

# **Sustainability Reporting in the Corporate Sector**

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**Presented to:  
The Institute of Actuaries of Australia  
2003 Biennial Convention  
18 – 21 May 2003**

## **INTRODUCTION**

In a talk broadcast on the ABC Radio's Ockham's Razor programme in June 2001, Dexter Dunphy, Distinguished Professor of Management at UTS, expressed the view that while progress, in particular, economic progress was the dominating theme of the twentieth century, the foremost issue of the twenty-first century will be achieving a more sustainable world. "*Never before in the history of the world has the viability of much of the life on this planet been under threat from humanity; never before have so many of the world's people experienced such material wealth and so many others lived in abject poverty.*". He went on to say that the rise of the corporation is one of the major contributing causes of this situation and must be part of the solution.

Financial reporting and analysis is a fundamental part of business management. Many now argue that more comprehensive reporting will assist in understanding how sustainable development issues affect business, and in turn, how business actions impact on the bigger picture of global development.

This paper provides an overview of the meaning of sustainable development and the evolution of sustainability reporting by corporations worldwide. We aim to generate discussion amongst actuaries of the contribution which could or should be made by business to sustainable development and the role that the actuarial profession could play in the measurement and assessment of this process.

# TABLE OF CONTENTS

1	THE MEANING OF SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT .	4
2	THE ROLE OF BUSINESS IN SUSTAINABLE DEVELOPMENT .....	7
3	THE PURPOSES OF SUSTAINABILITY REPORTING .....	8
4	THE DEVELOPMENT OF CORPORATE SUSTAINABILITY REPORTING .....	9
5	CASE STUDIES OF SUSTAINABILITY REPORTING BY A SELECTION OF INDUSTRIES .....	15
6	A ROLE FOR ACTUARIES? .....	41
7	CONCLUSION.....	42

## BIBLIOGRAPHY

## RELEVANT WEBSITES

## ABBREVIATIONS

## APPENDICES

- 1 Global Reporting Initiative – List of Recommended Indicators
- 2 Summary of Reporting by a Sample of Mining Companies
- 3 Summary of Reporting by a Sample of Finance and Insurance Companies

# **1 THE MEANING OF SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT<sup>1</sup>**

## **1.1 Background**

Increasing concern about the impact that human activity is having on the natural environment and supply of natural resources and the disparity in social and economic conditions of the lives of people throughout the world, has generated a growing movement calling for actions to be taken to address these issues. The concept of sustainable development has arisen from this movement.

The term “*sustainable development*” gained worldwide recognition following the publication in the mid 1980’s by the World Commission on Environment and Development of its report entitled “*Our Common Future*”<sup>2</sup>. In October 1987, the goal of sustainable development was endorsed by the General Assembly of the United Nations.

The Commission defined sustainable development as “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*” (WCED 1990).

Beder (1996) attributes the recognition of the concept of sustainable development to the fact that it accepts the status quo of capitalist societies and does not call for radical changes to the economic system. At the same time, it places responsibility for action on all participants in society; namely governments, business, non-government organisations, workers and individuals.

## **1.2 Practical Definition of Sustainable Development**

“*Sustainable development may be regarded as the progressive and balanced achievement of sustained economic development, improved social equity and environmental sustainability.*” (Moldan et al, 1997, p67).

The United Nations initiated the World Summit on Sustainable Development in an attempt to create a framework for concrete action to address the world’s problems. In Rio de Janeiro in 1992 at the first World Summit<sup>3</sup>, the document known as Agenda 21 was formulated and agreed to by the majority of the participating governments. This enunciates a set of principles and steps which aim to move the world towards sustainable development.

Chapter 40 of Agenda 21 describes the need for the development of indicators of sustainability “*to provide solid bases for decision-making at all levels and to contribute to a self-regulating sustainability of integrated environment and development systems*”.

Under the Agenda 21 framework, sustainable development is generally categorised into three main areas of consideration; social, economic and environmental conditions. Often a fourth area of institutional quality (or governance) is also added.

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<sup>1</sup> The two terms are often used interchangeably. In this paper we generally define sustainable development as the process by which the outcome (or state) of sustainability is achieved.

<sup>2</sup> Also referred to as the Brundtland Report after the Chair of the Commission Gro Harlem Brundtland, Prime Minister of Norway.

<sup>3</sup> Also known as the Earth Summit or Rio Summit

AL Dahl<sup>4</sup> suggests that:

- i) sustainability is about establishing a balance or equilibrium over time but, at the same time, it is a dynamic concept; and
- ii) sustainability is also a relative concept dependant on each society's culture, goals and values.

Some goals may be defined in absolute terms, based on scientific or statistical data, for example, on established human health or ecosystem health criteria. Many other environmental goals and most social and economic goals cannot be defined absolutely. According to Dunphy D et al (2000), "*Sustainability is more a symbol than a scientific concept. It's the focus for a new debate about the shape of the future, a signpost pointing to a general direction that we must take while debate is engaged about the best path forward*". Sustainability cannot be defined by some overlooking authority. All stakeholders need to be involved in developing solutions.

In broad terms, sustainable development can be considered at a series of levels, going from global to national and then to more interdependent levels covering regions or businesses or individuals.

### **1.3 Development of National Sustainability Indicators**

The Earth Summit created the UN Commission on Sustainable Development (CSD) with a main mandate to monitor the progress being made towards sustainability. At its first meeting in 1993, the CSD called for the development of a suitable set of indicators of sustainable development (ISDs), together with compilation guidance information. These were to be made available to decision-makers at the national level for possible integration into each country's national reporting and analytical processes. In 1995, the CSD initiated a SCOPE (Scientific Committee on Problems of the Environment) project on the development of ISDs, an "*agreed and workable set of indicators*", by 2000 (Moldan et al 1997).

The book edited by Moldan et al gives an overview of the work of the project. As the introduction points out, "*there are many definitions of sustainable development and no consensus on a single definition. However, there appears to be sufficient understanding and agreement to warrant developing indicators. Moreover, the very process of developing indicators contributes to the creation of a better definition of sustainable development*". An important goal of work on indicators is to make the concept more operational. Therefore, a crucial feature of indicators, as a whole, is their relevance to policy and decision-making. This point applies at the corporate level as well as at the national level.

The framework for categorising indicators adopted by the SCOPE project is the Driving Force – State – Response (or DSR) framework, the principles of which were developed by the OECD in devising a set of environmental indicators for national reporting (see OECD 1993). This framework has been adopted by Australia in the State of the Environment reports.

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<sup>4</sup> Moldan et al (1997)

The categories are outlined below:

Driving Force	A human activity that has an impact on sustainable development.
State	The current quality or quantity of environmental resources, social and economic conditions.
Response	The societal responses or policy initiatives.

The table below provides some examples of the placement of indicators within the framework. While the framework has been designed for reporting at a national level, the indicators shown in the table are also applicable to reporting at a company level.

	<b>Social</b>	<b>Economic</b>	<b>Environmental</b>
Driving Force	Employment	Contribution to GDP Exports Imports	Energy/water use Greenhouse gas emissions Waste generation Pollution
State	Male/female ratio of wages level or total employment	Relative contribution to GDP from Primary/secondary/tertiary sources	Area of protected land. Salinity levels
Response	Expenditure on training, health/safety, and local communities.	Expenditure on research & development	Environment policy. Change in technology. Environment protection expenditure.

The DSR framework has the advantages of being simple and easy to understand for decision-makers. However it has limitations:

- i) It does not identify direct causal inter-linkages between indicators, either at a horizontal or vertical level. In other words, a driving force factor does not necessarily lead to a related change in a state factor and a change in an environmental driving force can have social implications but there is no direct linkage or there are several other driving forces to consider; and
- ii) The indicators cannot be aggregated to form meaningful composite indices, like GNP, which could be used to compare countries or simplify the monitoring of progress.

These limitations need to be addressed further by research into developing more advanced analytical frameworks.

Do these limitations have implications for the adoption of sustainability reporting by companies? Is it too early for companies to start sustainability reporting? As will be explained in the following sections, many of the goals of reporting cannot be met at this stage. However, there are still many compelling reasons for companies to report on their sustainability performance.

## 2 THE ROLE OF BUSINESS IN SUSTAINABLE DEVELOPMENT

Agenda 21 recognises that business is one of the major forces in future human development and the day-to-day lives of the present generations.

