequate information system. Consequently traditional management accounting systems and practices will need to be modified to identify environmental impacts.

One approach that can be used to identify environmental costs and environmental impacts is Activity Based Costing (ABC). As the name suggests, ABC records costs by different activities. Expanding on the previous example, factory maintenance or cleaning costs can be segmented according to the different activities. Environmental components of maintenance costs such as clean-up of spills or collection and separation of recyclable materials can be identified and measured.

ABC can also be useful for public sector organisations. Instead of simply recording the cost of maintaining a road, ABC would record the various activities that comprise maintaining a road such as filling potholes, painting new line markings, maintaining verges, maintaining gutters and drains and clearing litter. Separate costs would then be allocated to each of these activities. Under this approach costs such as litter clearing costs become apparent.

ABC makes it possible to separate out the environmental and non-environmental costs. In this way the environmental costs can be considered and actions to reduce or eliminate these costs can be implemented. For example, appropriately labelled and placed

recycling bins could be introduced into the factory to ensure that recyclable materials are separated and collected efficiently and effectively. Therefore, the identification of this previously hidden cost ie. the cost of separating materials, could result in actions to reduce the cost and increase the effectiveness of recycling practices.

Although accounting systems tend to be based primarily on dollar amounts only, it is possible to integrate an accounting information system with other information systems, such as environmental management systems or geographic information systems. These information systems may provide non-financial information which can assist in analysis of why environmental costs are increasing in particular areas.

In the environmental accounting area, environmental, geographic and accounting information systems can be combined to provide a useful management tool for efficient and effective decision making.

5.4 Measurement of Environmental Information in Monetary Terms

Some environmental costs or environmental impacts have direct monetary values and can be relatively easily incorporated into management accounting systems, such as those used in the examples above. ABC is primarily focused on identifying environmental costs with direct monetary values that may be hidden within traditional accounting systems.

However, many environmental costs and impacts do not have readily identifiable monetary values and need to be estimated. Measurement of monetary values is difficult and controversial and is still in the very early stages.

As the Committee learnt during its overseas visit, there have been various experimental approaches throughout the world, to quantifying environmental costs and benefits for management accounting purposes. These approaches range from fairly conservative full-cost accounting to the more radical and experimental approaches which involve economic valuation techniques.

Full cost accounting is receiving increasing attention from companies and the accounting profession. Full cost accounting aims to incorporate all environmental costs and benefits into the price of a product or service.

If done in a comprehensive manner, full-cost accounting would require some form of life-cycle assessment, thereby requiring consideration of environmental impacts associated with the sources of raw materials, the production processes, the useful life of the product and subsequent re-use and recycling or disposal of the product. When all such costs are incorporated into the price of a product or service such prices are referred to as true-prices.

Life cycle analysis has been strongly criticised by many within the accounting profession because it is difficult to correctly and comprehensively identify all the flow-on effects that come from production. It is argued that it is not possible to consistently identify the full cost because it involves making arbitrary judgements about how far you take the flow-on effects into the analysis.

The debate over whether disposable or cloth nappies are best has been framed in life cycle analysis terms. Supporters of both sides of the debate argue that the effect of the type of nappies they support is less damaging to the environment. Both groups have framed their life cycle analysis in similar ways but slightly different assumptions have led to substantially different results. For example, those in favour of disposable nappies have looked at the effect of detergents used in washing cloth nappies. Those in favour of cloth nappies argue that any family with small children uses so much washing powder that adding a few nappies to the washing load does not increase the amount of detergent going into the environment.

Other approaches to measuring monetary values for environmental costs and benefits and environmental impacts are even more controversial. Some of these approaches, generally referred to as economic valuation methods or economic accounts include contingent valuation, replacement value, travel cost approach and so on.¹¹² However there are many difficulties with

¹¹² These techniques were outlined in Chapter 3 in the discussion of green national accounts

these approaches and they have not gained widespread acceptance.

In addition, there is continuing debate about the relevance and appropriateness of placing monetary values on some environmental costs and benefits.

5.4.1 Overseas Experience

The move towards identifying, quantifying and incorporating into decision-making, all environmental costs and benefits is consistent with the call by the European Union Fifth Action Programme on the Environment for the accounting profession to redefine its concepts, rules, conventions and methods so that products more fairly reflect their full cost.

The US EPA has been considering environmental management accounting for a number of years. The 'Environmental Accounting Project' aims to promote improved management accounting and capital budgeting for environmental costs. In 1995 they released a primer, *An Introduction to Environmental Accounting As A Business Management Tool: Key Concepts and Terms*.¹¹³ The primer focuses on how environmental accounting can be applied to improve environmental performance, control costs, facilitate investment in cleaner technologies, develop greener processes and products and inform decisions relating to product mix, product retention and product pricing.

More recently the US EPA Environmental Accounting Project issued an Environmental Accounting Resource List, presenting an extensive list of information sources on environmental management accounting.

A number of companies have made notable developments in the area of full cost accounting including Dow Europe, BSO/Origin (Netherlands), Volvo, Ontario Hydro (Canada), IBM, Baxter International Inc. (USA) and Landcare Research Ltd (New Zealand).

¹¹³ United States Environment Protection Agency. *An Introduction to Environmental Accounting As A Business Management Tool: Key Terms and Concepts*, June 1995

Full cost accounting approaches represent a dramatic departure from conventional accounting. In a recent report, Dow Europe stated:

When it comes to full-cost accounting, no one has all the answers. Certainly we don't, but we are beginning to take steps towards more realistic allocation of environmental costs. At Dow Europe we believe this is the first step in a long journey that may result in the more accurate "environmental pricing" of our products. It will take years to accomplish, but when implemented correctly, full-cost accounting has the potential to improve environmental performance more than any other program or regulation in place today.

True pricing leads to informed consumer choices. By building costs into a product's price consumers no longer need to rely upon 'green' advertising, seals and guides. Provided all products reflect their true environmental price tag, consumers can be confident that they are making the best choice for both their wallet and the world.

5.4.2 Australian Experience

The professional accounting bodies in Australia have begun to take interest in environmental management accounting. For example, the Institute of Chartered Accountants in Australia established the Environmental Accounting Task Force (EATF). The Task Force released a discussion paper, *The Impact of Environmental Matters on the Accountancy Profession* in January 1998. The EATF raised a number of environmental management accounting issues for consideration.

The Monash Centre for Environmental Management in Victoria has produced best practice guidelines for accountants in this area, *Accounting for Waste as a Business Management Tool*. The guidelines were funded by EcoRecycle Victoria and supported by the Australian Society of Certified Practising Accountants (ASCPA). The guidelines explore accounting techniques that integrate waste minimisation into mainstream business information systems with the aim:

*to facilitate waste minimisation and improve financial performance.*¹¹⁴

The Victorian EPA, in partnership with the Australian Centre for Cleaner Production and PricewaterhouseCoopers, has initiated the Environmental Accounting Demonstration Project. The aim of the project is to implement ABC within a pilot company to demonstrate the benefits from environmental management accounting.

Some individual companies have been experimenting with methods for identifying and incorporating environmental costs into mainstream business management systems, including ABC. These businesses see increasing benefits flowing from environmental management accounting. For example:

*Bonlac Foods' accounting system includes environmental costs and benefits to a certain extent. Capital expenditure for environmental related projects is budgeted separately to production expenditure, but still needs to fulfil the cost justification process.*¹¹⁵

*Environmental accounting has and does bring benefits to Bonlac Foods, such as cost justification for major projects such as the Darnum Park project.*¹¹⁶

The Committee understands that there has been limited experimentation with full-cost accounting in Australia.

Earth Sanctuaries (Australia) has developed full cost accounting which values the wildlife stock and the shrubbery and vegetation and so on within its sanctuaries.

¹¹⁴ Monash Centre for Environmental Management. *Accounting for waste as a business management tool: A best practice guideline for accountants*. Draft Report October 1997. p 12

¹¹⁵ Submission by Bonlac Foods Limited, 26 April 1999. p. 1

¹¹⁶ *Ibid*, p. 2

The Committee recommends that:

Recommendation 5.1:

The government encourage the accounting profession to develop, as a future project, methodologies to incorporate environmental costs into the prices of goods and services.

Recommendation 5.2:

The government provide funding to develop an Internet site containing information on environmental management accounting.

5.5 Environmental Financial Accounting

The primary aim of financial accounting is to provide general purpose accounting information about an organisation to external stakeholders, such as creditors, potential investors and shareholders. Unlike management accounting, where the accounting information is specifically provided for internal purposes, such as for management decision making, financial accounting is aimed at a much broader external user group.

Annual reports which incorporate an organisation's financial statements, are the main type of financial accounting reporting. They are used by a variety of different user groups who may require the information for different reasons.

5.6 Existing Accounting Standards

A great deal of financial accounting practices are regulated by accounting standards. Accounting standards cover various transactions and events as they relate to reporting entities and typically indicate how specific transactions and events should be recognised, measured, and reported.

There are two different types of accounting standards within Australia. There are standards (with the prefix AASB) that apply to organisations subject to the Corporations Law, and there are standards (with the prefix AAS) that apply to entities that are not

subject to Corporations Law (such as particular government departments, large partnerships, and trusts)¹¹⁷.

The Committee was advised that there are few accounting standards in Australia that specifically deal with the recognition, valuation and disclosure of environmental information.¹¹⁸

However, there are some environmental matters that are recognised within the existing accounting standards and impact on the financial statements. For example, the following environmental matters are required to be addressed:

- Balance sheet issues:
 - recognition, valuation and disclosure of environmental assets¹¹⁹;
 - recognition, valuation and disclosure of environmental liabilities and provisions;
 - recognition, valuation and disclosure of environmental contingencies; and
- Profit and loss issues:
 - major environmental commitments such as waste treatment and site clean up.¹²⁰

The existing Statements of Accounting Concepts provide some guidance for these items¹²¹, e.g. in relation to whether environment related expenditure should be treated as an expense or capitalised (that is, recorded as an asset) and then depreciated over time, and

¹¹⁷ Whether a non-corporate entity has to comply with accounting standards is dependent upon whether it is a reporting entity. Statement of Accounting Concept No 1 indicates that various factors need to be taken into account in this assessment, including the economic or political importance/significance of the entity as well as the financial characteristics of the entity

¹¹⁸ The only areas in the current accounting standards that could be described as relating directly to the environment are: AAS 7 (and AASB 1022) *Accounting for the Extractive Industries*: how to account for the costs of restoring a site to its original state; and AAS 35 (and AASB 1037) *Accounting for Self-Generating and Regenerating Assets*: how to account for consumable and bearer crops. Wheat is an example of a consumer crop. Apples are an example of a bearer crop. This standard does not apply to non-commercial self-generating and regenerating assets, such as the trees in a national park.

¹¹⁹ Those environmental assets within the definition of the Statements of Accounting Concepts 4.

¹²⁰ Based on R. Gray, J. Bebbington & D. Walters. *Accounting for the Environment*, Chartered Association of Certified Accountants and Paul Chapman Publishing London, 1993, p.7. and ICAA, Environmental Accounting Task Force, *The Impact of Environmental Matters on the Accountancy Profession: Discussion Paper*, 1998, p.15

¹²¹ Statements of Accounting Concepts do not have the force of law (are not mandatory) but are deemed to reflect best practice

how to treat environment related liabilities that will not be settled for some time, such as those that relate to cleaning up contaminated sites. However, the guidance is limited and has tended to show how environmental issues can be considered within the traditional financial accounting systems.

Because of the lack of accounting standards dealing directly and fully with environmental issues, some of the above information is not adequately or consistently presented in financial statements.

Perhaps more importantly, there are many environmental issues that are excluded by the existing accounting framework. The existing accounting standards and conventions mean that many environmental matters are simply not recognised, measured or disclosed.

A commonly used example is the concept of 'materiality'. Under the existing standards only information which is material is required to be disclosed in the financial statements. Information is considered to be material if leaving it out would give a misleading picture of a business operating result or financial position. In practice materiality is measured in financial terms. An item is material if it is more than 5% of an appropriate base, such as operating revenue, profit or a particular class of asset. Under the generally applied thresholds for materiality, most environmental information is not considered to be financially material.

The issue of monetary valuation of environmental assets and liabilities also raises difficulties in financial accounting. Traditional accounting generally only recognises items which have a monetary value. As mentioned previously the estimation of monetary values for environmental assets and liabilities which do not have a market value is difficult and controversial.

While it may be appropriate to include non-monetary measures, or physical measures for environmental information within the traditional financial accounting framework, accountants have limited experience in integrating monetary and non-monetary information in financial statements.

If accounting standards are extended to include environmental information, there are several issues that must be addressed:

- what changes need to be made to current accounting practice to incorporate the environmental implications of reporting entities?
- how are environmental assets and liabilities to be valued?
- how can non-monetary environmental information be incorporated into financial statements?

In summary, there is room for specific guidance to be provided on environmental matters within the existing accounting standards. However, not all environmental matters are covered by existing standards and the standards do not adequately provide for valuation of environmental matters or the inclusion of non-monetary information in the financial statements. To allow for environmental financial accounting there is a need to extend and modify existing accounting standards.

5.6.1 Overseas Experience

Overseas accounting bodies such as the Institute of Chartered Accountants in England and Wales, the Institute of Chartered Accountants of Scotland, the Association of Chartered Certified Accountants in the United Kingdom, and the Canadian Institute of Chartered Accountants are actively pursuing various reporting issues of an environmental and social nature.

The Committee was advised that several countries, including the UK, Canada and the US, have released accounting standards relating to environmental issues.

In addition, there are requirements in several countries for companies to report environmental information to securities bodies. For a number of years, the US Securities and Exchange Commission (SEC) has required disclosure of environmental information in financial statements.

In Canada, the Securities Commission requires public companies to report the current and future effects of environmental protection requirements in an Annual Information Form.¹²²

¹²² KPMG, *Environmental Reporting*, KPMG Denmark, 1997, p. 13

5.6.2 Australian Experience

At the present time neither the Australian Accounting Standards Board nor the Australian Accounting Research Foundation, the bodies responsible for developing accounting standards, have environmental reporting issues on their agendas. Nevertheless, the two major professional accounting bodies - The Institute of Chartered Accountants in Australia (ICAA) and the Australian Society of Certified Practising Accountants - are funding research to consider various environmental reporting issues.

In 1995 the ICAA established the Environmental Accounting Task Force. The Task Force released *The Impact of Environmental Matters on the Accountancy Profession* in January 1998. In this Discussion Paper, the Environmental Accounting Task Force raised a number of environmental reporting issues that it believed require consideration.

The Federal Government's Environment Policy released before the 1998 election committed the government to the development of national environmental accounting standards. Progress is still at an early stage.

Environment Australia sponsored a conference in April 1999 on *Developing an Environmental Accounting Standard for Local Governments*.

5.7 Environmental Matters in Existing Accounting Standards

Whilst there are a large number of accounting standards in place within Australia (currently 37), none are focused directly on the environmental matters that impact on financial statements.

Traditional financial accounting practices have been good at accounting for environmental expenses, such as, maintenance costs, costs of restoration of sites, costs of providing pollution control devices etc. If money is paid to rectify an environmental problem, accounting practices will account for that expenditure. However, there is debate over whether the cost of these items should be expressed as expenses or capitalised and expressed as increases in assets.

Where environmental assets, liabilities, expenses and revenues fall within the limited definitions in the Statements of Accounting Concepts and have readily identifiable market or monetary values these can be included in the financial statements relatively easily. However, as discussed previously, there may be significant difficulties in arriving at valuations where there are no market prices. While there are standards which relate to valuation of assets and liabilities these standards do not address the difficulties associated with valuing environmental assets and liabilities where there is no market price.

These difficulties mean that environmental assets and liabilities and so on, may not be adequately or consistently presented in financial statements.

5.8 Environmental Matters Excluded by Existing Accounting Standards

There are also environmental matters that are excluded from the financial statements because of existing accounting standards. The example of materiality was given previously. Within Australia, the guidelines provided in Accounting Standard AASB 1031 define as material an amount of more than ten per cent of the total equity, or the appropriate total for the respective class of assets or liabilities, or ten per cent of the operating profit or loss. This will tend to preclude the reporting of environmental information which may nonetheless be material in other than financial terms.¹²³

In addition, the definitions of assets and liabilities, and expenses are narrow and mean that many environmental assets and liabilities, contingent liabilities and expenses will not be recognised.

For example, the accounting definition of an asset is that:

- it gives a future economic benefit;
- it is controlled by an entity;
- it arises from a past transaction or other past event.

¹²³ The current standards AASB 1031 and AAS5 define materiality as “that information which if omitted, misstated or not disclosed has the potential to adversely affect decisions about the allocation of scarce resources made by users of the financial report or the discharge of accountability by the management or governing body of the entity”

For environmental accounting, the definition of an asset needs to be broader. Otherwise, it would exclude many environmental assets which, for example, may give a societal benefit but which do not give an economic one. Similarly restrictive definitions exist for liabilities, revenues and expenses.