Since the Earth Summit, the role of business in all aspects of sustainable development has become more significant due to:

- globalisation;
- the fall of communist states of eastern Europe;
- the declining role of government in regulating business activities; and
- the increasing awareness of and concern about sustainable development issues, such as the environment..

These developments have led to calls for greater accountability of business activity (often also called corporate social responsibility<sup>5</sup>) and higher standards of corporate governance. At the same time, business is expected to be more transparent and to respond to interests or concerns of all stakeholders, not just shareholders.

In the Millennium Poll on Corporate Social Responsibility, a survey of 25,000 people in 23 countries, including 1,000 Australians, Australians had the highest expectations of company performance. 45% of Australians believed companies should participate in the creation of a better society, and 51% claim to be punishing companies not seen as socially responsible. Only 8% of Australians held the view of a “pure” business role for companies (EnviroNics, 1999).

In an address to the Australian Minerals and Energy Environment Foundation conference in 2001, the CEO of WMC Ltd, Hugh Morgan said (WMC 2001):

*“Expectations about the benefits of development to society have risen sharply. Society looks for, and expects, business to be a long-term, net-positive contributor to economic, social and environmental wellbeing; in effect a net-positive contributor to sustainable development. As a result, the sustainable development issues faced by companies like ours are more complex as we seek to make a satisfactory return for our shareholders and ensure our own sustainability. Our continued licence to operate and access resources depends critically upon our acceptance by communities within which we operate.”*

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<sup>5</sup> This is another term often used to describe a company’s approach to sustainable development. However it is usually used in a context which excludes the environmental aspects of corporate management. The term has been defined by the World Business Council on Sustainable Development as follows: *“Corporate Social Responsibility is the commitment of business to contribute to sustainability, economic development, working with employees, their families, the local community and society at large to improve their quality of life”*

### 3 THE PURPOSES OF SUSTAINABILITY REPORTING

There are many forces creating the demand for more expansive information about the operation of businesses covering more than financial performance, for example:

- environmental issues are becoming more critical so stakeholders want to know more about business' environmental management;
- stricter environmental legislation in most countries, including Australia, has created greater financial and operational risk for business if something goes wrong;
- the development of socially responsible investment funds whose managers require more comprehensive information about company management and operations;
- the Socially Responsible Investment disclosure requirements in Australia's FSR Act 2001 will lead to investment managers demanding more information from companies;
- reporting legislation in some countries;
- peer pressure particularly for companies operating in areas with critical environmental impacts such as mining and oil; and
- general expectations of information – “*trust me*” has changed to “*tell me*” or “*show me*”.

Companies are expected to be transparent about their values, principles and performance as regards sustainable development. Mission statements are not enough.

These forces are summed up by Leon Davis, Deputy Chairman of Rio Tinto (IIED 2002b) in a report on the meaning of sustainable development in the context of the mining industry:

*“The competitive nature of business inclines management to be economical with information. That trait once had survival value in a smaller, more regulated economy where people who mattered were experienced bureaucrats and a select group of knowledgeable bankers, analysts and the like. Today, a company must gain the respect of a wider, more diverse audience. Today, openness and transparency are the traits which appeal to that audience. Being able to identify and communicate effectively with stakeholders is essential if a company wishes to establish public credibility.”*

There are a number of reasons from business' point of view why expanded public reporting, together with the natural prerequisite of measurement and analysis, can be beneficial:

- enhanced reputation leading to
  - reduced cost of capital and insurance from the demonstration of good performance;
  - improved market share;
  - retention of high quality employees;
- risk identification and control;
- better understanding of trends in financial performance;
- collection of detailed information which facilitates a more proactive approach to management issues;

- better relationships with stakeholders; and
- pre-empting issues that could lead to restrictive regulation, for example, on new resource projects.

As sustainability cannot be defined as a predetermined goal, the process of reporting on sustainability performance will evolve as the practice of reporters and needs of stakeholders develop. The first step that must be undertaken before reporting occurs is to establish the core understanding of the relationship between the company's operations and sustainable development. *"Good sustainability reporting builds on core values and sets out decision-making principles that are consistent with these values"* (Sustainability Reporting Program 2000).

## **4 THE DEVELOPMENT OF CORPORATE SUSTAINABILITY REPORTING**

As has already been explained, sustainability is usually defined in terms of balancing the relationships between current economic, social and environmental needs in a manner that does not compromise future needs (GRI 2002). Sustainability reporting by companies is as a result often referred to as the Triple Bottom Line (TBL) reporting<sup>6</sup>.

### **4.1 The Global Reporting Initiative**

The Global Reporting Initiative (GRI) was established in 1997 by the U.S. non-government organisation CERES (Coalition for Environmentally Responsible Economies) and the United Nations Environment Program. Its goal is to enhance the quality, rigour and utility of sustainability reporting practices by organisations. Sustainability reporting guidelines have been developed with the active participation of companies, environmental and social non-government organisations, accountancy organisations, trade unions, investors and other stakeholders worldwide.

An exposure draft of Sustainability Reporting Guidelines was released in 1999 for public comment. After an extensive process of consultation and review, the first set of Reporting Guidelines was released in 2002. Use of the guidelines may be as a reference by organisations or, as has already happened, organisations may report *"in accordance"* with the Guidelines.

The GRI reporting framework comprises three sets of documents.

- The GRI Sustainability Reporting Guidelines (the "Guidelines");
- Sector and Issue Supplements; and
- Technical protocols

Together this family of documents represents a comprehensive framework for measuring and reporting on economic, environmental and social reporting at an organisational level.

The Guidelines represent the foundation upon which all other documents are based and outline core content that is broadly relevant to all organisations regardless of size, sector or location.

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<sup>6</sup> A phrase coined by John Elkington in his book published in 1980, *"The Ecology of Tomorrow's World"*.

The sector supplements will be designed to provide an additional set of indicators for use in conjunction with the Guidelines that highlight specific issues that characterise a given industry sector.

The GRI is also drafting technical protocols that offer specific guidance on various technical aspects or reporting within GRI including expectations related to measurement of specific indicators.

The GRI Guidelines are a tool for decision-making at three levels (UNEP 2000):

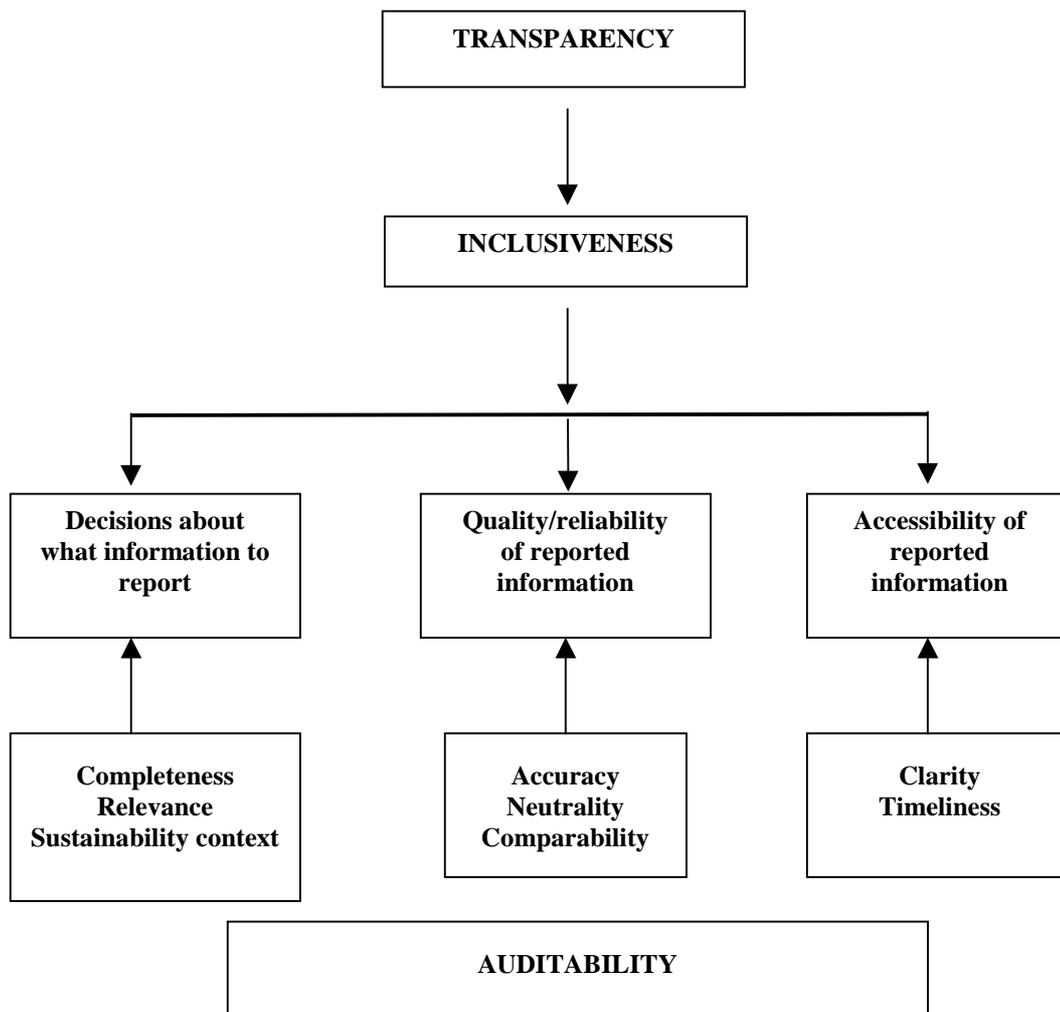
- i) They provide for the board and senior management an internal vehicle for evaluating the consistency between social, economic and environmental policy and performance. At the same time, the structured framework for reporting will assist reporting organisations in comparing themselves against others;
- ii) At the operational level, the Guidelines provide a logical structure for applying policy to the organisation's operations, services and products and lead to the development of appropriate data and information systems; and
- iii) They provide a consistent framework for sharing and promoting dialogue with internal and external stakeholders regarding the organisation's performance and thereby should facilitate continuing improvement in their sustainability performance.