In Statement of Accounting Concept (SAC) 4, paragraph 27 explicitly states that environmental resources such as air and water are shared and not controlled by the organisation and hence cannot be considered as assets.

The requirement in the definitions that the assets and liabilities be 'controlled by the entity' means that externalities or impacts external to the organisation are not considered. This means that impacts on the environment are not recognised.

Failure to recognise externalities is compounded by the 'entity assumption' which requires the organisation be treated as an entity distinct from its owners, other organisations, and other stakeholders. If a transaction or event does not directly impact on the entity then the transaction or event is to be ignored for accounting purposes.

In addition, the use of the term 'scarce resources' in existing accounting standards tends to recognise only those resources purchased by the organisation. Therefore, resources such as air and ocean water have not traditionally been considered scarce so they have not been valued within traditional accounting practices.

5.9 Focus on Financial Information

The existing accounting standards focus almost exclusively on financial information. For example, the 'assumed focus group' for financial accounting tends to be restricted to stakeholders with a financial interest in the entity specifically to those that make resource allocation decisions. The information that is provided therefore tends to be of a financial or economic nature and aimed towards showing how the organisation has applied the financial resources that have been entrusted to it.¹²⁴

¹²⁴ Statements of Accounting Concepts No. 2, 'Objective of General Purpose Financial Reporting' (paragraph 43) states that the objective of general purpose financial reporting is to provide

However, in the environmental area monetary measures may not always be readily identifiable or appropriate. The financial accounting standard for local government, AAS27, already acknowledges that financial and non-financial measures may be needed in the area of local government accounting. The Committee believes that there needs to be greater emphasis on integrating monetary and non-monetary measures in relation to environmental accounting.

5.10 Other Disclosures

Whilst the majority of corporate disclosure requirements are embodied within Accounting Standards, the Corporations Law does require certain disclosures within the Directors' Reports and Directors' Declarations (both forming part of a corporation's annual report).

5.10.1 Amendment to the Corporations Law

In June 1998 the first disclosure requirement of an environmental nature was added to the Corporations Law. The amendment requires companies to disclose details of their performance in relation to any particular and significant environmental regulation in their annual directors' report.¹²⁵

information useful to users for making and evaluating decisions about the allocation of scarce resources

¹²⁵ *Company Law Review Act* No. 61 of 1998, Section 229(1)(f)

However, the requirements of the amendment are yet to be clarified; terms such as performance, particular and significant have not been defined.¹²⁶ Some guidance has been given by the Australian Securities and Investment Commission (ASIC) in Practice Note 68,¹²⁷ which states that:

- (a) the requirements would normally apply where any entity is licensed or otherwise subject to conditions for the purposes of environmental legislation or regulation;
- (b) the requirements are not related specifically to financial disclosures (eg. contingent liabilities and capital commitments) but relate to performance in relation to environmental regulation. Hence, accounting concepts of materiality in financial statements are not applicable;
- (c) the information provided in the directors' report cannot be reduced or eliminated because information has been provided to a regulatory authority in accordance with any environmental legislation; and
- (d) the information provided in the directors' report would normally be more general and less technical than information which an entity is required to provide in any compliance reports to an environmental regulator.

The guidance provided by Practice Note 68 is limited and recognises that the reporting requirements will differ for each company.¹²⁸ However, ASIC expects full compliance with the spirit, as well as the terms, of the law.

The difficulties with interpretation and potential limitations of the amendment, in terms of the information required and companies required to report (only disclosing entities) clearly demonstrates

¹²⁶ The amendment has been referred to the Parliamentary Joint Committee on Corporations and Securities. The Committee will examine whether companies should be required by Corporations Law to report on compliance

¹²⁷ ASIC. *Practice Note 68 New Financial Reporting and Procedural Requirements*. PN 68.72-75. p. 19

¹²⁸ ASIC. *Practice Note 68 New Financial Reporting and Procedural Requirements*. PN 68.72-75. p. 19 and PricewaterhouseCoopers. *Environmental Reporting required by the Company Law Review Act 1998*. p. 1

how any moves for mandatory reporting must be carefully considered prior to their introduction. However, despite the difficulties with the amendment, it is forcing companies to consider, at least in a small part, the environmental implications of their operations.

The Corporations Law amendment extends environmental reporting in annual reports beyond purely financial disclosures and toward environmental performance reporting.

While the two types of environmental reporting (financial and non-financial) are not necessarily separate they are dealt with separately in this report. There are various issues which are particular to the different types of environmental reporting, including standards and auditing. Over time it is likely that the two types of environmental reporting will increasingly converge.

In particular, it is generally accepted that the main vehicle a company uses for informing the public about its ongoing performance is its annual report and there is evidence that this is one of the first places stakeholder groups look when seeking information about an organisation.¹²⁹ Therefore, to ensure stakeholders have access to environmental disclosures, companies may increasingly include this information in annual reports.

5.11 A New Financial Accounting Standard for the Environment?

In line with the amendments to the Corporation Law discussed above, materiality as provided in the existing accounting standards may not be an appropriate concept for environmental accounting and reporting, whether in monetary or non-monetary terms.

As indicated above the definitions in SACs are restrictive and result in many environmental assets, liabilities, expenses and revenues not being recognised. Before an accounting standard relating to environmental financial accounting could be developed

¹²⁹ Deegan, C., Rankin, M., "The Materiality of Environmental Information to Users of Accounting Reports", *Accounting, Auditing and Accountability Journal*, Vol 10, No. 4, 1997, pp. 562-583. and Tilt, C., "The influence of External Pressure Groups on Corporate Social Disclosure: Some Empirical Evidence" *Accounting, Auditing and Accountability Journal*, Vol 7, No.4, 1994, pp.56-71

the definitions within SACs would need to be amended. This is consistent with the issue raised by the ICAA in The Impact of Environmental Matters on the Accountancy Profession, which queries whether the definitions of assets and liabilities in SAC 4 are appropriate to environmental accounting.

The Committee was advised that it is possible for an accounting standard on environmental accounting to recognise the importance of non-financial measures of environmental impacts, and as mentioned above there is a precedent for non-financial measures being recognised in accounting standards.

Local government in Australia is currently looking at a code of accounting practice for environmental accounting. It is interesting that they have chosen to develop and implement their code at grassroots level rather than lobbying the accounting profession to promulgate an accounting standard.

The Committee recommends that:

Recommendation 5.3:

The government encourage the professional accounting bodies and the accounting standards setting board and other relevant stakeholders to consider a revised concept of materiality and revised definitions of assets, liabilities, revenues and expenses appropriate for environmental accounting.

Recommendation 5.4:

The government encourage the professional accounting bodies and the accounting standards setting board and other stakeholders to develop a new accounting standard that specifically deals with environmental issues.

Recommendation 5.5:

The government consider sponsoring a series of workshops on environmental accounting and reporting specifically targeted at the needs of different industries and stakeholder groups.

5.12 Emerging Trend – Social Accounting

While this report has focused on environmental accounting, sustainability requires that social issues also be taken into consideration. A social accounting standard was released in 1998 by the Council for Economic Priorities.¹³⁰ The standard entitled Social Accountability SA 8000 focuses on issues associated with human rights, health and safety, and equal opportunities.

According to the Green Futures magazine (April 1999), SA8000 requires the audit of site performance against the principles of the United Nations Declaration of Human Rights, the International Labour Organisation conventions and the United Nations Convention on the Rights of the Child. There are strict procedures laid down to ensure that those carrying out the audit (who must receive special training to qualify) take into account local opinion and operations.

¹³⁰ The Council on Economic Priorities (CEP) is an organisation which is largely based in the USA. CEP describes its mission as providing accurate and impartial analysis of corporate social performance and promoting excellence in corporate citizenship. CEP also produces a *Corporate Report Card* in which various companies are rated on issues such as environmental stewardship and treatment of employees. For further details see www.cepnyc.org

CHAPTER 6 ENVIRONMENTAL PERFORMANCE REPORTING

6.1 Introduction

The objective of environmental performance reporting is to provide information about the environmental impact and performance of an entity so that stakeholders can assess their relationship with the reporting entity.¹³¹ Over the last decade there has been increasing interest in companies reporting on their environmental performance to stakeholders (the various stakeholders are discussed in chapter 2).

There are various types of environmental performance reporting, from very specific reports to meet legislative requirements, to more comprehensive company environmental performance reports. The latter is often provided in a separate stand-alone environmental report or included within a company's annual report.

Company environmental performance reporting typically provides information of a non-financial nature such as details of environmental policies, environmental management systems, resource usage, environmental risks and impacts, emission levels of particular substances, environmental incidents and non-compliances, environmental awards, stakeholder engagement, performance against best practice guidelines, life-cycle analysis.

Therefore, company environmental performance reporting has tended to focus on eco-efficiency issues. Eco-efficiency is concerned with maximising the use of a given quantity of resources and minimising the environmental implications of using the resources.

Limited information of a financial nature has also been provided in stand-alone environmental reports, such as fines incurred for

¹³¹ 'Stakeholders' are typically defined as those parties that have an impact upon, or are impacted by the operations of an entity. As each entity will have a multitude of stakeholder groups with different information demands, some prioritising of information demands is necessary

breaches of environmental laws, amounts spent on recycling initiatives, provisions for restorations, and decommissioning of facilities.

Predominantly, environmental performance reports provide information on a voluntary basis in the absence of any legislative requirements.

The Committee was advised that the benefits of company environmental performance reporting include:

- improved environmental performance as environmental management systems are exposed to greater scrutiny;
- improved shareholder value as a result of demonstrated commitment to environmental improvement;
- enhanced reputation with stakeholders as a result of demonstrated commitment to good environmental performance;
- market opportunities for environmentally responsible products; and
- easier access to markets and finance and insurance.¹³²

There are also costs associated with company environmental reporting. In particular, there are direct costs in producing an environmental report. However, according to Professor Gray from the University of Dundee:

*a wide range of experience has shown that environmental reporting need involve relatively small costs to the reporting organisation.*¹³³

Some companies also perceive there may be costs associated with the disclosure of negative information about environmental performance.

¹³² NSW Environmental Protection Authority. 1997. *Corporate Environmental Reporting: Why and How?*, and submission by Chris Fayers, Monash University. 7 May 1999

¹³³ Submission by Professor Gray, K. Bebbington and D. Collison from University of Dundee, Faculty of Accountancy and Business Finance. 17 August 1998. p. 2

6.2 Mandatory Environmental Performance Reporting

Internationally, only a couple of countries have introduced mandatory environmental performance reporting. However some other countries require specific environmental reporting such as pollutant inventories.

6.2.1 Overseas Experience

Environmental Reporting Legislation

Several European countries, including Denmark and the Netherlands, have introduced mandatory environmental reporting requirements.

For example, in 1995 the Danish Parliament adopted the Green Accounts Regulation¹³⁴ which came into force on 1 January 1996. The purpose of the regulation is to:

- ensure easy access by the general public to documentation of the environmental performance and use of resources by certain enterprises; and
- improve the enterprises' knowledge of their own environmental performance through a focus on resource consumption, choice of raw material and pollutant emissions.

The Green Accounts Regulation requires a number of major polluting companies to prepare green accounts (around 1400 companies). The environmental accounts contain figures for:

- consumption of water, energy and raw materials;
- significant types and volumes of pollutants emitted to air, water and soil; and
- significant types and volumes of pollutants forming part of the production processes, the waste or the company's productions.

The environmental accounts must be submitted annually with the financial accounts and made available to the public.

¹³⁴ Information provided to the Committee by the Danish Environmental Protection Authority, Ministry of Environment and Energy

Pollutant Inventories

A number of countries¹³⁵ have developed pollutant inventories which require companies to report annually on their emissions of certain substances into the environment. The best known of these pollutant inventories is the US Toxics Release Inventory (TRI). The TRI requires industrial facilities using more than a specified amount of the substances listed on the TRI (more than 600 substances) to report on releases to the air, land and water. In addition, facilities must report movements of waste going for treatment or disposal at an off-site facility. Facilities must also report on pollution prevention activities and chemical recycling.

In the US the reports are submitted annually to the Environmental Protection Authority (EPA) and state governments. EPA compiles the data and makes it accessible to the public.¹³⁶

6.2.2 Australian Experience

As stated previously, corporate disclosure requirements are embodied within Accounting Standards and Corporations Law. Government can also enact disclosure requirements, apart from the annual report, covering all entities, including those that are not corporations.

Presently, apart from some disclosure requirements relating to the extractive industries (specifically, in relation to the entity's provision for restoration) there are no accounting standards relating to environmental disclosures. As outlined in the previous chapter, the recent amendment to the Corporations Law requires very limited environmental performance disclosure. The amendment requires companies to disclose details of their performance in relation to any particular and significant environmental regulation in their annual directors' report.¹³⁷

In addition, there are several requirements for specific environmental reporting as illustrated below.

¹³⁵ Pollutant inventories exist in Canada, Mexico, the US and the UK

¹³⁶ US EPA. *What is the Toxics Release Inventory?* www.epa.gov/opptintr/tri/ p.1

¹³⁷ *Company Law Review Act* No. 61 of 1998. Section 229(1)(f)

Pollutant Inventory

The National Environment Protection Measure for the National Pollution Inventory (NPI) was recently established in Australia. The Commonwealth, states and territories are cooperatively implementing the NPI.

The NPI requires Australian industrial facilities using more than a specified amount of the substances listed on the NPI (which are fairly restricted) to report annually on emissions of these substances, to the air, land and water, from 1 July 1998. Emissions data from the first NPI reporting year, 1998-99, will be available on the Internet in early 2000. The NPI aims to provide information to industry, government and the community on pollution sources. By making companies more aware of their pollutant emissions the NPI aims to encourage waste minimisation and cleaner production.¹³⁸

Specific Environment Reporting Legislation

For over ten years the Victorian EPA has required various forms of environmental monitoring and reporting. Traditionally EPA reporting requirements under licences (approximately 1200 industrial premises) have focused on assessment of discharges to the environment against allowable discharge limits.

Reporting generally only included analysis of environmental performance when discharges were in breach of licence conditions and corrective action was implemented. More recently, however, EPA reporting requirements are moving away from compliance reporting towards more comprehensive and integrated environmental reporting.

An example of one of the mechanisms promoting more comprehensive and integrated environmental reporting is the Environment Improvement Plan (EIP). The EIP assists companies in assessing their environmental performance and communicating this to the local community. Developing an EIP requires a

¹³⁸ Environment Australia. *NPI Guide 1998*. p.1. and the NPI is modelled on the United States Toxic Release Inventory (TRI). There is much evidence that the requirement to report against the TRI has actually led to a reduction in emissions and real cost savings. The reason is that companies are aware that bad publicity will follow should they be shown to be associated with high emission levels. To counter this, various recycling endeavours are implemented which actually lead to reduced materials and disposal costs

company to understand the environmental impacts of its operations, analyse its performance and identify specific actions to address its environmental impacts. Commitment to environmental improvement through the EIP is enhanced by ongoing consultation with, and environmental reporting to, the local community.

The EPA is moving toward annual environmental reporting through the accredited licensee scheme. The accredited licensee scheme represents an innovative approach to regulation that provides Victorian companies which are licenced, with the opportunity to move into a form of partnership with EPA and the community. Under the scheme, companies with a commitment to environmental protection, demonstrated through the development of an EIP and an environmental management system, can apply for accreditation and receive a reduction in their licence fee. Accredited licensees are required to provide a public environmental performance report authorised by a senior company executive, annually.¹³⁹

The recently reviewed Prescribed Waste Regulations include a requirement for producers of prescribed waste (listed in the Regulations) to report annually on the production of waste, from 1 July 1999. Producers of prescribed waste need to report if they transport prescribed waste from their premises more than five times in a year. To encourage integrated reporting, the timing of reporting is coordinated with the timing of EPA licence reporting and NPI reporting.

Until recently, the NSW EPA required annual reporting of compliance with licence conditions by licensed premises (approximately 5000¹⁴⁰). Under the new load based licensing scheme around 1000 of the largest industrial premises in NSW will be required to report on emissions of assessable pollutants. NSW EPA will be making data on emissions of assessable pollutants from licensed premises publicly available on its Internet site¹⁴¹.

¹³⁹ Letter from EPA 13 May 1999

¹⁴⁰ Transcript of evidence, Drew Collins, NSW EPA, 24 November 1998

¹⁴¹ Ibid

6.3 Summary of Mandatory Reporting Requirements in Victoria

Victorian businesses are subject to various mandatory environmental performance reporting requirements. Companies required to report under the Corporations Law need to report on details of their performance in relation to any particular and significant environmental regulation in their annual directors' report.¹⁴² Businesses licensed by EPA need to report according to their licence conditions and accredited licensees need to produce an annual environmental performance report.

In addition, businesses producing more than a specified amount of emissions must report under the National Pollution Inventory and businesses transporting prescribed waste from their site more than five times a year need to report to EPA on the production of prescribed waste at their site.

It is important that there is consistency between all these requirements in terms of the details about performance information to be reported and the timing of reporting. This will allow businesses to meet their reporting requirements more efficiently and effectively. It will also provide for greater consistency and comparability of information across all types of businesses.

The Committee recommends that:

Recommendation 6.1:

The Environment Protection Authority ensure consistency in reporting requirements under EPA licences, EPA accredited licences and the Prescribed Waste Regulations.

¹⁴² *Company Law Review Act* No. 61 of 1998, Section 229(1)(f)

Recommendation 6.2:

The Environment Protection Authority liaise with the National Environment Protection Council to ensure consistency between EPA reporting requirements and National Pollutant Inventory requirements.

Recommendation 6.3:

The Environment Protection Authority liaise with the Australian Securities and Investments Commission and other relevant stakeholders to ensure consistency between EPA reporting requirements and requirements under the Corporations Law.

6.4 Voluntary Environmental Performance Reporting

6.4.1 Guidance and Programs

Internationally there have been a number of initiatives to establish voluntary guidelines for company environmental reporting (see Appendix 5). The various guidelines address a range of issues in relation to company environmental reporting including structure and content of environmental performance reports.

Possibly the most widely recognised guideline is the UNEP Technical Report 24 Company Environmental Reporting: A Measure of the Progress of Business and Industry Towards Sustainable Development. The guideline contained a list of 50 reporting criteria to be considered in the preparation of environmental reports.¹⁴³

More recently the focus of voluntary reporting has shifted to sustainability reporting which includes the social performance of a company. The Committee notes that the inclusion of social aspects

¹⁴³ The UNEP/SustainAbility document lists 50 core reporting elements under 9 main headings, these being Management Policies and Systems; Input/Output Inventory; Process Management; Outputs; Products; Finance; Stakeholder Relationships and Partnerships; Sustainable Development; and Report Design

in company reporting has been on the agenda for more than a decade.¹⁴⁴

The principle aim of sustainability reporting is to integrate economic, environmental and social information about the performance of a company.

In March 1999, the Global Reporting Initiative (GRI), convened by the Coalition for Environmentally Responsible Economies (CERES), released the exposure draft of the Sustainability Reporting Guidelines¹⁴⁵. The key objectives of the GRI are:

- to design globally applicable guidelines for preparing enterprise-level sustainability reports; and
- elevate enterprise-level sustainable development reporting to the level of general acceptance and practice now accorded financial reporting.

The GRI highlights the difficulty of establishing the link between economic, environmental and social areas and incorporating that into decision making.

The Sustainability Reporting Guidelines, recommend specific data be reported and include explanatory notes to assist in interpreting and compiling the information. The Guidelines incorporate the views of a large number of stakeholders. A public comment and pilot-testing period will enable stakeholders to provide additional feedback and experience in relation to the guidelines. The guidelines will be revised and will be re-released in early 2000. At this stage there appears to be wide acceptance of the GRI Sustainability Reporting Guidelines.

In addition, Triple Bottom Line¹⁴⁶ reporting encourages reporting against a range of economic, environmental and social performance indicators.

¹⁴⁴ R. Gray, D. Owen & C. Adams, *Accounting and Accountability*, Prentice Hall Europe, 1996, p. 3

¹⁴⁵ Global Reporting Initiative. *Sustainability Reporting Guidelines, Exposure Draft for Public Comment and Pilot Testing*. March 1999

¹⁴⁶ J. Elkington, *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*, Capstone Publishing, 1997

While some companies including Shell, The Body Shop and South African Brewing have attempted sustainability reporting, the UNEP/SustainAbility Engaging Stakeholders: The 1997 Benchmark Survey found little evidence of:

*real efforts to develop and plot progress against sustainability indicators.*¹⁴⁷

Sustainability reporting to date has tended to involve compilation of information on economic, environmental and social performance without integration. There needs to be a comprehensive and systematic methodology for integrating the major aspects of sustainability.¹⁴⁸

Sustainability reporting is discussed in more detail in Appendix 6.

6.5 Other Voluntary Environmental Performance Reporting

6.5.1 Eco-Management and Audit Scheme (EMAS)

EMAS was established by European Economic Community (EEC) regulation in 1993 and came into force in 1995. The regulation allows for voluntary participation by companies in the industrial sector, in the EMAS.

The objective of the scheme is to promote continuous improvements in the environmental performance of industrial activities by:

- (a) the establishment and implementation of environmental policies, programs and management systems by companies in relation to their sites;
- (b) the systematic, objective and periodic evaluation of the performance of such elements; and
- (c) the provision of information on environmental performance to the public.¹⁴⁹

Once an organisation participates in the EMAS the various requirements become mandatory. One of the requirements is that

¹⁴⁷ UNEP/SustainAbility, *Engaging Stakeholders: The 1997 Benchmark Survey*, 1997. p. 5

¹⁴⁸ Adams, R. 1999. CERES GRI Sustainability Reporting Guidelines. *Environmental Accounting and Auditing Reporter*. Vol. 4. Issue No. 3. March. p. 2

¹⁴⁹ Council Regulation (EEC) No 1836/93 of 29 June 1993 *allowing voluntary participation by companies in the industrial sector in a community eco-management and audit scheme*

organisations produce an environmental statement or report, to the public. The entire EMAS program, as well as the environmental report, has to be audited by an independent accredited environmental verifier.

6.5.2 Industry Codes of Practice

Industry associations have become important vehicles for encouraging environmental self-regulation by businesses, particularly through the adoption of codes of practice and covenants. According to the United Nations Environment Program:

*the contribution that codes of practice can make to improving environmental performance is being recognised.*¹⁵⁰

Internationally, industry codes of practice in relation to environmental management and reporting have been developed in a number of sectors including the chemicals, forestry, oil, gas and minerals sectors. For example the European Chemical Industry Council (CEFIC) has developed guidelines on environmental reporting which propose a common structure and contents for corporate environment reports. The chemical industry worldwide has adopted the Responsible Care Program aimed at environmental improvement.

In Australia, the Minerals Council of Australia (MCA) was instrumental in the development of the Australian Minerals Industry Code for Environmental Management in 1996. The development of the Code recognised the need for the minerals industry to achieve environmental excellence and to be open and accountable to the community. Adoption of the Code is voluntary and most large Australian companies involved in mineral exploration and development have become signatories to this Code.

One requirement of the Code is that signatories demonstrate:

commitment to the Code's principles by reporting the company's implementation of the Code and environmental

¹⁵⁰ Fritz Balkau, United Nations Environment Program. *Groundwork*. Australian Minerals and Energy Environment Foundation. Number 3, Volume 2 March 1999. p. 18

*performance to governments, the community and within the company.*¹⁵¹

The mining companies have led the way in environmental performance reporting in Australia.

While industry codes of practice may require environmental reporting, this approach remains limited to a few sectors, in a small number of countries. Another shortcoming of industry codes of practice is the lack of monitoring of implementation and the lack of compulsion for implementation once a code has been adopted. This can result in the code of practice being little more than a public relations exercise.¹⁵²

The World Wide Fund for Nature (WWF) Australia recently released a Scorecard which assesses the environmental reports of signatories to the Australian Minerals Industry Code for Environmental Management. While the Scorecard assesses the environmental reports and not environmental performance of signatories, WWF sees this assessment as an important element in monitoring the effectiveness of the Code:

*Without any comparative assessment of the reports, the only vehicle available to communicate performance, WWF believes the Code is unable to achieve the goal of continual improvement in the industry.*¹⁵³

6.6 Environmental Reporting Awards

Environmental reporting awards provide guidance and encouragement for company environmental performance reporting. Guidance is provided through the criteria on which environmental reports are judged and on the basis of past winners and comments from judges.¹⁵⁴

A number of countries have introduced environmental reporting awards schemes. The Association of Chartered Certified Accountants (UK) has been running environmental reporting awards since 1991. Dutch and Danish reporting award schemes

¹⁵¹ Australian Minerals Industry. Code for Environmental Management. December 1996

¹⁵² Balkau, op. cit., p. 18

¹⁵³ WWF *Mining Environmental Reports Scorecard: Ore or Overburden*. May 1999
Adams. 1999. Anglian Water Scoops the Honours at this Year's ACCA Awards. Environmental Accounting and Auditing Reporter. Vol 4. Issue No 3. March

followed in 1995. A Norwegian scheme started in 1996 and schemes in other European countries are being established. A European environmental reporting award scheme was introduced in 1996-97.

The objectives of the award schemes are broadly similar: to identify and reward innovative examples of corporate environmental reporting. By doing so the sponsoring bodies seek to popularise and improve the practice of environmental reporting.¹⁵⁵

Australia also has Environmental Reporting Awards. Such awards were introduced in 1996 by the Australian Minerals and Energy Environmental Foundation, and by Annual Reports Award Incorporated.

6.6.1 Overseas Experience

World wide, the number of companies voluntarily producing environmental performance reports is large and is continuing to expand. For example, the UNEP/SustainAbility, Engaging Stakeholders: The 1997 Benchmark Survey, assessed 100 company environmental reports from a variety of sectors in eighteen different countries.¹⁵⁶

According to the Benchmark Survey there has been dramatic improvement in the quality of company environmental reports. However, it is also noted that company environmental reporting is:

*a journey that has only just begun.*¹⁵⁷

6.6.2 Australian Experience

Australia has tended to lag behind many other developed countries in both quantity and quality of environmental reports. However, a number of Australian companies have produced stand-alone company environmental reports.

Companies that have led the way in advancing the practice of environmental reporting within Australia have predominantly

¹⁵⁵ ACCA Website: www.acca.org.uk/technical/environment/era_awards. May 1999

¹⁵⁶ UNEP/SustainAbility, *Engaging Stakeholders: The 1997 Benchmark Survey*, 1997. p. 3

¹⁵⁷ UNEP/SustainAbility, *Engaging Stakeholders: The 1997 Benchmark Survey*, 1997. p. 3

come from the minerals and energy sector. Companies at the forefront of environmental performance reporting include WMC Ltd¹⁵⁸, BHP, Rio Tinto, ICI Australia and Pacific Power.

While the number of environmental performance reports is increasing and the quality of many of these reports has improved there are still a number of issues to be resolved.

Initially, there were many criticisms that environmental disclosures were overly self-laudatory and typically of little value in assessing corporate environmental performance.¹⁵⁹ It was not uncommon to hear the various corporate environmental disclosures being referred to as green glossies.

Recently there has been an improvement in the objectivity of voluntary environmental disclosures (for example, a number of organisations are disclosing information about environment-related fines, details of particular environmental incidents, etc), however, there is still scope for improvement.

6.7 Uniform Standards for Environmental Reporting

Companies are still uncertain about what they should be reporting. Despite the plethora of environmental performance reporting guidelines there is no universally accepted approach. The adoption of uniform standards would provide companies with certainty as to reporting requirements.

Submissions indicated that the benefits of company environmental performance reporting are enhanced when the reporting process is transparent, consistent and comparable across companies, industry sectors and countries.

From an accounting perspective it is generally accepted that information should be comparable across time and between

¹⁵⁸ WMC Ltd has been the recipient of a number of environmental reporting awards

¹⁵⁹ For example, see Craig Deegan and Michaela Rankin, *The materiality of environmental information to users of annual reports*. Accounting, Auditing & Accountability Journal. Vol 10, No 4, 1997. p. 562

entities.¹⁶⁰ To date, comparability has been an attribute that has been lacking in respect of environmental disclosures. Many organisations select their own unique metrics and performance indicators which means that benchmarking is difficult, if not impossible. Given that the reports should provide a basis for stakeholders assessing performance this is an obvious limitation.

Professor Davies from Monash University stated that corporate reporting must address a common set of criteria and standards otherwise it will be difficult to assess those who are seriously addressing environmental issues and those who are not.

There appears to be increasing impetus for the adoption of a standard for company environmental reporting. In January 1999, the Environmental Taskforce of the European Federation of Accountants (FEE) issued a Discussion Paper, Towards a Generally Accepted Framework for Environmental Reporting.

*FEE observe that preparers of environmental reports want confirmation that their reports are effective, and that users in turn are demanding more consistency in the way in which environmental issues and performance are measured and reported. FEE argues that a formal set of recognised reporting principles and standardised reporting framework should help overcome any perception that environmental reports lack credibility.*¹⁶¹

The recent publication of the GRI Sustainability Reporting Guidelines is also focusing attention on the issue of standardised reporting.¹⁶²

Most submissions to the Inquiry indicated support for uniform standards for company environmental reporting and suggested that a uniform set of standards or guidelines should be developed and that these standards should be developed jointly by the various stakeholders including government, industry, community and the accounting profession.

¹⁶⁰ Within Australia *Statements of Accounting Concepts 3: Qualitative Characteristics of Financial Information* indicates that comparability is one of the qualitative attributes that financial accounting information should possess

¹⁶¹ FEE. 1999. *Discussion Paper Toward a Generally Accepted Framework for Environmental Reporting*. January. p. 5

¹⁶² Adams, R. 1999. Dealing with a tidal wave. *Environmental Accounting and Auditing Reporter*. Vol. 4. Issue No. 3. March. p. 1

It is worth noting that the Environment Policy announced by the Federal Government in August 1998, committed the government to develop National Guidelines for Public Environmental Reporting. The guidelines will include:

- discussion on the need for and the costs and benefits of environmental reporting;
- generic environmental performance indicators (not sector specific indicators);
- methodology for producing an environmental report; and
- a subset of reporting items for small and medium sized organisations.¹⁶³

It is intended that the guidelines be voluntary and that industry associations would endorse the guidelines and promote them to their members. This would be facilitated by government funding of a position within three key industry associations to promote and disseminate the guidelines.

Development of national guidelines would eliminate the need for Victoria to develop standards unilaterally. The Federal Department of Environment believes that this approach will save duplication of time and effort between states and territories in developing their own guidelines.¹⁶⁴ National guidelines will only be developed after consultation with state governments and other stakeholders around Australia.¹⁶⁵

There are advantages and disadvantages to Australia developing its own national guidelines. The advantage is that the guidelines can incorporate issues and practices unique to Australia. However, many companies producing environmental reports at present, are multinational with sites in various countries. The adoption of international standards would assist multinationals in preparing reports and would also facilitate comparison between countries.

Another disadvantage of Australia developing national guidelines is that, as indicated above, there already exist a number of

¹⁶³ Environment Australia. 1999. *Request for Tender – National Guidelines for Public Environment Reporting*. No. 9/99. p. 2

¹⁶⁴ Transcript of evidence, Ms Smith, Department of Environment, 25 November 1998, p. 3

¹⁶⁵ Environment Australia, op. cit., p. 2

reporting standards or guidelines which have been developed by expert bodies or industry sectors around the world. Many of these guidelines have been tried and tested through voluntary reporting initiatives. A number of submissions received highlighted that existing standards and guidelines are appropriate and sufficient.

According to the Shell Company of Australia, there are already adequate mechanisms for corporate environmental reporting. Similarly, Professor Gray from the University of Dundee told the Committee:

*there are so many good guidelines on environmental reporting ... that any further production of such guidelines seems entirely wasteful. Most guidelines are broadly similar in content and tend only to differ in detail and emphasis.*¹⁶⁶

Shell highlighted another difficulty in adopting a uniform standard, i.e. that as data and systems improve the requirements for environmental reporting will change. The company considers that for this reason it is not practical or sensible to develop or adopt standards and environmental reporting should instead follow best practice.¹⁶⁷

This is an important issue and careful consideration will be required before any standard is adopted. Perhaps one way of overcoming this difficulty is to ensure periodic review and revision of the standard.

A difficulty in adopting a uniform standard is the need for it to be appropriate for all companies in all industry sectors. Alternatively, different standards may be adopted by different industry sectors, in the same way that EMAS, which is only for the industrial sector, is being developed for other sectors such as the finance sector (FEMAS).

Several submissions suggested that environmental reporting standards should be industry specific. According to Ms Raar of Deakin University:

¹⁶⁶ Submission by Professor Gray, K. Bebbington and D. Collison from University of Dundee, Faculty of Accountancy and Business Finance. 17 August 1998

¹⁶⁷ Submission by Shell Company of Australia. 30 June 1998

*uniform standards for industry groups... would assist users for purposes of consistency and comparability.*¹⁶⁸

Pricewaterhouse Coopers state that minimum standards along industry lines offer the greatest potential for success.¹⁶⁹

Submissions also suggested that industry associations may be effective in the development and promotion of environmental reporting standards.

In several submissions it was suggested that, in formulating guidelines or standards for environmental performance reporting, it was important to determine the users and the purpose of the information.¹⁷⁰

The Committee recommends that:

Recommendation 6.4:

The government support the development by Environment Australia of National Guidelines for Public Environmental Reporting.

6.8 Voluntary or Mandatory Reporting

A perceived problem of the various guides is that they are voluntary and therefore business will often refrain from disclosing particular information if it is unfavourable to its corporate image. According to a 1996 survey the majority of users of environmental information in annual reports support a mandatory approach.¹⁷¹

A number of submissions supported legislative backing for standards for company environmental reporting. There are several advantages to mandatory environmental reporting.