The current purpose of these guidelines is to examine a company's operations virtually in isolation. However, there is reference to the need for company reports to fit in with reporting being developed on a national or international level and to enhance comparability across reporters. This area needs more research.

## **4.2 Principles of Reporting**

The Guidelines are not a performance standard, rather they aim to present reporting principles and assist organisations in presenting a balanced picture of their performance.

The foci of attention in considering issues relating to the selection and presentation of information are illustrated by the following diagram.



The core principles of reporting are:

***Transparency*** Users should be fully informed about the processes, procedures and assumptions underlying the reported information. The application of this core principle is equivalent to the disclosure rules that apply to financial statements.

***Inclusiveness*** The views of stakeholders should be taken into account as far as possible to ensure that all significant information is covered. This covers such issues as choice of indicators, reporting boundaries and the report format.

***Auditability*** This principle ensures that the information can be verified by internal or external auditors or other interested parties.

The implementation of these core principles involves consideration of several aspects of the design of the reporting process, divided into the areas of what to report, the quality of the information and the ease of the collection process. The Guidelines set out how these general aspects should be approached as outlined below.

The definition of reporting boundaries could be subject to varied interpretation and therefore should be carefully explained. They may vary depending on the information being reported. They could be related to financial reporting boundaries or could be

extended to the full supply chain; that is, including both the raw material inputs and product outputs.

The scope of the information reported will vary between organisations to take into account which information listed in the Guidelines is relevant. However, users' needs have to be considered, not just the reporter's needs.

The sustainability context, or how to link organisational performance within a broader or macro-level context is a critical aspect of reporting. This aspect is in the very early stages of development. We will explore the possibilities in more detail in the case studies.

The factors that will determine the accuracy of the information will depend on the decision-making needs of users and the conditions under which it is gathered.

Neutrality requires that all relevant information is reported, both good and bad.

Comparability requires that reports from one period to the next should have consistent boundaries and scope. Any changes should be explained, including how previously reported information would have been changed under the new conditions.

Users of reports will have varying skills and understanding of the information to be reported on. The reports need to be designed to be as clear and non-technical as possible. The information should be provided according to a regular schedule. Some parts could be provided annually and others quarterly.

### **4.3 Stakeholder Perspectives**

Emphasis is placed on consultation with stakeholders prior to and during the development of sustainability reports. The value derived from reporting can be maximized only if stakeholders' expectations are being met.

### **4.4 Current Practice of Sustainability Reporting by Companies**

The driving forces behind the development of sustainability reporting have built up over the last ten years. Business reporting has developed more recently than national reporting, although some companies have been publishing environmental reports for over five years.

Before publishing a sustainability report, a company needs to carry out a fundamental analysis of their policies in relation to sustainable development issues and decide on the information they are willing and able to make public. A new level of accountability will be established which will be beneficial if it enhances the reputation of the company, but it also makes the company vulnerable if implementation is badly managed. Therefore, the initial development of a sustainability reporting system is a major exercise. In setting out to make public details of several new management areas a company needs to:

- involve the whole organisation at many levels;
- reappraise or develop more structured or explicit policies and practices; and
- set up new management systems in a way that will have long term support.

While the development can be carried out in stages, there has to be enough worthwhile information to report.

A survey by KPMG (2002) of reporting by the top 100 companies in nineteen countries<sup>7</sup> showed that 23% were producing some type of report.<sup>8</sup> The highest level of reporting was by utilities (50%) and communications and media (46%).

In an interview with Ethicalinvestor.com.au on 5 February 2003, Dexter Dunphy commented that: *“the majority of Australian companies are still focused on short term profits and are indifferent to or have not really thought about the benefits of sustainable development. Some companies still oppose the principles of sustainability.”* The low rate of acceptance of sustainability in Australia is demonstrated by the very small number of companies that publish a sustainability report. Allen Consulting (2002) report that only 10 of Australia’s top 50 companies publish environment reports<sup>9</sup> and six have produced social reports<sup>10</sup>.

Allen Consulting (2002) has classified the current responses of companies to sustainable development and sustainability reporting into five groups, based on a survey of major Australian companies and a selected group of overseas companies with a high profile on sustainability issues. These are:

- i) Wait and see what other companies are and will be doing, no reporting currently.
- ii) Open and transparent on current practices and standards, mostly in environmental performance.
- iii) Realignment of strategy and reporting with stakeholder expectations, for example WMC and Westpac.
- iv) Adoption of core principles of sustainable development in business activity, for example Rio Tinto.
- v) Realignment and integration of operations with sustainable development, for example Cooperative Bank in the United Kingdom.

Nevertheless, there are moves afoot by the Australian Government to encourage the development of sustainability reports. The Prime Minister’s Business Community Partnership was asked to progress a TBL reporting framework for Australian organisations.

In November 2002, Environment Australia released for public comment an exposure draft entitled *“Indicators and Methodologies for Public Environmental Reporting, an Australian Guide”*. The indicators in this guide are closely aligned to the GRI indicators, but they take into account Australian needs and conditions.

The Department of Family and Community Services (FaCS) has been asked to progress the social aspects of TBL reporting. FaCS will be producing a practical guide for Australian reporters of social indicators in 2003. The project has been driven by a panel of business and non-business organisations.

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<sup>7</sup> Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Japan, Netherlands, Norway, Slovenia, South Africa, Spain, Sweden, UK, USA

<sup>8</sup> Environmental, health & safety, social, community & sustainability or some combination of these.

<sup>9</sup> Wesfarmers, Cable & Wireless Optus, Telstra, BHP Billiton, Rio Tinto, WMC, Woodside, MIM, Normandy Mining and Orica.

<sup>10</sup> BHP Billiton, Rio Tinto, MIM, Normandy, Westpac and WMC Resources.

## **4.5 Overview of Recommended Corporate Sustainability Performance Indicators**

Under the GRI Reporting Guidelines, the indicators are grouped into the three conventional sectors. The general aims of the indicators within each sector are:

- Economic*** To measure direct and indirect impacts on the economic status of all stakeholders, such as suppliers, customers and employees, regional and national economy. To measure actions which may affect the company over a broader timeframe than the conventional reporting period. To develop understanding of how economic activities are linked to intangible assets . To measure indirect impacts such as the effects of changes in location of operations, community dependence and location of suppliers;
- Environmental*** This area has developed the greatest level of consensus about reporting methods. Absolute and normalised (resource use per unit of output) measures are required. Organisations are encouraged to report on their relationship with broader ecological systems in terms of their ability to absorb pollutants; and
- Social*** These indicators measure the organisation's impacts on stakeholders at the local, national and global level, such as labour practices and human rights. Stakeholders include the community, consumers and employees. Many of the measures will be qualitative.

### ***Integrated Indicators***

The GRI also encourages the development of integrated indicators. These are generally categorised into:

- i) Systemic measures that relate the organisation's activity to larger environmental, economic and social systems such as at the regional or national level or an established benchmark. These measures can be particularly useful if the organisation is prominent in a particular region, for example a mining operation in a remote region. No standard set of these indicators has been identified but reporting organisations are encouraged to consult with stakeholders and develop appropriate indicators; and
- ii) Cross-cutting indicators which relate two or more measures by using ratios. These relate the size of the impact to each incremental change in another value, for example, emissions per unit of output.

A list of the recommended indicators is in Appendix 1.

## 5 CASE STUDIES OF SUSTAINABILITY REPORTING BY A SELECTION OF INDUSTRIES

In our case studies we will be focusing on electricity generators, mining companies and the finance and insurance sector.

### 5.1 The Electricity Generation Industry

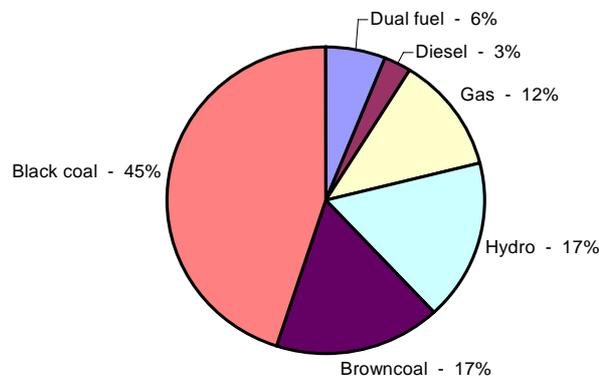
#### 5.1.1 Background

*“BC Hydro’s vision for a sustainable future makes good business sense. Becoming a sustainable energy company does not mean that we will drastically change what we are already doing, but rather be clearer and more deliberate about where we are headed”*

We have included the electricity generating market as a case study due to its importance to Australia’s economic growth and businesses and due to its large emissions of greenhouse gases.

Australia’s greenhouse gas emissions are about 1.3% of global emissions. With a population of 19.5 million this gives Australia one of the highest per capita emissions in the world (2nd highest per capita CO<sub>2</sub> emissions in 1997 after USA). High per capita emissions are mainly as a result of agricultural land clearing, greater vehicle use due to long distances of travel and the high proportion of coal use in electricity generation. In 2000 electricity related emissions were 32% of the total net emissions.

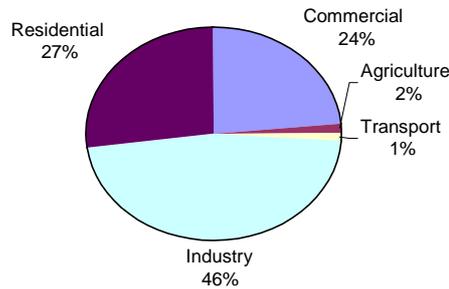
Graph 5.1 shows the installed capacity of Australia (ESAA<sup>11</sup> Australia Electricity Supply development 2000 – 2002).



The consumption of this electricity is split between industrial, residential commercial, agriculture and transport sectors in Graph 5.2.

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<sup>11</sup> Electricity Supply Association of Australia



The high industrial use reflects the high level of aluminium smelting, most of which is exported. Australia has amongst the lowest large business and residential electricity prices in the world.

Electricity consumption is projected to grow by 2.8% pa over the next 10 years resulting in related greenhouse gas emissions rising by 205 million tonnes by 2010. A key challenge for the Australian electricity supply industry is the management of peak power demand as, although some of this demand is met by efficient gas fired plants, much depends on less efficient coal fired generation. This can have a significant impact on greenhouse gas emissions as well as electricity supply and user costs.

On 1 April 2001 the Commonwealth Government's Mandated Renewable Energy Targets legislation was implemented, designed to increase the amount of electricity generated from renewable sources by a total of 9,500 GWh by 2010. The Act works by placing a legal responsibility on wholesale buyers of electricity to purchase a percentage from renewable sources.

A survey of regulated gas and electricity companies in the UK undertaken by KPMG on behalf of OFGEM<sup>12</sup> indicated that the main rationale for reporting was to improve image and respond to stakeholder pressure. However, the survey revealed that many companies did not realise the full range of potential benefits that can be derived when the process is integrated into the business strategies which take account of environmental and social performance as well as financial performance.

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<sup>12</sup> Office of Gas and Electricity Markets

### **5.1.2 How Far The Industry Has Come**

#### **Worldwide**

E7 is a non profit group comprised of nine leading electricity companies from G7 countries working together for sustainable energy development. The United Nations Environment Programme (UNEP) invited E7 to prepare a report on behalf of the global electricity sector for the 2002 World Summit on Sustainable development. This report entitled “Industry as a partner for sustainable development: Electricity” investigates the contributions that the electricity sector has made to sustainable development over the past decade. A summary of its conclusions are as follows:

#### **Environmental Contributions**

- Improvements in electricity generation, transmission efficiency and pollution control technologies have reduced primary fuel consumption and associated emissions and waste.
- Many companies have adopted life cycle analysis to evaluate environmental performance of generation options, have improved environmental impact assessments with stakeholder consultations and improved environmental management due to the development of international standards.
- Helped slow the increase of CO<sub>2</sub> emissions through appropriate fuel choices, continued technological development, end use energy efficiency, demand side management and carbon sequestration projects despite growing energy consumption.

#### **Social Contributions**

- Improved healthcare, agricultural practices and food storage, education and telecommunications have resulted from the increased availability and supply of electricity.
- Processes for involving stakeholders has been improved resulting in more informed decision making.

#### **Economic Contributions**

- Electricity has enabled revolutionary efficiency and productivity improvements in both developing and industrialised economies.
- Market mechanisms for reducing pollution such as tax credits, emission fees and emission trading have been used to achieve compliance while reducing costs and spurring technological innovation.

## **Australia**

The electricity supply industry is working to reduce growth in greenhouse gas emissions through the Greenhouse Challenge program, mandated generation efficiency standards, regulated mandatory new renewable energy electricity supply and electricity related greenhouse gas abatement program projects.

Nearly all of Australian electricity supply businesses are members of ESAA and adhere to its detailed code of environmental practice (which includes environmental performance in terms of sustainable development, community participation and environmental and resource management). Nearly all members have comprehensive environmental management systems with many certified to the ISO 14001 standard and all produce annual environmental reports.

### **5.1.3 Electricity Generation Case Study Examples**

We have investigated the following 6 electrical companies' sustainability or environmental reports in our case study.

- **Loy Yang power** (Brown coal mine and power station capable of producing one third of Victoria's electricity demands);
- **Tarong Energy** (Coal, Gas and Windfarm powerstations – leading Queensland generator);
- **TXU** (Electric and natural gas services in Australia, US and Europe);
- **BC Hydro** (3rd largest electrical utility in Canada);
- **Delta Electricity** (Mainly coalfired power stations); and
- **Scottish Power** (US and UK power stations).

The style of reporting varies greatly across companies with the majority of the Australian energy sector producing environmental reports rather than the more inclusive sustainable development report. BC Hydro is considered to be one of the leaders in sustainability reporting in this sector. Reporting guidelines for this sector include Global Reporting Initiatives (“GRI”) and those issued by ESAA, Department for Environment Food and Rural Affairs (UK) and Australian Reporting Guidelines

Although most companies use the GRI as guidelines, generally companies are not commenting on every indicator recommended. Instead companies choose the ratios they feel are most relevant to their organisation or on which they currently have information to comment on. Consequently, although all the companies in the case studies operate in the same electrical generation area, not all companies report on the same indicators. Comparisons across companies are further complicated by the different ratio standards used:

- For example absolute emissions vs emissions per MWh sent out vs emissions per unit of fuel consumed, or
- graphs with no accompanying numerical tables or results per power station excluding totals for the whole company.