Mandatory environmental reporting would ensure all companies report. One submission notes that mandatory reporting would be

¹⁶⁸ Submission by Ms Raar Deakin University, 22 June 1998

¹⁶⁹ Submission by PricewaterhouseCoopers, 15 February 1999

¹⁷⁰ 15 February 1999 and Transcript from Roger Burritt, Australian National University, 25 November 1998

¹⁷¹ M. Rankin, *Corporate Reporting – the Green Gap*, ICAA, 1996, in ICAA, Environmental Accounting Task Force, *The Impact of Environmental Matters on the Accountancy Profession: Discussion Paper*, 1998, p. 9

more effective as voluntary compliance would not obligate less conscientious operators to report.¹⁷²

In addition, by requiring all companies to report, reporting companies are not disadvantaged compared with non-reporting companies. Professor Gray advised that under voluntary reporting only the leading companies report while the majority of companies have a free ride.¹⁷³

The UNEP/SustainAbility, *Engaging Stakeholders: The 1997 Benchmark Survey* concludes with 12 recommendations for companies, industry associations and governments. The single recommendation for governments is that they:

review the need for new mandatory reporting requirements.

The recommendation goes on to state:

*Because of the 'free rider' syndrome, where reporting companies are disadvantaged in comparison with some non-reporting companies, national and international government agencies are likely to come under growing pressure to review the need for regulated reporting requirements for key industry sectors. They should prepare for the challenge, wherever possible working closely with companies which are already reporting.*¹⁷⁴

In the survey mentioned above, the majority of businesses do not support mandatory disclosure of environmental information in the annual report.¹⁷⁵

Several submissions did not support mandatory environmental reporting. Shell stated that because of the constantly changing market place in which environmental reporting is taking place it is neither practical nor sensible to regulate. At present the process of environmental reporting is arguably one of continuous improvement.

¹⁷² Submission by Victorian National Parks Association, 30 June 1998

¹⁷³ Submission by Professor Gray, K. Bebbington and D. Collison from University of Dundee, Faculty of Accountancy and Business Finance. 17 August 1998. p. 3

¹⁷⁴ UNEP/SustainAbility, *Engaging Stakeholders: The 1997 Benchmark Survey*, p. 29

¹⁷⁵ M. Rankin, *Corporate Reporting – the Green Gap*, ICAA, 1996, in ICAA, Environmental Accounting Task Force, *The Impact of Environmental Matters on the Accountancy Profession: Discussion Paper*, 1998, p. 9

In addition, it has been argued that mandatory reporting will result in companies providing only the statutory minimum information. Mandatory reporting will not invoke exploration and experimentation which is currently a feature of voluntary environmental performance reporting.

The Committee recommends that:

Recommendation 6.5:

The government encourage voluntary environmental reporting by publicly listed companies and the public sector (not already subject to mandatory reporting requirements) with the intention of mandating, within 10 years, disclosure of environmental information through the Environment Protection Act and require more detailed reporting under the Corporations Law.

As discussed under mandatory environmental performance reporting, consistency in the type of information presented is essential if progress is to be evaluated over time and across companies. It is important that voluntary environmental performance reporting, whether undertaken independently or as part of an industry code of practice, becomes increasingly consistent in the type of information required.

Voluntary environmental performance reporting also needs to be consistent with the mandatory requirements. For example, a company may report voluntarily and also be required to report under the National Pollution Inventory. Therefore, consistency across all the reporting requirements will provide more meaningful information with greater efficiency.

6.9 Government Support for Voluntary Reporting

As mentioned, a number of submissions stated that government, along with other stakeholders should develop uniform standards for environmental reporting.

In addition, submissions suggested a variety of ways in which government should encourage, support or promote company

environmental reporting. In particular it was suggested that government agencies should undertake environmental reporting, thereby leading by example.

According to NSW EPA if the government does not show leadership, it undermines other educational programs.¹⁷⁶ Further, through its purchasing policy, government can encourage environmental reporting by requiring suppliers and contractors to report.

As mentioned, environmental reporting awards aim to guide and encourage better quality environmental disclosures. One way this could be achieved would be for the government to sponsor awards or provide incentives to award winners.

The government could also support and encourage environmental reporting through the provision of funding and grants. For a number of years the Victorian EPA has run the Cleaner Production Partnerships Program which provides grants for companies to undertake cleaner production projects. A similar approach could be taken to provide grants for environmental reporting.

Alternative funding to support environmental reporting could also be investigated. For example, the Federal Government has provided funding for an officer to work with three industry associations to encourage the associations' members to develop environment reports.¹⁷⁷

The Committee recommends that:

Recommendation 6.6:

The government give consideration to financially supporting and promoting environmental reporting awards.

Recommendation 6.7:

The Victorian Government support the Federal Government incentives to industry groups to assist their members to

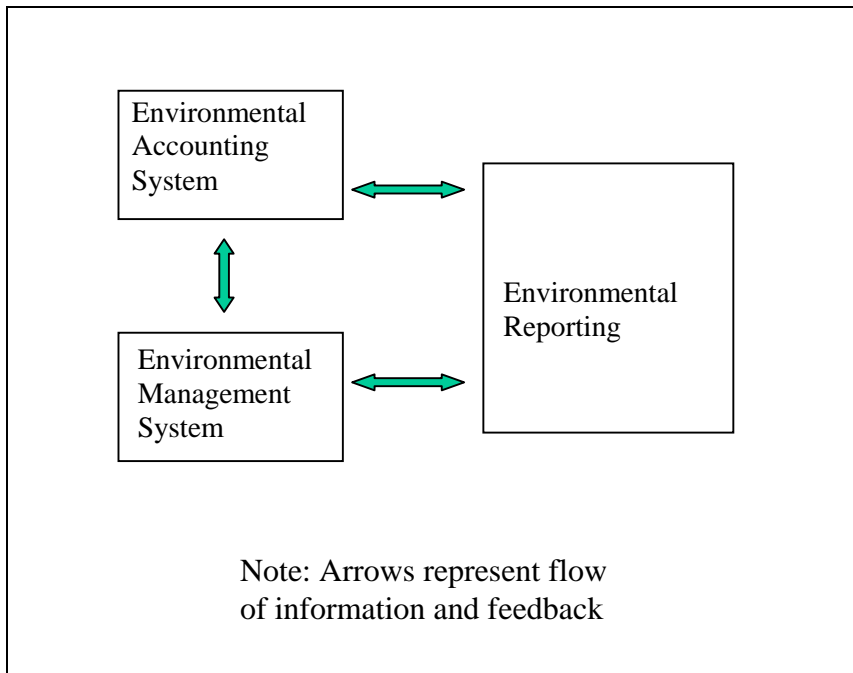
¹⁷⁶ Transcript of evidence. Mr Collins, NSW Environmental Protection Authority, 24 November 1998

¹⁷⁷ Ibid

**implement the National Public
Environmental Reporting Guidelines.**

6.10 Environmental Management

An area closely linked to environmental accounting and reporting is environmental management. According to the Institute of Chartered Accountants in Australia, in *The Impact of Environmental Matters on the Accountancy Profession: Discussion Paper*, these areas are interrelated¹⁷⁸.



6.11 Environmental Management Systems

An environmental management system (EMS) provides a framework for managers to take environmental matters into consideration in their decision making. EMS are defined in the Australian Standards IAS 14001 and IAS 14004 as:

*Part of the overall management system that includes organisational structure, planning activities, responsibilities, practices procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy.*¹⁷⁹

¹⁷⁸ ICAA, Environmental Accounting Task Force, *The Impact of Environmental Matters on the Accountancy Profession: Discussion Paper*, 1998. p. 8

¹⁷⁹ AS/NZS ISO 14001. *Environmental Management Systems – Specification with Guidance for Use*. Standards Australia and AS/NZS ISO 14004: *Environmental Management Systems – General Guidelines on Principles, Systems and Supporting Techniques*. Standards Australia

As some witnesses pointed out to the Committee there are a number of benefits associated with implementing an EMS. The rigour imposed by the EMS will assist businesses to manage their environmental impacts and improve their environmental performance.

An environmental management system will provide companies with the information required to generate an environmental report. According to Clayton Utz, the new requirements in the Corporations Law to report on environmental performance:

highlight the importance of developing and implementing adequate Environmental Management Systems (EMS) within existing corporate operating procedure¹⁸⁰.

The Committee notes that an EMS does not necessarily result in improved environmental performance or improved environmental reporting. The success of the EMS in achieving these outcomes will be dependent on the quality of the EMS, the commitment of management to the EMS and the extent to which it is integrated into business management systems and business decision making processes.

Another benefit of an EMS which is becoming increasingly important is its role in demonstrating commitment to good environmental performance. Increasingly, customers are demanding that businesses demonstrate that they are operating in an environmentally sound manner. To access these consumers, companies need to demonstrate their environmental credentials to the market.

For example:

Bonlac Foods environmental record and reputation played an important role in being the Official Dairy Supporter (of the Sydney Olympics).¹⁸¹

Entire markets may demand environmentally friendly goods and services. As stated earlier European and some Asian countries are considering requiring producers and products to be

¹⁸⁰ Clayton Utz. *Environment Issues*. August 1998. p. 1

¹⁸¹ Letter from Bonlac Foods. 29 April 1999

environmentally sound and the European Union is currently working on a directive in this area.

According to a representative from the Department of Natural Resources and Environment:

*A major driver in the private sector in the future will be environmental management systems from the point of view of market access. A number of companies, land holders and producers are already involved in ISO 14000 reporting so they can present their products to the marketplace based on sustainable practices and maximising their ability to capitalise on the clean, green image of their produce.*¹⁸²

Bonlac Foods advised the Committee that:

*Environmental performance including ISO 14000...is a marketing advantage for our company, particularly in relation to exports.*¹⁸³

The Committee believes that, if Victorian producers and products are to remain competitive within Australia and overseas it is vital that businesses and particularly primary producers are able to demonstrate their commitment to good environmental performance. A certified EMS can demonstrate such commitment.

6.12 Implementation of EMS

An EMS comprises:

- a policy document or mission statement that outlines the environmental aims and the commitment to the environment;
- a review of existing activities and their environmental impacts;
- a strategic plan for achieving the objectives in the mission statement that has specific quantifiable goals. These goals should show how the results of the review will be improved; and

¹⁸² Transcript of evidence. Mr Sutherland DNRE. 11 March 1999

¹⁸³ Letter from Bonlac Foods. 29 April 1999

- a management strategy that outlines responsibilities, procedures and tools required to meet the goals that have been established.

Some EMS also include a statement of environmental performance which is publicly available.

An EMS is a way of incorporating environmental information into every facet of an organisation's decision making. As EMS is based on the same decision making processes that are used for continuous improvement and applies them to environmental performance.

The extent that an EMS is adopted will vary considerably depending on the type and size of the organisation. Large companies tend to adopt more sophisticated EMS while smaller organisations are likely to adopt smaller EMS appropriate to their operations.

6.12.1 Overseas Experience

There are two widely recognised standards for environmental management systems. The International Standards Organisation (ISO) 14001 is a standard applicable worldwide. The Eco-Management and Audit Scheme (EMAS) is applicable within the European Union.

ISO 14001

The ISO 14000 series covers various aspects of the environment as it relates to business. ISO 14001 is a standard for environmental management.

The advantage of adopting ISO 14001 is that it gives a standard for environmental management against which benchmarks can be established. ISO 14001 also provides for independent accreditation, although certification under ISO 14001 by organisations is voluntary.

The advantage of seeking accreditation is that it provides stakeholders with independent assurance that appropriate environmental management processes are in place. It can also be used as a marketing tool, for example, to attract outside investors

to invest in a company where the level of environmental responsibility is demonstrably high.

EMAS

EMAS was established by European Economic Community (EEC) regulation in 1993 and came into force in 1995. The regulation allows for voluntary participation in EMAS by companies in the industrial sector.

The objective of the scheme is to promote continuous improvements in the environmental performance of industrial activities by:

- (a) the establishment and implementation of environmental policies, programs and managements systems by companies in relation to their sites;
- (b) the systematic, objective and periodic evaluation of the performance of such elements; and
- (c) the provision of information on environmental performance to the public¹⁸⁴.

Adoption of EMAS is voluntary. However, once EMAS has been adopted all the regulations must be adhered to.

The EMAS regulations have a strong focus on auditing of the scheme. The regulations require the examination of the environmental policies, programs, management systems, review or audit procedures and the environmental statements to verify that they meet the requirements of the regulations, and require the environmental statements to be validated, by an independent accredited environmental verifier.¹⁸⁵

6.13 Comparing the Standards

ISO 14001 and EMAS provide frameworks for implementation of an EMS. They ensure that organisations have a framework for approaching the task of environmental management.

¹⁸⁴ Council Regulation (EEC) No 1836/93 of 29 June 1993 *allowing voluntary participation by companies in the industrial sector in a Community eco-management and audit scheme*. Article 1

¹⁸⁵ *Ibid*, Article 4(3)

Differences exist between ISO 14001 and EMAS. The most significant difference is that ISO 14001 focuses mainly on systems development while EMAS is performance-oriented. For example, a requirement of EMAS is that a company must:

adopt a company environmental policy... which... must include commitments aimed at the reasonable continuous improvement of environmental performance, with a view to reducing environmental impacts.

*...set objectives at the highest appropriate management level, aimed at the continuous improvement of environmental performance in the light of the findings of the audit, and appropriately revise the environmental program to enable the set objectives to be achieved at the site.*¹⁸⁶

ISO 14001 has been criticised for being process focused and not necessarily resulting in environmental improvements.

Despite the differences, the European Commission recently recognised ISO 14001 as being equivalent to the EMAS¹⁸⁷ and issued a 'bridging document' which identifies all differences and similarities between EMAS and ISO 14001. Such recognition is designed to encourage companies which already hold the ISO 14001 certification to register under EMAS.¹⁸⁸

One advantage of ISO 14001 is that it applies worldwide and is more flexible since it can be applied to any company in any sector (eg. service sectors). EMAS is currently limited to the European Union and to companies in the industrial sector. However, since the launch of EMAS the European Commission has explored opportunities to extend it to other sectors.

¹⁸⁶ Ibid, Article 3(a) and (e)

¹⁸⁷ Under EEC No 1836/93, Article 12 companies implementing national, European or international standards for environmental management systems and audits and certifies, according to appropriate certification procedures, as complying with those standards shall be considered as meeting the corresponding requirements of this Regulations provided that:

- (a) The standards and procedures are recognised by the Commission acting in accordance with the procedures laid down in Article 19;
- (b) The certification is undertaken by a body whose accreditation is recognised in the member state where the site is located

¹⁸⁸ REC: The Bulletin7/3: EMAS-ISO bridge-building. www.rec.org/REC/Bulletin/Bull73/business. p. 2

For this reason, the European Commission invited a group of banks to identify modifications to the existing EMAS to allow participation by financial institutions.¹⁸⁹ According to Natwest Banking Corporation, the extension of EMAS will provide a standard framework to compare the financial services sector across Europe.¹⁹⁰

The European Commission is currently revising the EMAS regulations. Stakeholders have been invited to review and comment on the draft proposal for new EMAS regulations.¹⁹¹

6.14 Industry Environmental Management Systems

Various other guidelines for EMS have been developed worldwide. In particular, a number of industry associations have developed EMS for their members. For example, the Chemical Industry has established the Responsible Care Program for its members.

6.14.1 Australian Experience

A number of public and private sector organisations are adopting the EMS provided by ISO 14001. However, a lesser number have sought accreditation of their EMS under ISO 14001.

A recent study of private sector firms that have adopted ISO 14001 indicated that the environmental managers of these firms believed that their practices exceeded the requirements of ISO 14001¹⁹². ISO 14001 provides the minimum practice that organisations should achieve in environmental management. It should not be seen as best practice. Organisations should strive to exceed the requirements of ISO 14001.

In 1996, the National Office of Local Government published a guide to ISO 14001 for local government. Adoption was voluntary and very few local councils decided to adopt ISO 14001. The

¹⁸⁹ Peter Charnley. NatWest Group. From EMAS to FEMAS. United Nations Fourth International Round-Table Meeting on Finance and the Environment. 17-18 September 1998

¹⁹⁰ Natwest Banking Corporation. *Environmental Report 1998*

¹⁹¹ John Piet. Chairman FEE Environmental Working Party. Letter to the European Commission dated 31 March 1999

¹⁹² Leahy, S., (1999), *The role of the ISO 14001 standard: evidence from politically exposed firms*, presented at the 4th International Expert Seminar on Environmental Management Instruments, Queensland, April 1999

Committee was advised, other local councils have adopted the EMS framework given in ISO 14001 but it is still not widely used.

6.14.2 Industry Codes of Practice

As mentioned previously the Australian Minerals Industry has developed a Code for Environmental Management. The Code includes a commitment to integrated environmental management. The Code requires an EMS to be developed which is consistent with the Principles of the Code and generally accepted components of an effective EMS. Guidance documents available for the development of an EMS include Environmental Management in the Australian Minerals and Energy Industries – Principles and Practices¹⁹³ and Best Practice Environmental Management in Mining.¹⁹⁴

6.14.3 Victoria

A number of Victorian businesses and the Victorian EPA have developed an EMS. The EMS involves setting targets for environmental performance, monitoring against these performance targets and achieving environmental improvements.