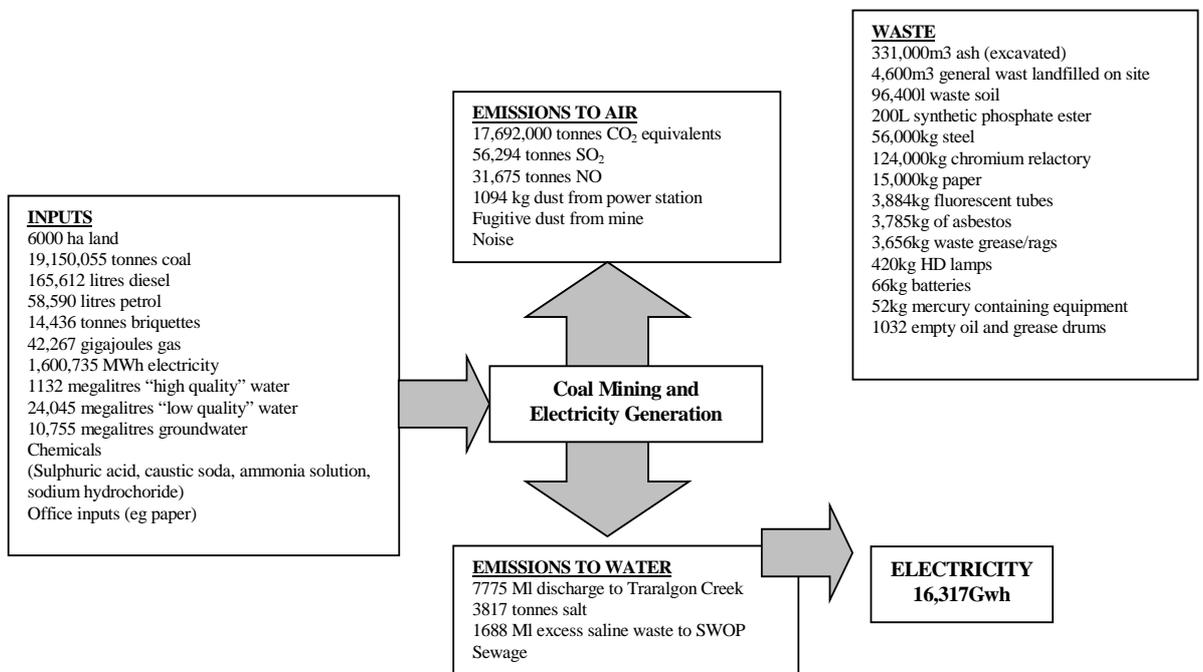
An example of some of the indicators reported on in the environmental / sustainability reports is as follows

## Environment

### E1. Materials

Some of the more complete environmental reports have illustrated the electricity generation process very well – allowing the reader to gain an insightful understanding of the business process including all the inputs and outputs.

Diagram 5.1 shows a summary of the inputs and outputs into Loy Yang Power's processes.



## E.2 Energy

The following table documents the amount of fuel sources used as a percentage of the energy supplied [Scottish Power environmental performance report 2001/02].

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<b>Scottish Power's Fuel Sources as % of Energy Supplied (UK Division)</b>						
	<b>Hydro</b>	<b>Coal</b>	<b>Sour Gas</b>	<b>Nuclear</b>	<b>Wind</b>	<b>CHP/CCGT<sup>13</sup></b>
1998	2.5	34.7	14.5	47.4	0.90	
1999	2.3	35.9	11.8	49.3	0.68	
2000	2.57	49	7.0	40.6	0.73	0.13
2001	2.0	45.9	3.7	38.4	0.79	9.28

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## E.3 Water

The main uses of water in coal power stations to produce high purity steam to drive the turbines, as cooling water, to supply domestic water and to supply miscellaneous operations such as cleaning and dust suppression.

The following table documents Tarong Energy's key performance indicators with regard to water [Tarong Energy's Environmental performance report 2001/2002].

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	<b>2000/01</b>	<b>2001/02</b>
Average copper levels in water discharged to Meandu Creek ( $\mu\text{g/L}$ )	26	24
Average salt levels in water discharged to Meandu Creek ( $\text{mg/L}$ )	910	946
Water consumed from Boondooma Dam at Tarong Power Station (ML)	24,340	25229
(% of total water use)	94%	98%
Quantity of water recycled or reused at Tarong Power Station (ML)	1650	470
(% of total water use)	(~6%)	(~2%)
Quantity of water per MWh at Tarong Power Station (L/MWh)	2354	2432
Number of species of noxious/undesirable fish/eggs identified in Tarong/ Tarong North water systems	Not assessed	0

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<sup>13</sup> Combined Heat and Power/Combined Cycle Gas Turbine

## E.4 Biodiversity

Guidelines recommend the following information be included in a sustainability report:

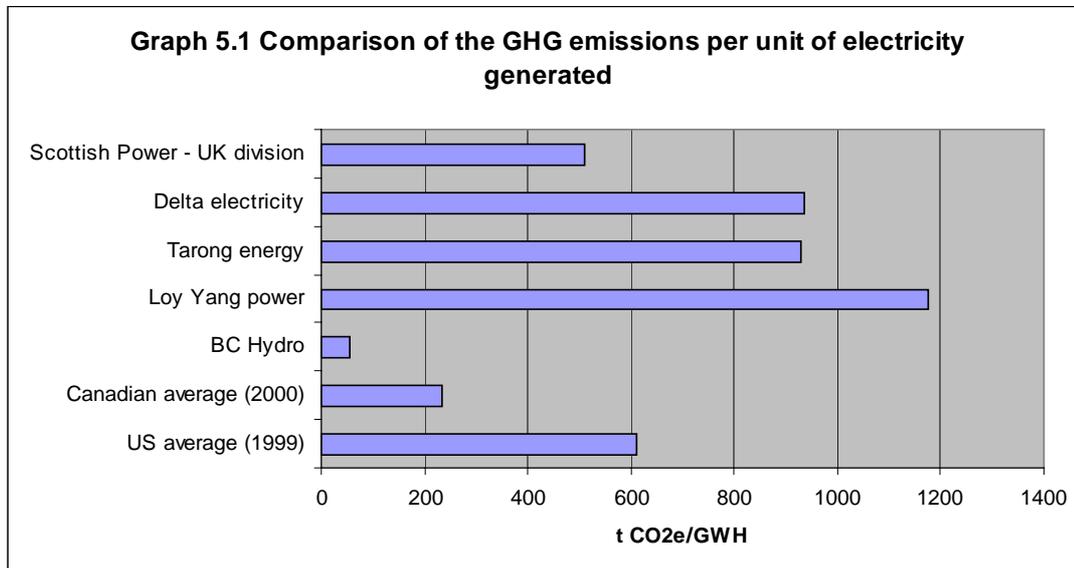
- The total amount of land owned, leased or managed by the organisation as well as the location and size in biodiversity rich habitats;
- Description of the major impacts on biodiversity associated with the organisation's activities and/or products and services in terrestrial, freshwater, and marine environments;
- Amount of impermeable surface as a percentage of land purchased or leased;
- Changes to natural habitats resulting from the reporting organisation's activities and operations and percentage of habitat protected or restored; and
- Objectives, programmes and targets for protecting and restoring native ecosystems and species in degraded areas.

Examples include:

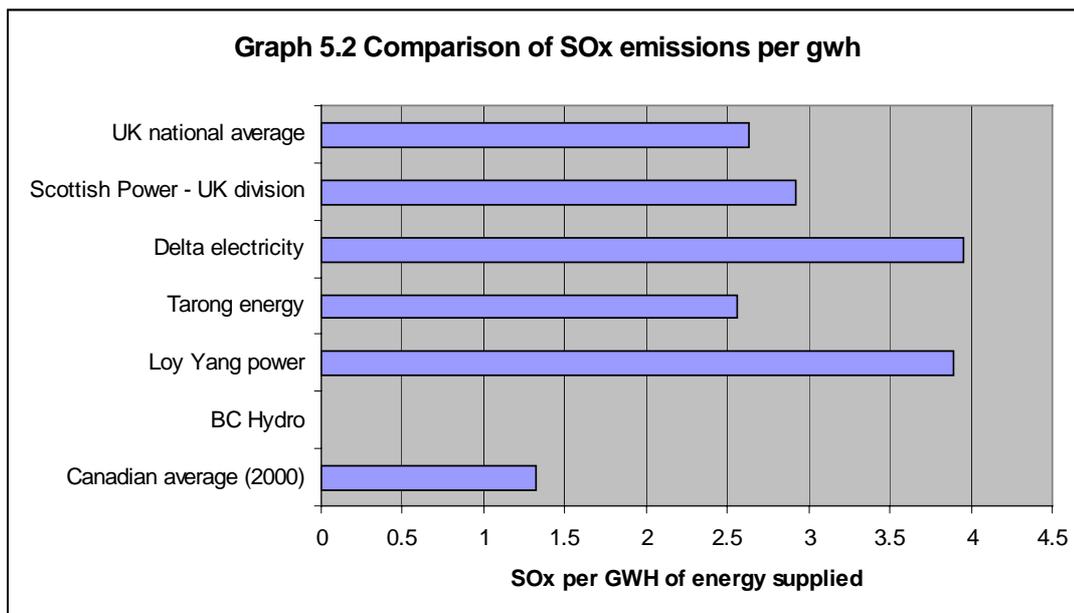
*"Delta Electricity's operations cover approximately 6,000 hectares of land... Flora and fauna assessment and management on Delta's land holdings ensure that rare and endangered species are identified and protected."*

## E.5 Emissions, Effluents and Waste

Emissions, effluents and waste information is the most common information published by electrical suppliers in their reports. Graph 5.1 shows a comparison of greenhouse gas emissions (tonnes of CO<sub>2</sub>) per unit of electricity generated.



This graph shows the higher Australian emissions compared to US and Canadian experiences due to their large use of coal. Graph 5.2 compares the SO<sub>x</sub> emissions per GWH. Once again the Canadian and UK national average are lower than most Australian emissions.



This information is easily comparable across electrical companies and countries. Comparisons can also be made across years to determine whether a company or country is reducing its emissions through efficiency programs. In time with increasing and improving environmental reporting we would also expect to be able to compare other environmental and social indices with increased ease and reliability.

### **E.6 Compliance**

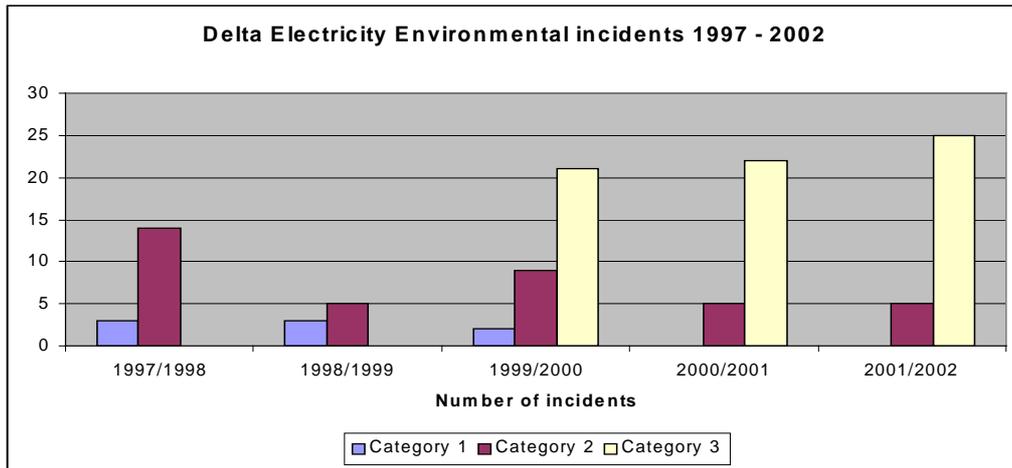
The guidelines recommend the inclusion of penalties for noncompliance with all applicable international declarations / conventions / treaties and national, regional and local regulations associated with environmental issues.

Delta electricity report no non-compliance issues with regard to Environment Protection Authority Licences: Licenses cover a range of activities ranging from the temperature of the water entering Lake Macquarie to the number of air quality monitoring stations surrounding Mt Piper Power Station.

Companies are also required by law to report significant environmental incidents to the appropriate licensing authorities. Each environmental incident is classified into one of three categories:

- i) Incidents involving an EPA licence condition or other statutory regulation breach.
- ii) Near miss incidents involving a possible or potential breach of a licence condition or other statutory regulation.
- iii) Minor plant incidents although not serious in nature are diligently monitored to assist in the management of potential problems and issues.

Graph 5.2 records the historical environmental incidents reported by Delta Electricity [Delta Electricity Environment Report 2001/02]

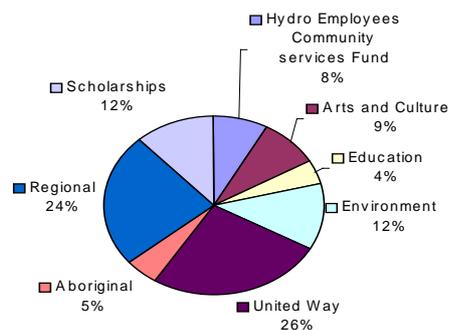


## Social

The following table shows the lost time injury frequency rate (injuries per million hours).

	Actual	Target
Loy Yang Power Station	5.5	4.6
Tarong Energy	4.4	<5
BC Hydro	3.9	
Canadian Utilities	3.8	

BC Hydro's corporate and regional donations and sponsorships of \$1.15M Canadian were awarded to non-profit organisations throughout the province split as follows:



Loy Yang also report on the employee turnover rate (3%), females in the workforce (3%) and the number of females in senior management positions (0%).

BC Hydro report on their employee training programs, quoting the proportion of its workforce who have professional development plans in place at 95%.

## Economic

BC Hydro measures

- shareholder value-added defined as how well BC Hydro performed beyond the return expected for a company with a similar level of risk.

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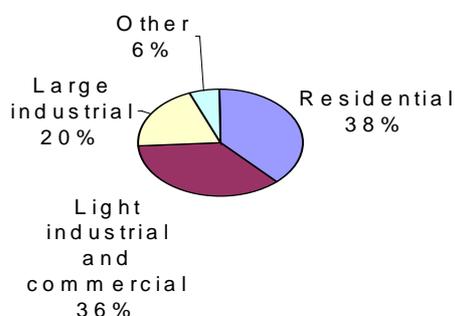
### Shareholder Value Added

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In Canadian \$M	2002	2001	2000	1999
Actual	(145)	(103)	(129)	(11)
Target	(306)	(55)	30	28

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- Proportion of revenue from customer groups



BC Hydro also include information on

- Electricity Trade market prices
- Revenue by Region
- Customer satisfaction rating for call centres
- Disbursement of revenue between energy costs. Maintenance, taxes and retained earnings.

## Other

- **Verification:** All reports have been independently verified. Verification provides comfort to various stakeholders of content accuracy. The verification statement comments on the scope of the assessment, the general findings and recommendations;
- **GRI Content index:** Both Scottish Power and BC Hydro document a complete list of the GRI recommended content with the associated report and page number where the content has been reported on. Given the large GRI information request this documentation considerably helps the finding of particular information; and
- **Targets and achievements:** Reports should set out the company's policies and objectives with associated targets and procedures for achieving objectives. Achievements towards targets should then be compared to performance in previous

years. Often while companies are good at outlining policies and procedures they have not been as good at reporting on performance.

#### **5.1.4 Remaining Challenges and Opportunities.**

Benchmarking in the electricity generation sector facilitates best practice sharing and allows comparison of environmental performance in a meaningful way. However challenges are inherent in benchmarking as there is no consensus on what areas key performance indicators should focus on. Also due to the diversity of the sector the development of robust and widely applicable benchmarking schemes would be highly controversial.

### **WorldWide**

The E7 in its report entitled “Industry as a partner for sustainable development: Electricity” also examines the challenges remaining in the industry. These are summarised as follows:

#### **Remaining Challenges**

Three key challenges remain for the electricity sector (in collaboration with government and other stakeholders) the availability, accessibility and affordability of electricity for all people.

- Solar, wind and geothermal technologies remain relatively high priced and cannot provide sufficient electricity to meet demand and must be coupled with storage facilities and other means of electricity generation;
- To address climate change without compromising the goal of expanding economic growth and access to electricity, it is imperative that market penetration of low carbon emitting energy systems and zero carbon emitting technologies occur;
- To provide electricity to the two billion people who do not yet have access to it;
- Electricity companies experience public concern to proposed plans and decisions involving fuel choice, facility siting, mitigation of environmental and social impacts, and tariffs;
- In many developing countries limited economic resources have hampered electrification, especially the financing of energy infrastructures that require a long term return on investment; and
- It is sometimes difficult to provide low income customers with affordable tariffs. In the absence of a strong regulatory framework companies often utilise only the cheapest available fuel.

E7 has determined the following 2 goals to overcome these challenges:

- Electricity companies should implement “best practices”<sup>14</sup> to guide their operations; and
- Electric companies should share their expertise in partnership with governments and non-governmental organisations, financial and development institutions and

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<sup>14</sup> E7 proposal for international guidelines for best practices promoting sustainable development in the global electricity industry.

technology providers from around the world to help focus their sustainable development activities on expanding access to electricity for all people.

## **5.2 The Mining and Metals Industry**

### **5.2.1 Background**

The mining industry has recognized that the public perception of their industry is generally negative for many reasons, including:

- Disturbance to wilderness areas;
- Community dislocation when a mine is closed down; and
- Pollution incidents such as the river damage at the Ok Tedi mine in Papua New Guinea.