In addition, the EPA has published a series of Best Practice Environmental Management Guidelines for different industry sectors which include information on developing EMS. The series includes:

- Environmental Guidelines for the Dairy Processing Industry;¹⁹⁵
- Environmental Guidelines for the Concrete Batching Industry; and¹⁹⁶
- Environmental Guidelines for the Textile Dyeing and Finishing Industry.¹⁹⁷

¹⁹³ Australian Minerals and Energy Environment Foundation. *Environmental Management in the Australian Minerals and Energy Industries – Principles and Practices*

¹⁹⁴ Commonwealth EPA. *Best Practice Environmental Management in Mining*

¹⁹⁵ Victorian EPA. *Environmental Guidelines for the Dairy Processing Industry*. Publication Number 570

¹⁹⁶ Victorian EPA Environmental Guidelines for the Concrete Batching Industry. Publication Number 628

¹⁹⁷ Victorian EPA *Environmental Guidelines for the Textile Dyeing and Finishing Industry*. Publication Number 621

The EPA is actively seeking to encourage companies to implement EMS.

6.15 Verification of Environmental Management Systems

A feature of both ISO 14001 and EMAS is the requirement for verification or certification by an accredited independent environmental verifier. Both systems require that a company's environmental policies and strategies, management systems and audit procedures be examined to verify that they meet the relevant requirements. As EMAS also has a reporting requirement, that accredited independent environmental verifier must also validate the environmental report.

The Australian Minerals Industry Code for Environmental Management also requires regular audit of the Environmental Management System and environmental performance by internal or external personnel.

Although the audit is not specifically mentioned in most EMS, it is an important part of the process. Since an EMS assumes that the environment must be managed in the same way that any other part of the organisation must be managed, procedures and controls for managing must be established and these can be audited by a performance auditor. Any reported information can be audited to ensure that it provides an accurate view of the environmental management of the organisation.

The Victorian EPA appoints environmental auditors under the *Environment Protection Act 1970* and these auditors can audit an EMS. Environmental auditors certified by the Quality Society of Australasia can also conduct audits of environmental management systems.

The Committee recommends that:

Recommendation 6.8:

Within the next 10 years all Victorian businesses, over a certain size (to be determined in consultation with the business community) be required to adopt an environment management system (based on ISO 14001, or EMAS, or an industry best practice model) to a certifiable standard.

CHAPTER 7 PUBLIC SECTOR ENVIRONMENTAL REPORTING

7.1 Introduction

The community is increasingly demanding environmental protection and environmental improvement. This demand is acknowledged in government policy initiatives at all levels, such as the National Strategy for Ecologically Sustainable Development, the National Greenhouse Strategies, the Victorian Industrial Waste Strategy and environmental policy and legislation at national and state levels. While some government agencies are responsible for implementing these policies, all government agencies are responsible for operating consistently with these policies.

All government departments and agencies impact differently on the environment. The operations of departments and agencies that have direct involvement with natural resource management and environmental protection have broad impacts on the environment.

The impacts from departments and agencies can include resource usage such as water, energy and paper, vehicle emissions and waste production. In some cases these impacts can be significant. For example, it has been estimated that government operations in Victoria result in 6.5 million tonnes of greenhouse gas emission.¹⁹⁸

The Committee believes Parliament should be able to assess the performance of departments and agencies to ensure that services are being provided efficiently and the organisations are environmentally responsible.

According to Dr Robinson, Chairman of the Victorian EPA, a systematic approach to environmental performance such as environmental management systems and environmental reporting:

helps ensure that their [government agencies] duty of care toward the environment, as required by the Environment

¹⁹⁸ S. Fiedler. An Analysis of Environmental Protection Authority's contribution to the Enhanced Greenhouse Effect 1997 (EPA unpublished)

*Protection Act 1970 is explicitly catered for. This in turn would reduce the threat of legal or political impact ensuing from their activities.*¹⁹⁹

However, evidence indicates that reporting on environmental activities and impacts of government departments and agencies is lagging behind private sector environmental reporting.²⁰⁰ This is occurring worldwide as well as in Australia. For example, judges of the 1998 ACCA Environmental Reporting Awards (UK) noted an apparent absence of activity in public sector reporting.

In a submission to the Productivity Commission on the Implementation of Ecologically Sustainable Development by Commonwealth Departments and Agencies, the Australian Industry Group stated that:

*it is unacceptable that industry be required to carry the costs of increased environmental reporting while the [Commonwealth] Government is “streamlining” its annual reporting processes to exclude the implementation of Ecologically Sustainable Development.*²⁰¹

In addition to being accountable to the community, it is argued that government departments and agencies should report environmental information in their financial statements and annual reports or in environmental performance reports to encourage and support private sector disclosure of environmental information.

According to Dr Robinson:

*the benefits of environmental reporting [by government agencies] can be significant.... externally it sends a clear message about government providing leadership.*²⁰²

¹⁹⁹ Submission by Dr Brian Robinson, Chairman, EPA. 13 May 1999. p. 2

²⁰⁰ Submission by Victorian Auditor-General's Office, 2 July 1998. p. 1

²⁰¹ Industry Commission. *Implementation of Ecologically Sustainable Development by Commonwealth Departments and Agencies, Draft Report*. February 1999. p. 111

²⁰² Submission by Dr Brian Robinson, Chairman, EPA. 13 May 1999. p. 2

NSW EPA stated that:

*whilst we are promoting private industry to undertake environmental reporting and environmental stewardship in everything they do, we are looking at the government to do the same.*²⁰³

The importance of government leading by example was also highlighted in a number of submissions. Professor Davies from Monash University believes that:

*Government agencies should provide a high-quality model of environmental reporting that can be used as an example by all others.*²⁰⁴

7.2 Environmental Information that impacts on Financial Statements and Annual Reports

Public sector disclosure requirements are established by Australian Accounting Standards (AAS) developed jointly by the Australian Accounting Standards Board (AASB) and the Public Sector Accounting Standards Board (PSASB) of the Australian Accounting Research Foundation. The close relationship between the AASB and PSASB helps to ensure that the Standards developed by both Boards contain (to the extent possible) identical requirements and that financial reports prepared by all entities in Australia are prepared on a consistent and comparable basis.

Australian Accounting Standard AAS 29 Financial Reporting by Government Departments specifically deals with disclosures in financial statements. But AAS 29 does not specifically cover disclosures of environmental information, including that which impacts on the financial statements.

There are instances where environmental matters impact on the financial statements of public sector organisations, for example contingent liabilities for site remediation. Such environmental information is required to be disclosed under the accounting standards. However, because the accounting standards do not deal specifically with environmental matters, this information is not necessarily disclosed consistently or at all.

²⁰³ Transcript of evidence. Mr Collins, NSW EPA, 24 November 1998

²⁰⁴ Submission by Professor Davies, Monash University, 29 June 1998

There is also environmental information that arguably should be included in the financial statements of public sector organisations but may not be included due to the limited disclosure requirements in the existing accounting standards such as materiality and the definitions of assets and liabilities (as discussed in Chapter 4). These requirements restrict the recognition and disclosure of environmental information in the financial statements.

7.2.1 Australian Experience

Australia lags behind international best practice for public sector environmental reporting in financial statements and annual reports. This is partly because the complexities of our three tier government (Federal, State and Local) make it difficult to achieve a consistent approach.

There are a small number of public sector organisations that are reporting environmental impacts in financial statements and annual reports.

7.2.2 Victorian Experience

Similarly to the private sector, there is a lack of standards directly relating to public sector disclosure of environmental information which impacts on financial statements. While this situation is consistent across Australia, a review of current literature indicated that the disclosure practices in the Victorian public sector do not compare favourably with other states.²⁰⁵

Under existing accounting standards, there are some cases where environmental assets and liabilities are included in the public sector financial statements. For example, heritage and infrastructure assets controlled by public entities. Heritage assets are defined by the accounting profession as physical assets which a community intends to preserve for cultural, historical or environmental reasons. Museum and library collections, buildings, parks and monuments worthy of preservation are examples of heritage assets. Roads, bridges, reticulation systems, dams, government buildings and harbours are examples of infrastructure assets.

²⁰⁵ Submission by Victorian Auditor-General's Office, 2 July 1998. p. 1

Other environmental assets are included in financial accounts. The Victorian Department of Treasury and Finance released two key documents in 1995 and 1996 concerning the principles, policies and methods of asset valuation to be adopted by all Victorian public sector managers.²⁰⁶ According to these documents natural assets are to be recognised if they are tangible (ie. have a physical nature) and if they have a useful life beyond the current accounting period. To qualify for financial reporting purposes an asset must have service potential or future economic benefits.²⁰⁷

Liabilities for the remediation of contaminated sites have been included in some public sector financial statements. In particular, the Victorian Auditor-General's Office has ensured that appropriate liabilities have been raised by entities for remediation of contaminated sites.²⁰⁸

Under the *Financial Management Act 1994* there are no specific requirements for environmental disclosures by government departments and agencies in their annual reports. According to the Act, public sector annual reports should provide both financial and general information about operations and performance.²⁰⁹

Therefore, unless the operations of government departments or agencies have direct involvement with natural resource management or environmental protection and management, such as the Department of Natural Resources and the Environment or the Environment Protection Authority, they are unlikely to report environmental information in their annual report.

7.3 What Environmental Information should be included in Public Sector Annual Reports?

The two main questions are:

1. what environmental information impacts on the financial statements and should be disclosed under

²⁰⁶ These documents are (1) *Recognition and Valuation of Non-Current Physical Assets* (released January 1995) and (2) *Asset Management Series - Principles, Policies and Practices: Catalogue of Reference* (released January 1996)

²⁰⁷ Statement of Accounting Concepts 4 'Definition and Recognition of the Elements of Financial Statements'

²⁰⁸ Submission by Victorian Auditor-General's Office, 2 July 1998. p.. 1

²⁰⁹ Department of Finance, Victoria. *Directions of the Minister for Finance under the Financial Management Act 1994*. Part 9

existing accounting standards but is not because of lack of direct guidance?

2. what environmental information is not recognised or disclosed under existing accounting standards but should be?

There was general support during the Inquiry for extending the environmental information reported by the public sector. The Issues Paper sought feedback on whether it was desirable for the public sector to report in their annual returns:

- financial expenditure (as opposed to expenditure on sets of activities) which could reduce pollution or other environmental impacts, or remediate environmental damage; and
- commitments to rehabilitate or remediate damaged sites.

In submissions to the Inquiry, many supported the extension of public sector reporting in annual reports to include these items. According to one witness, such disclosure would improve accountability and encourage preventative management.²¹⁰

However, the general view was that disclosure in public sector annual reports should be broader than the suggested items. It was suggested that environmental disclosures should include all expenditure which impacts on the environment and action being taken to eliminate or reduce these impacts.

For example, Mr Maganov states that:

*expenditure on items which have direct or indirect impacts upon the environment may in the long term be required as normal reporting.*²¹¹

According to the Victorian Auditor-General's Office:

the present practice of isolated voluntary disclosures should be replaced by formal requirements in the Financial Management Act 1994.

²¹⁰ Submission by Ms Evans RMIT Business Accountancy, 5 May 1998

²¹¹ Submission by Mr Maganov, 15 June 1998. p. 10

The Victorian Auditor-General stated that the development of an appropriate framework for public sector environmental reporting is essential in ensuring that information is meaningful and comparable.²¹²

The Committee recommends that

Recommendation 7.1:

The government encourage the accounting profession and the accounting standards setting board and other stakeholders to develop a new accounting standard for public sector reporting on environmental issues.

7.4 Environmental Performance Reporting

Environmental performance reporting typically provides information of a non-financial nature such as details of environmental policies, environmental management systems, resource usage, environmental risks and impacts, emission levels of particular substances, environmental incidents and non-compliances, environmental awards, stakeholder engagement, performance against best practice guidelines, life-cycle analysis.

Environmental performance reports can be included in the annual report of the public sector organisation or provided separately as a stand-alone report. The limited environmental performance reporting undertaken by public sector organisations has tended to be included in the annual report.

7.4.1 Overseas Experience

Various governments overseas require the public sector to report on environmental impacts and on actions taken to reduce those environmental impacts.

For example, in 1990 the UK Government committed all departments to draw up strategies for environmental improvement and to monitor and report against these strategies. Strategies include targets for environmental improvements, actions planned and actions taken, and cover a number of aspects

²¹² Submission by Victorian Auditor-General's Office, 2 July 1998. p. 3

including conserving resources, reducing pollution, green procurement, waste management and land management.

Reporting by departments on their strategies is consolidated into a single government environmental improvement report *Digest of Green Housekeeping in Government Departments*.

7.4.2 Australian Experience

There are various requirements across Australia for environmental performance reporting by government departments and agencies whose operations directly relate to natural resource management or environment protection.

As indicated in the Issues Paper, some Australian states require the presentation of performance indicators in annual reports where practicable. For example, this is a requirement under the NSW Annual Reports (Departments) Regulations 1995.

The *Financial Management Act 1994* has no specific requirements for environmental performance reporting. However, the Act requires public sector annual reports to provide both financial and general information about operations and performance²¹³.

In the Committee's recent report on Annual Reporting in the Victorian Public Sector, the Committee recommended that public sector agencies include in their annual reports:

- environmental disclosure where the activities of an agency cause known or predicted material impacts on the environment; and
- environmental disclosures such as:
 - level of compliance with EPA regulations;
 - descriptions of projects requiring an environmental impact assessment, site remediation or rehabilitation;
 - the indicators that show environmental impacts;

²¹³ Department of Finance, Victoria. *Directions of the Minister for Finance under the Financial Management Act 1994*. Part 9

- audited statements of environmental management systems; and
- performance measures for waste minimisation.

214

In NSW, local government is required under the *NSW Local Government Act 1993* to report on such matters as waste management policies and recovery plans for threatened species.

Other requirements for environmental performance reporting exist across all government departments and agencies regardless of whether they have direct involvement with the environment. For example, the Australian Accounting Standard AAS 29 Financial Reporting by Government Departments (1993) encourages but does not prescribe the publication of performance information on major projects.

In 1992, the Commonwealth Public Accounts Committee released its report on Social Responsibilities of Commonwealth Statutory Authorities and Government Business Enterprises. The report recommended that statutory authorities and GBEs report in their annual reports, statements concerning their actions in relation to a range of environmental responsibilities.

Under the *Protection of the Environment Administration Act 1991*, the NSW EPA may advise public authorities on performance targets for those public authorities relating to environment protection. The NSW EPA may report on the achievement of performance targets set by public authorities. Where public authorities fail to publicly report on their achievement against performance targets the EPA must report on their behalf.²¹⁵

To date, establishment of performance targets and reporting of performance targets has been slow. In 1997 the EPA surveyed NSW State Government departments and agencies to determine whether they had set environmental performance targets and if so, whether they reported publicly on their success or failure in meeting these targets. The survey found that 29 of the 81

²¹⁴ Public Accounts and Estimates Committee, *Report on Annual Reporting in the Victorian Public Sector*, May 1999, p.xxx

²¹⁵ New South Wales Environment Protection Authority. *Protection of the Environment Administration Act 1991*. Section 11

departments responding had targets, with a further 18 planning or considering developing them. Of the 29 departments that had set targets, 21 had reported publicly on their performance against these targets, mostly through annual reports. Most indicators related to energy use and waste.²¹⁶

To encourage other government agencies, the EPA annual report 1997-98 includes a section on EPA's environmental performance.

In addition, the NSW Waste Reduction and Purchasing Policy requires all State Government departments and agencies, except state owned corporations, to adopt environmentally responsible waste reduction and purchasing practices. State Government agencies must report to the EPA on achievements under their plans two years from the date that their plans are approved.

There are no specific requirements in Victoria for departments or agencies to establish environmental policies, develop indicators on environmental performance or report on environmental performance. As discussed earlier, some departments or agencies have introduced some of these aspects.

For example, EPA has developed and implemented an environmental management system which covers paper usage, energy usage – buildings, energy usage – fleet, general waste and laboratory and field operations. An environment improvement plan has been developed for paper usage, which measures usage, sets targets for reduction and establishes actions to achieve those targets. Environmental improvement plans for the other elements are still to be developed. There is no public reporting of the environmental performance outcomes.

According to Dr Robinson:

Government Business Enterprises and operational agencies would benefit from the development of an environmental management system in much the same way that private sector businesses do ...there is less quantifiable benefit to administrative or policy departments from adopting an environmental management system, but savings can still be

²¹⁶ New South Wales Environment Protection Authority. *New South Wales State of the Environment 1997*. sec. 8.5.3

*realised in purchasing policy, energy use and transport by adopting an environment policy.*²¹⁷

7.5 Example of Specific Environmental Performance Reporting

All governments have committed to specific environmental performance reporting under the National Greenhouse Strategy (the Strategy) 1998. The Strategy extends the program of action launched through the 1992 National Greenhouse Response Strategy and commits all governments in Australia to reducing greenhouse emissions. The Strategy recognises the importance of:

*governments leading by example... in showing the way with action to reduce the greenhouse gas emissions associated with their own operations.*²¹⁸

Measure 3.1 of the strategy states that governments will reduce greenhouse emissions from their operations by:

- developing an inventory of greenhouse emissions;
- developing and implementing an action plan to reduce emissions;
- arranging for independent verification of performance under the action plan; and
- regularly monitoring and publicly reporting on performance.²¹⁹

The Commonwealth Government has made some progress in relation to this matter. An inventory has been completed for all government departments, targets established and a detailed report on performance published, *Energy Use in Commonwealth Operations 1997-98*.²²⁰ A key aspect of the Commonwealth approach is that heads of departments and agencies are held responsible to their Ministers for energy performance.

²¹⁷ Submission by Dr Robinson, Chairman, EPA. 13 May 1999

²¹⁸ Commonwealth of Australia. *The National Greenhouse Strategy: Strategic Framework for Advancing Australia's Greenhouse Response*. 1998. p. 31

²¹⁹ Measure 3.1. in Commonwealth of Australia. *The National Greenhouse Strategy: Strategic Framework for Advancing Australia's Greenhouse Response*. 1998. p. 32

²²⁰ Department of Industry, Science and Resources. 1998. *Energy Use in Commonwealth Operations 1997-98*. Commonwealth of Australia. December

NSW is developing an inventory for all government departments and has set targets for reducing emissions. Similarly to the Commonwealth, departmental secretaries are responsible to their Ministers for energy performance.

Little progress has been made in Victoria on Measure 3.1. Only the Department of Justice has developed an inventory of greenhouse emissions and has set targets for reducing energy consumption. Other departments and agencies have made little or no progress. The Committee notes that at present there is no whole of government approach in Victoria.

7.6 What Environmental Performance Reporting should the Public Sector be Undertaking?

A number of submissions received indicated the general consensus that public sector agencies should report on a range of environmental performance indicators. However, there was no agreement as to what environmental performance indicators should be included.

In the Issues Paper the Committee queried whether government departments and agencies should report performance indicators relating to the environmental impacts of major projects (as encouraged by AAS 29 Financial Reporting by Government Departments (1993)). There was broad support for such reporting. According to the Victorian National Parks Association, development and reporting of performance indicators relating to the environmental impacts of major projects is vital and would prevent unnecessary delays in the project.

However, most submissions supported reporting on a range of performance indicators relating to environmental impacts of all government activities and not be confined to major projects. The Strategic Research Centre for Environmental Accountability, University of Tasmania, informed the Committee that disclosures need to provide the community with information about all the activities of government that impact on the environment.²²¹

Dr Robinson, Chairman of the Victorian EPA, stated that:

²²¹ Submission by Strategic Research Centre for Environmental Accountability, University of Tasmania, 7 July 1998. p. 2

*agencies should, in the first instance, be encouraged to report on the key direct impact of activities on the ambient environment. This will vary widely across portfolios, and individual departments and agencies should be encouraged to identify these key impacts so that adequate reporting can be established over a period of time. There may be some activities that are relevant to all departments – for example paper consumption and energy use - that could form a core set of indicators to be reported on and compared across agencies.*²²²

This approach is in line with the proposal for National Guidelines for Public Environmental Reporting. The proposal for developing these guidelines states that:

*it is clear that there are generic performance indicators that can be identified for all areas of economic activity and that such generic indicators need to be identified.*²²³

It was suggested in some submissions that environmental performance reporting should differ across agencies, with those having significant environmental impacts such as the Department of Natural Resources and Environment, reporting in more detail.

Both the Shell Company of Australia and Professor Davies from Monash University suggested that government agencies follow best practice for environmental reporting for public and private organisations. Arguably public sector environmental reporting requirements should be higher due to the government's leadership role in environmental matters.

A set of environmental performance indicators that could be adopted is the Service Efforts and Accomplishments (SEA) indicators. SEA indicators cover inputs, outputs and outcomes of government activities. The NSW Council on the Cost of Government is currently applying the SEA approach to produce reports on performance in major policy areas, including the environment.

The Committee recommends that

²²² Submission by Dr Robinson, Chairman, EPA. 13 May 1999. p. 2

²²³ Environment Australia. 1999. *Request for Tender – National Guidelines for Public Environment Reporting*. No. 9/99. p. 2

Recommendation 7.2:

The government establish a core set of environmental performance measures applicable to all departments and agencies eg. energy and vehicle usage, including those under the National Greenhouse Strategy (Measure 3.1).

Recommendation 7.3:

Each government department and agency should identify environmental performance measures specific to their department or agency.

Recommendation 7.4:

The government require all Victorian departments and agencies to implement an environment improvement plan which includes the core environmental performance measures and any specific measures identified and include targets for each environmental performance measure.

Recommendation 7.5:

The government develop an integrated environmental and financial reporting framework for the public sector, which will:

- **use physical indicators to convey useful information to decision makers; and**
- **present a balanced perspective of the Victorian Government's environmental performance.**

Recommendation 7.6:

The government publicly report annually on environmental performance across the whole of government.

Interim Report of the Inquiry into Environmental Accounting and Reporting

CHAPTER 8 ENVIRONMENTAL AUDITING AND VERIFICATION

8.1 Introduction

The term environmental auditing as used by the International Federation of Accountants, is becoming more common. There are a variety of activities that are currently referred to as environmental auditing. For example:

- auditing of site contamination;
- auditing of environmental management;
- auditing of industrial facilities for environmental compliance and due diligence;
- auditing for resource consumption eg. energy audits and waste;
- auditing of environmental management systems including ISO 14001 and EMAS;
- auditing of environmental information in financial statements; and
- auditing of company environment performance reports.

There are conceptual and practical differences between these services and therefore the term environmental auditing can be confusing.

This Chapter focuses on the last two environmental auditing services, auditing of environmental information that impacts on financial statements and auditing of company environmental performance reports (commonly referred to as verification). While environmental auditing or verification can be undertaken internally by the company, or externally by an independent party, the focus is on external auditing or verification by an independent party.

The auditing or verification exercise differs depending on the type and purpose of environmental disclosures. The auditing of

environmental information in financial statements differs from the verification of company environmental performance reports.

The auditor or verifier will assess a mix of financial and non-financial information. Non-financial information should be used when:

- financial measures are unreliable;
- non-financial measures provide additional information useful for decision making; and
- non-financial measures provide a better indicator of the economic, efficient and effective use of environmental assets.

8.2 Audit of Environmental Information in Financial Statements

8.2.1 Why Audit Environmental Information?

The law requires financial statements issued by many organisations to be audited by registered company auditors. Therefore, environmental issues that impact on the financial statements also need to be audited. Auditors are required to assess the risk of a material misstatement (including omissions) in the financial report.

Auditing of environmental information impacting on financial statements is also important for providing credibility to the information disclosed in the financial statements. Users of environmental reports are increasingly demanding assurance that environmental disclosures represent an accurate picture of the environmental performance of the company. Results from an Australian survey indicated that over 50% of users of annual reports thought external environmental audits were quite or highly important. Disclosing the details of environmental audits within annual reports was felt to be quite or highly important by 64% of users.²²⁴

²²⁴ Michaela Rankin, *Corporate Reporting – the Green Gap*, ICAA, 1996, in ICAA, Environmental Accounting Task Force, *The Impact of Environmental Matters on the Accountancy Profession: Discussion Paper*, 1998, p. 9

8.2.2 Framework for the Auditing of Environmental Information

Laws in relation to the reporting of financial information are fairly well defined. Companies have well developed accounting systems and are required to prepare accounts according to accounting standards and have those accounts audited according to auditing standards. This framework provides some assurance to stakeholders that the financial statements are prepared in accordance with generally accepted accounting principles.

Internationally, as well as in Australia, there are few accounting standards dealing with disclosure of environmental information in financial statements (from Chapter 3). There are no auditing standards dealing with environmental information in financial statements and annual reports. Various accounting and auditing bodies have taken initiatives to address auditing of environmental information in financial statements.

The Institute for Accounting and Auditing Research in Amsterdam produced one of the first research reports for auditors titled *The Environment and the Audit Profession*. In 1994, the Canadian Institute of Chartered Accountants released the *Auditing and Related Services Guideline: Audit of Financial Statements Affected by Environmental Matters*.

The International Auditing Practices Committee of the International Federation of Accountants (IFAC) issued a Discussion Paper *The Audit Profession and the Environment* in 1995. The Auditing Standards Board (AuSB) of the Australian Accounting Research Foundation issued the discussion paper within Australia.

Following this Discussion Paper, IFAC released an international auditing exposure draft dealing with the impact of environmental issues on the audit of financial statements. AuSB issued the *Exposure Draft in Australia*.²²⁵

In April 1998, the Exposure Draft became an Australian Auditing Guidance Statement (AGS) 1036, *The Consideration of Environmental Matters in the Audit of a Financial Report*. AGS

²²⁵ Australian Accounting Research Foundation. 1997. Exposure Draft 65. *The Consideration of Environmental Matters in the Audit of Financial Statements*. July

1036 does not establish new Auditing Standards (AUS), but provides guidance on the application of existing auditing standards where environmental issues are significant to the financial report of an organisation. In particular, guidance is provided in relation to auditing standards on knowledge of the business; risk assessment and internal controls; consideration of laws and regulations; the work of an expert and other procedures.

In conducting an audit of financial statements the auditor must consider environmental matters which may impact on the financial statement. Environmental matters, which impact on the financial statement, arise primarily from environmental laws and regulations faced by a company and the environmental management system operating within a company.

Environmental laws may impact on the financial statement through liabilities and provisions, contingencies and other items in the financial statement. Non-compliance with environmental laws may materially impact on the financial statement.

Internal management systems and in particular environmental management systems may also impact on the financial statement through:

- the design and effectiveness of pollution records;
- policies and procedures for monitoring compliance with the business' environmental policy and environmental laws and regulations;
- policies and procedures for the identification of contingencies; or
- policies and procedures for the development of accounting estimates related to environmental matters²²⁶.

Therefore, according to AGS 1036 auditors must have some knowledge of environmental laws significant to the company and the environmental management systems operating within a company. AGS 1036 recognises that in some cases the auditor will

²²⁶ International Federation of Accountants. *The Audit Profession and the Environment*, Discussion Paper prepared by the International Auditing Practices Committee. p. 16

need to rely on work which has been carried out by experts such as lawyers, engineers or other environmental experts.²²⁷

As the auditing of financial statements is well defined, the extension of financial auditing procedures to cover environmental information has been less controversial than the verification of environmental performance reports. The guidance available in AGS 1036 is useful in assisting auditors of environmental information in financial statements to assess the risk of a material misstatement in the financial report due to environmental matters. However, the lack of accounting standards dealing with environmental issues means that environmental auditing is not as clear as financial auditing.

8.3 Verification of Environmental Performance Reports

8.3.1 Why Verify Reports?

A common criticism of many of the first environmental performance reports is that information provided did not represent an accurate picture of the environmental performance of the company. Research indicates that the vast majority of environmental disclosures:

*tended to be biased and self-laudatory with minimal disclosure of negative environmental information.*²²⁸

Verification of environmental reports is seen as important for assuring both preparers and users of the reports, that the reporting process is transparent and the information is credible and provides an accurate representation of the company's environmental performance. The Eco-Management and Audit Scheme states that verification by an independent accredited environmental verifier enhances the transparency and credibility of companies' activities in this field.²²⁹ Similarly, PricewaterhouseCoopers submitted to the

²²⁷ Auditing Standards Board. Auditing Guidance Statements (AGS) 1036, *The Consideration of Environmental Matters in the Audit of a Financial Report*. p. 6

²²⁸ Craig Deegan and Michaela Rankin, *The materiality of environmental information to users of annual reports*. Accounting, Auditing & Accountability Journal. Vol 10, No 4, 1997. p. 562

²²⁹ Council Regulation (EEC) No 1836/93 of 29 June 1993 *allowing voluntary participation by companies in the industrial sector in a community eco-management and audit scheme*. Note: verification refers to the entire EMAS and not only to environmental statements/reports

Committee that verification will assist in ensuring the transparency of environmental reporting.²³⁰

According to the GRI, verification should:

*strengthen the reliability of information... without relieving the management of the enterprise of responsibility for the accuracy, completeness, and - in particular - balance and fairness, of the representations it makes.*²³¹

The World Wide Fund for Nature (WWF) stated that:

*The presence – or absence – of external verification will in large part [sic] dictate what, if any, weight should be attached to the environment and social performance claims of companies... WWF attaches great store to whether a company's claims are simply made on the basis of self-assessment or whether they are exposed to rigorous analysis.*²³²

Verification may assist the company to improve their environmental management and reporting. Auditors can provide feedback to the company on the adequacy and appropriateness of environmental management systems and data. Feedback from the verification exercise:

*should serve as a catalyst for improvement in environmental performance.*²³³

According to British Telecom (BT):

*the primary purpose of verification is to underpin the credibility of the report. Verification also provides BT's management with a level of comfort that its reporting systems are adequate and that it has addressed all key environmental impacts and risks.*²³⁴

²³⁰ Submission by PricewaterhouseCoopers. 15 February 1999

²³¹ Global Reporting Initiative. *Sustainability Reporting Guidelines: Exposure Draft for Public Comment and Pilot Testing*. CERES. March 1999. p. 9

²³² Michael Rae. *Independent Verification: Are company claims worth the paper they are written on?* 1999. p. 3. Paper tabled at Sub-Committee meeting 3 March 1999

²³³ Ken Fung, Snowy Mountains Engineering Corporation. *Independent Verification of Public Environmental Disclosure: Process and Outcomes*. Presented at Engaging the Market: Linking Financial and Environmental Performance Seminar 15 April 1999

²³⁴ British Telecom. *A Report on BT's Environmental Performance 1996/97 in UNEP/SustainAbility, Engaging Stakeholders: The 1997 Benchmark Survey*, 1997. p. 27

8.3.2 Framework for the Verification of Reports

As outlined earlier, verification is emerging as a key element in environmental performance reporting. More and more companies are choosing to have their environmental reports verified. For example, Engaging Stakeholders: The 1997 Benchmark Survey notes a seven-fold increase in verification in their survey sample between 1993-94 and 1997. In the 1998 Environmental Reporting Awards offered by the Association of Chartered Accountants (UK) the judges highlighted, the higher level of independent verification – 66 per cent of all entries, as a real improvement.²³⁵

While most companies are undertaking verification voluntarily, verification is a requirement under EMAS and is also called for by the Danish Environment Protection Authority under the Green Accounts Regulations.

Auditing of financial statements is a well established practice. Companies have well developed accounting systems to collect accounting information. Accounts are prepared according to accounting standards and audited according to auditing standards.

Internationally, as well as in Australia, few companies have well developed environmental management systems to collect environmental information. There are no generally accepted standards for the preparation of environmental performance reports or for the verification of these reports, including the wording of verification statements.

This creates difficulties in verification of environmental performance reports. For example, Newson and Deegan state that:

*organisations not committed to a formal environmental management system should not be encouraged to seek verification of an environmental report...as it is likely to lower the credibility of environmental reporting in general.*²³⁶

²³⁵ Adams, R. 1999. *Anglian Water Scoops the Honours at this Year's ACCA Awards*. *Environmental Accounting and Auditing Reporter*. Vol. 4. Issue No. 3. March

²³⁶ Newson, M. and Deegan, C. 1996. *Environmental Performance Evaluation and Reporting for Public and Private Organisations*. Prepared for the Environment Protection Authority and State and Regional Development, NSW. Report No. 650015. Unpublished. p. 144

In addition, there is no regulation or certification of auditors providing verification of environmental performance reports.

According to Engaging Stakeholders: The 1997 Benchmark Survey:

*clearly, verification has arrived, but there is a fair way to go before it is accepted in the same way that it is in relation to corporate financial accounting and reporting.*²³⁷

8.4 The Verification Process

While interest in verification of environmental performance reports is growing, very little guidance has been developed. The International Federation of Accountants considered the audit of environmental performance reports in their discussion paper, *The Audit Profession and the Environment*.²³⁸

In 1996, the European Federation of Accountants (FEE) issued a research paper titled *Expert Statements in Environmental Reports*. The Research Paper analyses expert statements included in environmental reports, to gain an insight into the content of current expert statements and into the expectations of companies and potential users which are relevant for the wording of the expert statement. Based on the analysis, recommendations are made for the contents of the expert statement.²³⁹

According to the Global Reporting Initiative (GRI):

methodologies for the independent examination of non-financial reports are being developed.