These issues are affecting the industry's ability to gain approvals for new projects and generally carry on their business.

### **5.2.2 The Mining and Minerals for Sustainable Development Study**

In 1998 a group of nine leading mining companies decided to embark on a project to address these issues. They formed the Global Mining Initiative (GMI) which had three elements:

- i) A two year independent study, funded by the industry, carried out through the World Business Council for Sustainable Development (WBCSD), called the Mining and Minerals for Sustainable Development (MMSD) project. The study was to examine industry performance objectively and to suggest ways forward on sustainable development issues;
- ii) Establishment of a new industry association to provide leadership on sustainable development, the International Council on Mining and Metals (ICMM), whose secretary-general is an eminent conservationist, Dr Jay Hair; and
- iii) Conduct a conference in May 2002 of CEOs, government representatives and other stakeholders to discuss the outcomes of the study and set the industry's agenda to be coordinated through the ICMM.

The report of the MMSD study (IIED 2002a, p 390) summarised the major issues from the past and the ways to address these problems in the future in the following table:

<b>The Worst of the Past</b>	<b>A Vision for the Future</b>
Mineral revenues that are spent outside the public view for the benefit of a few	Mineral wealth spent transparently to support social and economic goals
Long-running disputes with landowners about compensation	Disputes resolved efficiently and fairly
Tariff and non-tariff barriers that deter developing countries from establishing downstream industries	A level playing field where free trade works more equitably

<b>The Worst of the Past</b>	<b>A Vision for the Future</b>
Minerals development as a threat to protected areas and biological diversity	Mineral development in appropriate places and as a source of revenue to ensure the protection of areas critical to biodiversity
Companies that set their own rules in protected enclaves	A shared system of laws and practices that applies to everyone
Government decisions taken privately and unaccountably, based on poor information	Decisions taken publicly after consultation with affected parties, based on clear criteria
Mining and recycling industries seeing each other as competitors	An integrated, complementary approach to management of materials in use
Consumers who have no idea of the source of the minerals they use	Consumers who know the source of the products they use and increasingly act on that knowledge
Minerals development as a threat to indigenous peoples' cultures and societies	A minerals industry that works in partnership with indigenous peoples and communities
Frequent disputes and armed conflicts	Fair, equitable and accepted ways of preventing and resolving disputes
Minerals operations endangering worker and public health and causing deaths	A minerals industry that promotes improvements in public health
A legacy of ghost towns, poverty, and pollution	Integrated planning for sustained post-closure environmental, social, and economic benefits
Infrequent exchanges among a few stakeholders	Ongoing and inclusive dialogue among all stakeholder groups

The major recommendations made by the study are for the following specific actions:

- An industry protocol for sustainable development;
- A commitment to address the negative legacy of the past;
- Supporting legalisation of artisanal and small-scale mining;
- Integrated management of the full mineral chain (from exploration through product use to recycling or final disposal);
- More effective government management of mineral investment; and
- A more equitable international trade regime for minerals.

The report highlights the need to develop a harmonised system of reporting guidelines to ensure that key aspects of company practice are reported to a standard that informs internal and external stakeholders about the sustainable development performance of corporations and major projects.

### **5.2.3 Current Reporting Practices**

The ICMM has published a review of the industry's response to sustainable development (ICMM 2002). The paper includes commentary on a survey of public reporting by forty of the world's largest mining companies published by KPMG in 2001. In summary:

- 38% of respondents produced a separate report addressing environment, health and safety or social issues;
- Of these reports, 40% included some form of external verification;
- 19 companies disclosed performance against goals and targets in either their annual report or separate environmental reports;
- 90% addressed health and safety issues in annual reports or separate publications; and
- 73% set goals with respect to health and safety.

WMC Resources is regarded as one of the world leaders in sustainability reporting (Allen Consulting 2002). WMC has been publishing an environment report since 1995 and a community report since 1999. WMC sees that the reporting process serves three main functions (UNEP 2000):

- i) A reflection of where a company is;
- ii) It can serve as an aspirational document to motivate and show the forward thinking of the company; and
- iii) It can be the basis for a more formal public commitment for the future.

#### **5.2.4 Mining Case Study Examples**

We examined the reports of six major companies operating in Australia<sup>15</sup>. Only one company (BHP Billiton) is reporting largely in accordance with the Global Reporting Guidelines but others are moving towards this goal. In commenting on the reporting we will focus on the following areas; environmental (energy use, greenhouse gas emissions, water use), social (injury rates) and economic (community contributions). A brief summary of the reported information is given in Appendix 2.

Appendix 2 does not include details of reporting on environmental non-compliance incidents. Under government legislation and the Minerals Industry Code in Australia, all companies are required to report on these incidents. All companies provide comprehensive information on these incidents and the policies in place targeting a reduction in their occurrence.

In attempting to review the reports from the point of view of their provision of information relating to sustainable development, one realises the difficulties of presenting the information when there is a great diversity of operations. The larger companies are involved in mining several types of minerals and varying degrees of processing or smelting.

Our general comments on the current state of reporting by these companies are as follows:

- i) There is considerable degree of openness on health and safety issues with, in some cases, detailed descriptions of accidents and steps being taken to reduce the risk of further occurrence;
- ii) All companies have been making improvements in their death and injury experience. All companies are aiming to, or have achieved, a Lost Time Injuries Frequency Rate below 3.0 per million hours worked;
- iii) There is limited quantitative information on regional operations, or for multinational companies, on national operations. The quantitative information tends to be on a company wide basis. While national information would be compiled by the companies for national reporting purposes, for example under the Greenhouse Challenge in Australia, it would be desirable to provide this information more publicly;
- iv) Currently, targets are being set internally. Apart from the greenhouse gas emission data provided in some cases, the reports do not relate the targets to national objectives. This is desirable in areas such as water and energy use. The companies need to work with governments to establish targets that are integrated with national objectives;
- v) All companies have established schedules for the rehabilitation of disturbed land. However, usually land is being disturbed at a greater rate than it is being rehabilitated. It would be of interest to know how long it would take to rehabilitate all disturbed land if operations were closed now and the possible cost;
- vi) Where long term data is available, most companies have made considerable progress in reducing greenhouse gas emissions. However progress has slowed or

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<sup>15</sup> Alcoa, BHP Billiton, MIM, WMC, Rio Tinto and Newmont

reversed in recent years. The assessment of this trend is complicated by changes in the calculation methodology required by the Australian Government. Changes in business operations could also be a factor but these reasons are not always explained; and

- vii) The reports often include detailed descriptions of community projects or activities. The companies appear to be making a significant contribution to the isolated or regional communities in which they operate. However it is difficult to place a perspective on it without local knowledge.

### **5.3 Finance and Insurance Industry**

#### **5.3.1 Role of Financial Institutions in Moving Towards Sustainability**

Since its creation in 1972, the United Nations Environment Programme (UNEP) has encouraged economic growth that is compatible with preservation of the environment. Twenty years on, at the 1992 Earth Summit a covering letter from the international investment community to Maurice Strong, Secretary-General to the 1992 Earth Summit stated:

*"Financiers are the pump primers of the global economy - they can withdraw funds or give their full support to any enterprise. They can therefore uniquely and powerfully influence the course of industrial development so that it is compatible with sustainable development agenda".*

Financial institutions play a vital role in determining value and allocating funds to specific business activities - essentially determining what goes ahead and what does not. Their potential to promote the principles of sustainable development flow through their lending, investment and insurance activities, as well as their internal policies and processes (PWC 2001).

For the lending sector, the assets of the world's top ten banks amounted to the accumulated GDP of all 108 'developing countries' in 1999 (UNEPFI 2002). They have a tremendous influence on the Global economy and its environmental impact (PWC 2001 citing Delphi, 1997). Banks have an indirect influence on mankind and the environment through their customers and financing and investment options provided to them.

For Superannuation funds, the Australian compulsory superannuation contributions system has meant that the over \$A 450 billion in assets are being held in superannuation funds covering around 97% of full time workers and 81% of all employees (PWC 2001). The way these funds are invested has a real impact on society's activities.

For the insurance and reinsurance industry, considerable know-how in risk assessment and risk management and mitigation has been developed over the centuries. These issues are key to achieving sustainability. Insurers and Reinsurers also control substantial assets that are open to sustainable management.