In 1999 the GRI will establish a working group to explore and develop the possibilities for achieving generally excepted verification methodologies.²⁴⁰

The lack of standards for verification of environmental performance reports means that the verification exercise can vary

²³⁷ UNEP/SustainAbility, *Engaging Stakeholders: The 1997 Benchmark Survey*, 1997. p. 27

²³⁸ International Federation of Accountants. *The Audit Profession and the Environment*, Discussion Paper prepared by the International Auditing Practices Committee. Chapter 5. p. 16

²³⁹ FEE. *Research Paper on Expert Statements in Environmental Reports*. FEE 1996

²⁴⁰ Global Reporting Initiative. *Sustainability Reporting Guidelines: Exposure Draft for Public Comment and Pilot Testing*. CERES. March 1999. pp. 9-10

considerably. In particular, the verification exercise may differ in relation to:

- the objectives and scope of the verification;
- the comparison criteria used; and
- the level of assurance.

8.5 Objectives and Scope of Verification

The general lack of standards for verification of environmental reports means that the objectives and scope of the verification exercise vary considerably. As noted in *Engaging Stakeholders: The 1997 Benchmark Survey*:

*some verification statements merely provide a sign-off on the report, whereas others are far more challenging and highlight areas for improvement.*²⁴¹

In establishing the objectives and scope of the verification exercise, key issues include the level of assurance that the verifier is providing and the aspects of the environmental performance report on which assurance is being provided. Different aspects of the report which can be verified include:

- data adequacy and accuracy including interpretation of data;
- data collection processes;
- report adequacy and accuracy including assessment of environmental issues facing a company; and
- environmental systems assessment including integration into the company's management control system.

The differences in the objectives and scope of the independent verification are illustrated in the following examples²⁴². The scope of the independent verification of North's Environment, Health and Safety Annual Report 1998 conducted by Dames and Moore was to:

²⁴¹ UNEP/SustainAbility, *Engaging Stakeholders: The 1997 Benchmark Survey*, 1997. p. 27

²⁴² These reports were randomly selected and no judgement has been made as to the adequacy or otherwise of the verification exercise

- verify progress against the 1997-98 actions and targets listed in North's first EHS public annual report;
- make further suggestions for improvement based on site observations and discussions with personnel; and
- assist business units in developing appropriate actions and targets for 1998-99.

The scope of the independent verification of Western Mining Company's Environment Progress Report 1997 conducted by Coopers & Lybrand Consultants was to independently verify the data and content of the report. The objective was to:

- review the reporting systems used by management to collect and consolidate environmental data;
- verify the data reliability of three individual sites and the corporate aggregation; and
- comment on the content and context of the report in light of the findings.

In some cases the objectives and scope of the verification has been so limited that it could not be considered verification of an environmental performance report. For example, in the Rhone-Poulenc report, verification which involved 'certain tests' to verify the calculation of the company's water, air and waste pollution indices was not considered to be verification of the whole report.²⁴³

The varying objectives and scope of the verification exercise could be seen to reduce the value of the verification exercise and may add little in terms of credibility to the environmental performance report.

Engaging Stakeholders: The 1997 Benchmark Survey also documents some current practices that should not be confused with verification of environmental performance reports. These practices include certification of environmental management systems and endorsement letters from third parties such as non-government organisations.

²⁴³ UNEP/SustainAbility, *Engaging Stakeholders: The 1997 Benchmark Survey*, 1997. p. 27

8.6 Comparison Criteria

According to the International Federation of Accountants, information is verifiable if there are criteria available against which actual information can be verified objectively.²⁴⁴ Once the objectives and scope of the verification have been determined criteria have to be established against which the verifier can assess the extent to which the verification objectives have been met.

As criteria for verification of environmental performance reports have not been established yet, verifiers have been using existing guidelines for environmental reporting as the criteria.

For example, the verification statement in the Novo Nordisk Environment and Bioethics Report 1997 declares that the verification was based on the revised UNEP/SustainAbility fifty-point checklist of reporting ingredients (Engaging Stakeholders 1996 and The Benchmark Survey 1997) and the ICC Business Charter for Sustainable Development.²⁴⁵

Verification of environmental reports under EMAS uses the requirements of the regulations as the criteria against which the information is verified. Similarly, the Global Reporting Initiative states that:

*independent assurance that the report is in accordance with the GRI Guidelines will in itself be useful.*²⁴⁶

8.7 Level of Assurance

A key issue in the verification process is the level of assurance being provided. In relation to financial statements, the word audit generally refers to the provision of a high level of assurance in the integrity of the report's content. There is no comparable assurance provided for verification of environmental reports.

In addition, words used in audit statements such as true and fair have precise meanings in financial auditing. However, opinions given in verification statements are not clearly defined. According

²⁴⁴ International Federation of Accountants. *The Audit Profession and the Environment*, Discussion Paper prepared by the International Auditing Practices Committee. p. 8

²⁴⁵ Novo Nordisk Environment and Bioethics Report 1997. p. 5

²⁴⁶ Global Reporting Initiative. *Sustainability Reporting Guidelines: Exposure Draft for Public Comment and Pilot Testing*. CERES. March 1999. p. 9

to Elkington and Fennell many verification statements are filled with 'weasel words,' or let-out clauses.²⁴⁷ Therefore, it is difficult to assess the assurance given in verification statements.

One of the main recommendations of the FEE Expert Statements in Environmental Reports, was that given the absence of generally accepted guidelines on how to perform an audit of an environmental report or how to report, expert statements should contain a description of the scope of the audit and the audit objectives. The Paper also suggests contents for the expert statement on an environmental report²⁴⁸.

Due to the lack of standards covering these areas most companies are setting their own objectives and scope, determining the level of assurance to be provided and choosing the criteria against which their report is verified. As a result, the extent to which verification adds to the credibility of an environmental performance report is questionable.

A Global Environmental Management Initiative (GEMI) study, Environmental Reporting and Third Party Statements, found that most stakeholders currently see basic styles of verification adding very little – if any – credibility or other forms of value to environmental reporting. These findings are consistent for investors, environmental advocacy groups, the media, government regulators and corporate representatives.²⁴⁹

To avoid the difficulties associated with the type and scope of the verification exercise, it would seem desirable to adopt standards for environmental performance reporting and establish guidelines or standards in relation to verification of environmental reports. This would ensure that all reports are being verified to the same standard and would ensure that verification adds value to the environmental report.

According to the report commissioned by the European Environment Agency:

²⁴⁷ J. Elkington and S. Fennell, 1996. Verification: Can Credibility be Bought? *Tomorrow* Vol 6 No.5 p 59

²⁴⁸ FEE. *Research Paper on Expert Statements in Environmental Reports*. FEE 1996

²⁴⁹ Elkington, op. cit., p 59

*the current trend towards normalising and standardising the measures used for environmental performance will make it easier for external verifiers to assess if the environmental report gives a complete and truthful account of the company's environmental performance.*²⁵⁰

In addition, the Association of Chartered Certified Accountants (UK) 1998 Environmental Reporting Awards highlighted as a problem the differences between the statements issued by the verifiers. The judges ask:

*will comparability require standardisation and if so, how will this be achieved.*²⁵¹

²⁵⁰ Skillius, A. and Wennberg, U. *Continuity, Credibility and Comparability: Key Challenges for Corporate Environmental Performance measurement and Communication*. A Report Commissioned by the European Environment Agency. February 1998. p 42

²⁵¹ Adams, R. 1999. Anglian Water Scoops the Honours at this Year's ACCA Awards. *Environmental Accounting and Auditing Reporter*. Vol. 4. Issue No. 3. March

The Committee recommends that:

Recommendation 8.1:

The government establish a taskforce, with representatives from the professional accounting bodies and the accounting and auditing standard setting boards and relevant stakeholders, to develop basic standards for verification of environmental performance reports for publicly listed companies.

Recommendation 8.2:

To ensure a degree of consistency in future environmental reporting, auditors be required to audit and accredit industry best practice reporting models.

8.8 Environmental Auditors and Verifiers

8.8.1 Auditors of Environmental Information in Financial Statements

Currently auditors of environmental information in financial statements are primarily registered company auditors. Only registered company auditors are allowed to conduct the audit of the financial statements of a company registered in Australia. Auditors are registered by the Australian Securities and Investments Commission under the Corporations Law.

Auditors of financial statements may seek the assistance of experts such as lawyers, engineers or environmental scientists. The Auditing Guidance Statement 606 – *Using the Work of an Expert*, provides guidance on seeking and using assistance from environmental experts.

In addition, the Joint Accreditation System for Australia and New Zealand (JAS-ANZ) has accredited the Quality Society of Australasia Limited (QSA) as an internationally recognised certifier of environmental auditors. The QSA certified environmental auditors provide a number of environmental auditing services including environmental management system

audit, compliance audit, due diligence audit and environmental financial audit.

An environmental financial audit provides identification, evaluation or confirmation of environmental liabilities and assets and financially material environmental costs and benefits, for public or other reporting.

8.8.2 Verifiers of Environmental Performance Reports

The qualifications of the verifier of environmental performance reports are of vital importance.²⁵² Verification of environmental performance reports is being carried out overseas and in Australia by a variety of individuals and organisations. There appear to be two main categories of organisations carrying out verification:

- accounting organisations (eg. Deloitte & Touche, KPMG, PricewaterhouseCoopers); and
- environmental management consultants (eg. ERM, Dames and Moore, SustainAbility, Arthur D. Little).

In the Engaging Stakeholders: The 1997 Benchmark Survey the top ranking verifiers:

*are Deloitte & Touche, KPMG and Ernst & Young among the accountants, and Aspinwall, ERM and SustainAbility among the environmental management consultants.*²⁵³

These two groups appear to use quite different approaches to the verification of environmental performance statements.

Currently there is no regulation or accreditation of environmental performance verifiers. The regulation or accreditation of such environmental verifiers can be seen as important in ensuring the quality and integrity of independent verification.

Internationally, EMAS is the only standard requiring verification of environmental reports by accredited independent verifiers. The regulations state that:

²⁵² Skillius, A. and Wennberg, U. *Continuity, Credibility and Comparability: Key Challenges for Corporate Environmental Performance measurement and Communication*. A Report Commissioned by the European Environment Agency. February 1998. p 43

²⁵³ UNEP/SustainAbility, *Engaging Stakeholders: The 1997 Benchmark Survey*, 1997. p. 27

*it is necessary to provide for an independent and neutral accreditation and supervision of environmental verifiers in order to ensure the credibility of the scheme.*²⁵⁴

The regulations state that member states shall each establish a system for the accreditation of independent environmental verifiers and for the supervision of their activities.

In Australia, there are a few accreditation programs for environmental auditors. However, none of these programs specifically certifies environmental auditors to undertake verification of environmental performance reports. However, auditors accredited under these programs may still have the most appropriate qualification and experience to verify environmental reports.

As mentioned above, QSA provides an internationally recognised certification of environmental auditors. QSA certified environmental auditors may provide a number of environmental auditing services. However there is no specific category, under the QSA environmental auditor certification scheme, for verifiers of environmental performance reports.

There is also regulation over the appointment of environmental auditors (for industrial premises and contaminated land) under the Victorian Environmental Protection Act 1970. EPA appointed Environmental Auditors for Industrial Premises may provide a number of environmental audit services. Once again, however, there is no specific category for verifiers of environmental performance reports.

According to one witness, Victoria could take a lead in broadening the role of EPA in relation to auditing.²⁵⁵

²⁵⁴ Council Regulation (EEC) No 1836/93 of 29 June 1993 *allowing voluntary participation by companies in the industrial sector in a community eco-management and audit scheme*

²⁵⁵ Submission by Mr R. Burritt, Australian National University, 11 September 1998

The Committee recommends that:

Recommendation 8.3:

The government should encourage the certification of verifiers of environmental performance reports through the Quality Society of Australasia.

8.8.3 Auditors of Public Sector Organisations

The majority of submissions agreed that auditors of Victorian public sector agencies should report to Parliament on breaches of environmental laws which have been encountered in the course of an audit. Some of these submissions stated that all breaches of environmental laws should be reported. While other submissions stated that reporting of breaches should be limited to those which:

- may give rise to material financial obligations; and
- have not been rectified at the time or within a specified period of time.

In addition, there was broad support for auditors of Victorian public sector agencies to report on the adequacy of systems established within those agencies to ensure that there is compliance with environmental laws. These submissions held that auditing of systems to ensure compliance with environmental laws was a critical aspect of the auditing process.

A couple of submissions stated that financial auditors do not have the professional competence to report on breaches of environmental laws. This view is consistent with the Auditing Guidance Statement (AGS) 1036, The Consideration of Environmental Matters in the Audit of a Financial Report.

A couple of submissions highlighted the need for a specific purpose engagement so that auditors have adequate skills or qualifications. Such a specific purpose engagement would be likely to involve a multi-disciplinary team to undertake the audit.

The Committee recommends that:

Recommendation 8.4:

The government pursue the development of standards for auditors of environmental information in public sector annual reports and public sector environmental performance reports.

APPENDIX 1

List of Submissions

Joint Submission

Mr R Atkinson FCA,
President

Institute of Chartered
Accountants in Australia

Mr D G Boymal, FCPA,
National President

Australian Society of Certified
Practising Accountants

Mr Ches Baragwanath
Victorian Auditor-General

Ms Jenny Barnett
Victorian National Parks Association Inc

Mr Deane Belfield
Principal Consultant, Global Environmental Service
PricewaterhouseCoopers

Ms Rita Bentley, President
Prospectors and Miners Association of Victoria Inc

Mr Andrew Booth, Land and Water Group
Environment Victoria

Dr Malcolm Brown, Manager – Health, Safety & Environment
Shell Company of Australia

Mr Roger Burritt, Senior Lecturer
Department of Commerce and Co-ordinator, APCEA
Australian National University

Professor R W Davies. Dean, Faculty of Science
Monash University

Dr Dan Douglass

Interim Report of the Inquiry into Environmental Accounting and Reporting

Ms Patricia Evans, Senior Lecturer
Department of Accountancy
Royal Melbourne Institute Technology University

Mr Mark Drerup, Manager, Environmental Affairs
Association of Liquidpaperboard Carton Manufacturers

Mr F G Faux, Senior Lecturer in Accounting
Victoria University of Technology

Mr Chris Fayers
Department of Geography and Environmental Science
Monash University

Ms Glenys Foster, President
The Foster Foundation

Mr Geoff Frost, Lecturer in Accounting
Department of Accounting and Finance, University of Newcastle

Professor R H Gray, Director
The Centre for Social and Environmental Accounting Research
University of Dundee

Mr Peter Grieve, Accountant
Moore Australia Ltd

Mr Ian Hamilton, President
Public Land Council of Victoria Inc

Mr Roger Holloway
TreeBank Carbon Services

Mr Barry Hutton, Department of Accountancy
Royal Melbourne Institute Technology University

Mr Charles Jones
President
Bennalla District Environment Group

Mr Lincoln Kern
Wellington Shire Council

Ms Li-Peng Lim
Strategic Research Centre for Environmental Accountability
University of Tasmania

Hon. Robert Maclellan
Minister for Planning and Local Government

Mr Peter Maganov

Mr Roger Martin

Professor M R Mathews
Department of Accountancy and Business Law
Massey University, NZ

Ms Heather Mitchell, Patron of the Public Land Council of Victoria
Former President, Victorian Farmers Federation

Mr Simon Molesworth, AM, QC, National President
Environment Institute of Australia

Mr Mark O'Connor, Environmental Coordinator
Bonlac Foods

Dr Colin Officer

Ms Jean Raar, Lecturer in Accounting
School of Accounting and Finance, Faculty of Business and Law
Deakin University

Mr D A Robinson
Leighton Contractors Pty Ltd

Mr Stan Rodgers, Principal Consultant
AVTEQ Consulting Services

Mr Bill Scales, AO, Secretary
Department of Premier and Cabinet

Ms Lisa Shadforth, Project Manager
EcoRecycle Victoria

Mr Anthony Tabor, Research Officer (Life Cycle Assessment)
Centre for Design
Royal Melbourne Institute Technology University

Interim Report of the Inquiry into Environmental Accounting and Reporting

Dr Ian Thomas
Department of Landscape Environment and Planning
Royal Melbourne Institute Technology University

Mr Hedley Thomson, Manager Strategic Planning
City of Ballarat

Mr Dennis Trewin, Deputy Australian Statistician
Australian Bureau of Statistics

Professor Ian Wills, Associate Professor
Faculty of Business & Economics, Department of Economics
Monash University

APPENDIX 2

List of Hearings and Witnesses

Mr Terry A'Hearn, Manager Policy Coordination
Environment Protection Authority

Mr John Allen, General Manager Environment
RGC Goldfields

Mr G Angus, Consultant
Plastics and Chemical Industry Association

Ms C Bagatol, External Affairs Manager
Cleanaway Technical Services

Mr R Baxter, Operations Southern Division
Insurance Council of Australia

Mr D Belfield, Management Consulting Services
PricewaterhouseCoopers

Dr D Bowman, Senior Environmental Adviser
Shell Australia Ltd

Mr Roger Burritt, Senior Lecturer
Department of Commerce, Australian National University
and Co-ordinator Asia Pacific Centre for Environmental
Accountability

Ms D Cann, National Administrative Officer
Environment Institute of Australia

Mr Michael Carolin, Environment Adviser
Australian Business Chamber

Senator Grant Chapman (Chairman elect)
Joint Parliamentary Committee on Corporations and Securities

Mr Andrew Clark, Director of Finance
ACT Treasury

Interim Report of the Inquiry into Environmental Accounting and Reporting

Mr Drew Collins,
Director of Economics and Environmental Reporting
NSW Environment Protection Authority

Mr Chris Davey, Section Executive
Technical Services in Project and Structured Finance
National Australia Bank

Mr D Davis, General Manager
Environmental Policy and Planning
BHP

Ms Adele De Costa, Code Co-ordinator, (Environment)
Minerals Council

Ms Di Dibley
Environmental Reporting Australia

Mr G Drake, Group Manager
Public Policy and Environmental Affairs
Western Mining Company Ltd

Ms P Evans, Senior Lecturer
Royal Melbourne Institute Technology University

Mr J Faux, Senior Lecturer in Accounting
Victoria University of Technology

Mr C Fayer,
Centre for Environmental Management
Monash University

Dr Geoffrey Frost
Department of Accounting and Finance
University of Newcastle

Ms Katherine Hannan
National Environment Resource Officer
Enviro Australia

Ms Jeannette Haycocks, Director
Environment and Energy Statistics, Australian Bureau of Statistics

Ms Juanita Higgs, Regional Projects Manager
Southern Sydney Regional Organisation of Councils (SSROC)

Cr Mike Hill, Secretary
Victorian Local Governance Association

Mr B Hutton, Lecturer
Royal Melbourne Institute Technology University

Mr Richard Jennings, Conservation Team Leader
Moreland Council

Mr Bruce Jones, Executive Officer
WTO Rules and Trade and Environment Section
Department of Foreign Affairs and Trade

Mr Robert Joy, Executive Director
Environment Protection Authority

Ms Ros Kelly, Partner
Dames and Moore

Mr Ian Knox, Deputy Managing Director
Westpac

Mr Peter Maganov, Manager
Environmental Reporting
NSW Environment Protection Authority

Mr Eric Mather, Senior Manager
Institutional Marketing, Business Development
Westpac

Mr S Molesworth, QC, National President
Environment Institute of Australia

Senator John Murray
Joint Parliamentary Committee on Corporations and Securities

Mr Marc Newson
Principal Consultant on Environmental Accounting
PricewaterhouseCoopers and Member of the Environmental
Accounting Task Force of the Institute of Chartered Accountants

Interim Report of the Inquiry into Environmental Accounting and Reporting

Mr J Newton, Manager
Technical and Environment
Australian Industry Group

Mr Frank Nugent, Secretary
Joint Parliamentary Committee on Corporations and Securities

Mr M O'Connor, Environmental Coordinator
Bonlac Foods Ltd

Mr Dick Osborne, Research Fellow
Australian Centre for Regional and Local Government Studies
University of Canberra

Mr C Parker, Accounting and Audit
Australian Society of Certified Practising Accounts (ASCPA)

Ms C Proske, Manager
Global Environmental Services
PricewaterhouseCoopers

Mr M Rae, Program Leader
Resource Conservation
World Wide Fund for Nature Australia

Mr Stephen Ray, Conservation Officer
Manningham City Council

Mr M Sadhu, Project Manager
Australian Accounting Research Foundation
Australian Society of Certified Practising Accounts (ASCPA)

Dr Hugh Sadler, Director
Energy Strategies and former Counsellor Australian Conservation
Foundation

Ms Kerry Smith, Manager of the Sustainable Communities Section
Department of Environment

Ms D Souksen, Technical Consultant
Australian Society of Certified Practising Accounts (ASCPA)

Dr John Stanton
School of Management
University of Newcastle

Dr Patricia Stanton
Department of Accounting and Finance
University of Newcastle

Mr P Sutherland, Executive Director
Catchment Management and Sustainability Section
Department of Natural Resources and Environmental

Mr C Temby, Resource Analyst
J B Were

Mr D Trafford, Group Manager Southern Region
Insurance Council of Australia

Mr Ian Wearing
Principal Adviser to the Chief Minister of the ACT

Mr Dick Wells, Executive Director
Minerals Council

Interim Report of the Inquiry into Environmental Accounting and Reporting

APPENDIX 3

List of Organisations and Witnesses who gave Evidence at Meetings Overseas

England

Mr Alan Brown, Mr John Custance (Environmental Protection and Information Management Division), Ms Paula Higgins (Environment and Business Division), Department of Environment, Transport and the Regions, (DETR), and Mr Prashant Vaze, Head of Environmental Accounting, Office for National Statistics

Mr Roger Adams, Head of Technical Services and Research, Association of Chartered Certified Accountants

Mr John Ellington, Chairman, SustainAbility and other officials

Ms Kelly Bernbeck, Programme Manager, Business in the Environment and other officials

Mr Dominic Grieve, MP, Mr Bob Blizzard, MP, Members of the Parliamentary Environmental Audit Committee, Mr Fergus Reid, Clerk to the Environmental Audit Committee, Ms Jill Goldsmith, Research Officer with the Environmental Audit Committee

Germany

Frau Christa Ratte, Herr Walter and Mr Peter Franz and other officials at the Federal Ministry for the Environment

President M Barth, Mr Werner Franke and Professor Nikola Hale, Under Ministry of Environment

The President and other officials, State Office for Environment Protection Baden-Württemberg

Mr Rainer Rauberger and other officials from the Institute for Management and Environment, Augsburg

President and Dr Werner Schulz of the Umweltbundesamt,
Federal Environmental Agency, Berlin

Dr Horst Mierheim, Director, and Dr Jürgen Pankrath, Director
International Environmental Affairs, Federal Environmental
Agency

Mr Walter Radermacher, Head of Environmental Economics and
Accounting and other officials at the Federal Statistics Office,
Wiesbaden

The Netherlands

Dr Steven J Keuning, Head of Statistics, The Netherlands

Mr Peter van Wingerden, Mrs Henny Hendrick-vanderKlis and
Mrs Ali van der Tempel, The Netherlands Court of Audit

Dr Andreas Burger, Senior Scientific Officer, Environmental
Economic Section, Federal Environment Agency

Dr Johan Piet, Partner with Deloitte and Touche in Amsterdam
and President Federal Environmental Task Force

Denmark

Officials from the Danish Commerce and Companies Agency – Ms
Kristian Madsen and Ms Anja Otterstron

Mr Claus Trolle, Managing Director, AKZO Nobel

Mr Jens Fredderiksen, Partner KPMG
Parliamentary Committee for Environment and Planning and
Finance:

Mr Steen Gade, Chairman of the Danish Parliamentary
Environment and Regional Planning Committee, Ms Helen Beun,
Mrs Bodil Thrane, Members of the Parliamentary Environment
and Regional Planning Committee, and Mr Jan Rasmussen,
Secretary to the Parliamentary Environment and Regional
Planning Committee

Mr Henrik Wulff, Ms Gert Johansen, Mr Peter Brostrm, and other
officials Danish Ministry of Environment and Energy

Ms Mett Norkje, Ministry for Finance

Scotland

Professor R H Gray, Director, Centre for Social and Environmental Accounting Research, University of Dundee, Ms Jan Bebbington, Lecturer, University of Dundee, Mr David Collison, Lecturer, University of Dundee

Interim Report of the Inquiry into Environmental Accounting and Reporting

APPENDIX 4

Details of New Zealand Meetings

Mr Ken Tremaine, Director
Environmental Accounting, KPMG

Professor Stewart Lawrence
Department of Accounting, School of Management Studies
University of Waikato, Hamilton

Mr Brennan Allen – who is doing a doctoral program on
environmental reporting and Mr Kwame Mfodwo – specialist in
maritime and environmental law at the University of Waikato

Mr John Tan, Accountant and Environment Manager
Landcare Research

Members of the Select Committee on Finance and Expenditure

Mr David Carter (Chairperson)

Mrs Jenny Bloxham

Hon. Dr Michael Cullen

Hon. Peter Dunne

Ms Ruth Dyson

Hon. Marie Hasler

Mr Rodney Hide

Mr Mark Peck

Rt. Hon. Winston Peters

Hon. Clem Simich

Ms Belinda Vernon

Mr John Wright

Officers from the New Zealand Auditor-General's Office

Mr David Macdonald

Controller and Auditor-General

Mr Terry McLaughlin

Acting Assistant Auditor-General, Parliamentary Group

Mr Bruce Anderson

Assistant Auditor, General Strategy and Planning

Mr Jim Olsen

Sector Manager, Parliamentary Group

Rt. Hon. W F Birch

Treasurer and Minister of Finance

Mr Ian Reddie, Deputy Secretary

Budget Management Section

Dr Ian Ball

- **Professor of Accounting and Public Policy at Victoria University**
- **Principal of Public Sector Performance (NZ)**
- **Chairman of the Public Sector Committee of the International Federation of Accountants**
- **Member of the NZ Accounting Standards Review Board**
- **Previously, Central Financial Controller in the NZ Treasury and in that capacity had primary responsibility for the overall design and implementation of the NZ financial management reforms)**

Officers from the Office of the Parliamentary Commissioner for the Environment

Dr J Morgan Williams

Parliamentary Commissioner for the Environment

Ms Jenny Boshier, Assistant Commissioner

Mr Bob McClymont, Director, Citizens' Concerns

Mr Phil Hughes, Environmental Investigator

Officials from Ministry for the Environment

Ms Church, Chief Executive Officer

Mr David Brash

Manager, Standards Indicators

Mr Ralph Chapman

Manager, Strategic Policy Group

Ms Susan Beard,

Manager, Pollution and Waste Group

Mr Markus Milne

Department of Accountancy, University of Otago

Professor M R Mathews and Ms L E Tozer, Massey University

Interim Report of the Inquiry into Environmental Accounting and Reporting

APPENDIX 5

Voluntary Environmental Reporting Guidelines

To date reporting guidelines have been released internationally by such bodies as:

Confederation of British Industry (UK), Introducing Environmental Reporting – Guidelines for Business (1993)

Environmental Protection Authority (NSW), Corporate Environmental Reporting, Why and How (1998)

Environmental Task Force of the European Federation of Accountants, FEE Discussion Paper Towards a Generally Accepted Framework for Environmental Reporting (1999)

Global Environmental Management Initiative (USA), Environment Reporting in a Total Quality Management Framework (1994)

Global Reporting Initiative (sponsored by Coalition for Environmentally Responsible Industries, US), Sustainability Reporting Guidelines (1999)

Institute of Chartered Accountants in England and Wales, Environmental Issues in Financial Reporting (1996)

Public Environmental Reporting Initiative (USA), The PERI Guidelines (1992)

UK Government's Advisory Committee on Business and the Environment (UK), Environmental Reporting and the Financial Sector – An Approach to Good Practice (1997)

United Nations Environment Programme (and SustainAbility), Engaging Stakeholders – Second International Progress Report on Company Environmental Reporting (1996)

World Council for the Environment (now part of WBCSD), Environmental Reporting – a Manager's Guide (1994)

Deloitte and Touche (Denmark), Assessor's manual for the Analysis and Evaluation of Corporate Environmental Reporting (1996)

United Nations Environment Program (and Company Environmental Reporting: A Measure of the Progress of Business and Industry Towards Sustainable Development (UNEP Technical Report 24). Company Environmental Reporting contained a list of 50 reporting criteria to be considered in the preparation of environmental reports.

APPENDIX 6

New Trends in Social and Environmental Reporting – Sustainable Development and the Role of Triple Bottom Line Reporting

During the past few years a number of corporations throughout the world have commenced discussing various issues associated with what has become commonly termed as triple bottom line reporting. Triple bottom line reporting has been defined by Elkington²⁵⁶ as reporting which provides information about the economic, environmental, and social performance of an entity. It represents a departure from the previous ‘bottom line’ perspective which have traditionally focussed solely on an entity’s financial or economic performance. The notion of reporting against the three components (or ‘bottom lines’) of economic, environmental, and social performance is directly tied to the concept and goal of sustainable development. Sustainable development has been defined as “development that meets the needs of the present world without compromising the ability of future generations to meet their own needs” (Brundtland Report²⁵⁷). This means that for an organisation (or a society, state or country) to be sustainable it must have sufficient economic resources, it must protect its environment, and operate in conformity with the views of its constituents or society.

Sustainability appears to have become a central part of the language of government and business world-wide and the definition provided within The Brundtland Report has attracted widespread acceptance (for example, the definition has been directly adopted within reports released publicly by Australian companies such as North Ltd, Rio Tinto Ltd, WMC Ltd, and Body Shop Australia and in numerous overseas companies). Many organisations are now explicitly stating that their focus is on

²⁵⁶ J. Elkington, *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*, Capstone, Oxford, 1997

²⁵⁷ World Commission on Environment and Development, *Our Common Future*, Oxford University Press, 1987

longer run sustainability considerations, which although having implications for near term profitability, are essential for long-term survival (at both the corporate and global level).

When considering the environmental and social implications of an organisation (two elements of sustainability) two separate components are often identified, these being eco-efficiency, and eco-justice considerations. Where corporations have elected to produce stand-alone environmental reports (and numerous organisations throughout the world have elected to do so) they have tended to focus on eco-efficiency issues alone. For true sustainability there is a view that eco-justice must also be addressed.

Eco-efficiency is concerned with maximising the use of a given quantity of resources and minimising the environmental implications of using the resources – it relates to environmental protection. Considerations of eco-efficiency do not address the difficult issues of whether the goods being produced (which consume various resources) actually need to be produced. Eco-justice considerations, however, question what gets produced, when it gets produced, and for whom it gets produced. According to Stone²⁵⁸:

‘It [eco-justice issues] may well point to the significant reduction or elimination of production of certain goods and services ... Eco-justice will also demand a reduction in consumption and the material standard of living in affluent nations and a corresponding shift and a redistribution of (scarce) resources to more impoverished nations ... and will at least challenge and probably reject the notion of economic growth as the dominant driving force and measure of economic health for nations, for organisations and for individuals’.

As noted above, most environmental reports and supplementary disclosures in annual reports have, at least to date, considered eco-efficiency issues but not eco-justice issues. The concentration on eco-efficiency issues is probably because such issues tend to be more technical or ‘scientific’ in nature and less controversial than

²⁵⁸ D. Stone, “No longer at the end of the pipe, but still a long way from sustainability: A look at management accounting for the environment and sustainable development in the United States”, *Accounting Forum*, 19(2/3), 1995, p. 97

eco-justice issues. Eco-justice considerations are very value-laden and hence easily open to criticism. As Jonathon Porritt, Director of Forum for the Future (UK) states in relation to organisations embracing both eco-efficiency and eco-justice considerations:

‘That’s a huge challenge for both government and companies to take on, and more than once I’ve heard hard-pressed business people beg to be allowed to concentrate on dealing with their environmental impacts (which can at least be quantified, costed and conventionally managed) without cluttering the agenda “with all this wishy-washy stuff about ethics and corporate social responsibility”²⁵⁹.

Eco-justice style reporting would indicate how the entity is using its limited resources to ensure that particularly disadvantaged groups are not being forgotten. Other issues to consider from an eco-justice perspective would include the creation of employment opportunities, education and health care; the observance of human rights and equal opportunities, impact on indigenous peoples, support for people in developing countries, and so forth. The disclosure of eco-justice information is becoming more widespread in the UK and Europe, but is limited within Australia.

Whilst a number of companies commenced producing stand-alone environmental reports in the early 1990s, in the late 1990s a number of companies have commenced producing stand-alone ‘social reports’ – reports which address various eco-justice issues. The practice is more common in Europe and the UK and no known illustrations of the practice are available within Australia.

Organisations producing stand-alone social reports include Body Shop (UK), Traidcraft (UK), Co-Operative Bank (UK), South African Brewing, APSO (Ireland), British Telecom, BP (UK), and Shell (UK). A review of the social accounts currently being produced indicates that a great deal of the disclosures being made relate to whether the organisation is meeting stakeholder expectations and, if not, what remedial action is being undertaken. Stakeholder expectations are learned through direct consultation mechanisms which engage various stakeholder groups.

²⁵⁹ Porritt, 1999, p. 21

Whilst there have been many environmental reporting guidance documents released over recent years this has not been the case with respect to social (or eco-justice) reporting. In 1999, however, two documents were released which provide some guidance, these being:

- Sustainability Reporting Guidelines issued by Global Reporting Initiative²⁶⁰; and
- Towards Standards in Social and Ethical Accounting, Auditing and Reporting issued by The Institute of Social and Ethical Accountability (ISEA).

While this report has not addressed this emerging area, governments will most certainly need to grapple in the future, with difficult eco-justice issues.

²⁶⁰ For example, in relation to employees, the guidelines suggested disclosure about workforce diversity (gender, race, age); child labour; turnover rate (recruitment and retention); compensation and benefits; flexibility in work arrangements; assistance for displaced workers. In relation to community involvement, the guidelines suggested disclosures about such things as complaints; community reinvestment; activities in developing countries; philanthropy; and, taxes