Although financial institutions are not obvious environmental polluters, they are large consumers of energy and resources. By optimising the use of natural resources and energy, they will have a direct positive impact on the environment.

UNEP was convinced that the financial sector has an important role to play in the achievement of its goals and in 1992 it established a partnership with the banking sector,

called the UNEP Finance Initiatives (UNEPFI). Today this partnership has grown to include over 190 signatories plus two associate members in 45 nations.

In 1995, the UNEP launched another partnership with insurance companies and pension funds. This partnership has since grown to include over 90 insurance, reinsurance and pension companies from 26 countries.

### **5.3.2 Recent Driving Factors for Financial Institutions to Achieve Sustainability**

Along with greater awareness of and commitment to sustainability issues that the UNEP and the Earth Summit have created a number of other factors have spurred financial institutions into shaping their operations and business units to progress towards sustainability. These factors have been driven by companies' desire to achieve better risk management (e.g. environmental and reputation risks ), climate change factors and legislation. The key factors are reviewed below.

#### ***Environmental Liability Risk***

Once environmental liability became a financial liability driven by developments in the US in the 1970's and 1980's, the lending sector awoke to the new challenges. There has been a growing awareness in the financial sector that the environment brings opportunities (such as environmental investment management funds) along with risks (such as a customer's soil degradation).

On the risk side, there has been an enormous raising of concern in the United States since the late-1980s. Banks could, under Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), be held directly responsible for the environmental pollution of clients and be obliged to pay remediation costs. Some US banks even went bankrupt under this Act. In Asia, South America and Eastern Europe, change is also under way, mostly through the influence of environmental standards from multilateral development banks, such as the World Bank (UNEPFI 2002).

Research from 1995 on the environmental activities of the UNEP FI signatories confirmed this trend with 80% of respondents having some kind of assessment of environmental risks (UNEP 1995).

In Australia, banks have been prompted by these trends to examine the extent of their exposure to cases where the bankruptcy of a client places the bank in the position of directly managing the company's affairs, or owning property held as security against the defaulted loan. In Canada and US, according to Monash (2000), banks have established environmental due diligence processes for loans in which real estate serves as the primary source of collateral.

The insurance sector has also undergone significant changes in recent years as a result of the impact of environmental risks. In response to numerous pollution liability claims being made under general liability policies, the insurance sector has reacted by: writing policies on a 'claims made' basis to avoid indefinite on-going potential exposure; and drawing a distinction between 'gradual' pollution/seepage and 'sudden and accidental' pollution. However, the US courts have recently blurred this distinction, which to some degree has shifted the market towards total pollution exclusions from general liability policies and the introduction of specific environmental pollution liability policies (PWC 2001).

## **Reputation Risk**

A new form of liability which is equally important is the potential of adverse effects to a company's own reputation by associating with a company or a business that is viewed negatively.

In recent years, numerous companies have suffered setbacks due to isolated incidents that caused harm to humans or to the natural world. These reactions, whether real or perceived, are sourced from the customer base and are driving prudent companies to implement comprehensive environmental management and ethical screening systems.

For example, banks in Australia will generally lend for any legal activity. However, there are exceptions, with some banks not lending to brothels.

There are also examples of adverse public reaction to a bank servicing a client involved in a legal activity. For example, Westpac's provision of banking facilities to Energy Resources Australia, who were involved in uranium mining in the world heritage listed area of Jabiluka. (Monash 2000).

Events such as the Three Gorges Hydroelectric Power Scheme<sup>16</sup> were also influential in demonstrating to European banks the importance of balancing economic and commercial interests with social and environmental responsibilities of their lending decisions (Kearins and O'Malley 2001).

For the insurance sector, the recent payout of insurance claims arising from the Wollongong floods in 1998 and the Bali terrorist attacks in 2002, demonstrated the capacity of insurance companies to respond to community expectations despite not being contractually obliged, to protect against reputation risk.

## **Climate Change**

A dramatic increase in weather-related insured losses has been witnessed in the last few years. The 15 most expensive weather-related losses of all time have all occurred since 1987 including Hurricane Andrew which occurred in the US in 1992 and resulted in over US \$15 billion in claims. This has led to insurers and reinsurers realising the potential of a better understanding of environmental risk and climate change on improving the insurers' bottom line.

In response to this concern, many European insurance companies have worked in partnership with national governments, to assist in developing possible solutions, including Munich Re, Swiss Re and General Accident in the UK.

Munich Re announced 698 natural disasters for 2002 and insured and economic losses amounted to \$13 billion and \$55 billion respectively (Munich Re 2002). It has recently warned of an increase in natural disasters in the future due to the changing climate coupled with rapidly increasing population in high-risk areas.

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<sup>16</sup> The significant social and environmental impacts of the Three Gorges Hydroelectric Power Scheme Project received much attention from Non-Government Organisations, community groups and media worldwide. In April 1999, due to the demands of shareholders concerned with the project, the management of Morgan Stanley Dean Witter agreed to develop social and environmental guidelines for their lending, investment and underwriting practices. The World Bank also withdrew funding for the project. Credit Suisse Group also suffered reputational damage through their involvement in this project and as a result enhanced existing environmental risk lending assessment procedures. (Kearins and O'Malley 2001).

## **Legislation**

As mentioned above, banks could under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) be held directly responsible for the environmental pollution of clients and be obliged to pay remediation costs. Other pieces of legislation have also driven change.

In the UK, The UK Pensions Act 1995 was amended in July 2000 to require all pension trustees to report on the extent to which social, environmental and ethical considerations are taken into account in their investments. Other European countries such as Germany and France are currently looking at adopting disclosure legislation similar to that in the UK. At the same time, issues of corporate governance are prompting pension funds to consider the social and environmental performance of companies.

In North America, the Community Re-Investment Act 1997 requires financial lenders with annual turnover above a certain limit to re-invest in registered community programs, thereby making capital available in low and moderate-income urban areas.

In Australia, the tabling of superannuation legislation amendment (Choice of Superannuation Funds Bill, 1998) will enable employees, when the Bill is passed, to choose where their superannuation contributions are invested in future periods. The proposed introduction of this member choice amendment has resulted in trustees undertaking activities to better understand and satisfy the needs of their members. Some surveys showed that a significant proportion of members felt that it was important to pursue social as well as financial returns, particularly when considering long term investment decisions for their retirement.

Introduction of environmentally screened and socially responsible investment (SRI) funds eg. EcoPool introduced by HESTA superannuation fund in 1999, was a leading success which led other trustees to offer SRI funds as an investment alternative.

The growth in SRI has continued in this sector, with both trustees and fund managers showing interest to satisfy the superannuation members' needs. *"The Australian Institute of Superannuation Trustees' most recent annual survey also showed that 75% of trustees now recognise SRI as a separate asset class"* (PWC 2001).

### **5.3.3 Financial Institutions Sustainability Achievements so far...**

Financial institutions have come a long way since 1992, there have been positive reactions by the sector to the business opportunities associated with sustainable development, greater participation in UN Environmental and Sustainability forums, growth in the SRI market, emergence of new lending products and philosophies, development of indices and sustainability rating agencies, greater involvement by the insurance and reinsurance sector in climate change debates and greening of the companies' own operations.

This section highlights some of these achievements.

### ***Participation in UN Environmental, Sustainability and Climate Change Forums***

Financial Institutions from over 30 countries worldwide have had participation in international sustainable development forums such as the:

- UNEP Finance Initiatives;
- World Business Council for Sustainable Development; and
- United Nations Framework Convention on Climate Change.

In Australia, until recently, at an industry level, little interest has been shown in sustainable development. This is changing with greater awareness and commitment emerging, although with only five financial institutions being signatories to the UNEP Financial Institutions Initiatives as at April 2003 (QBE Insurance Group, VicSuper and Westpac Banking Corporation, and more recently, Insurance Australia Group and National Australia Bank), the challenges lie ahead to further this progress.

### ***Sustainability Indices and Rating Agencies***

In 1999, the Dow Jones and Sustainable Asset Management (SAM) of Switzerland launched the first world series of sustainability indexes, the Dow Jones Sustainability Indexes (DJSI).

A new wave of interest in financial benchmarks for SRI was triggered and in 2000 the FTSE4Good Series of indices was launched to focus on corporate social responsibility as its core theme.

In addition to SAM which provides the Dow Jones with screening services for the DJSI, a number of independent environmental rating agencies, such as ERI, Oko-Invest, SERM and Triumvirate, have also emerged to assist analysts to environmentally screen funds. (Delphi, 1997)

In Australia, a number of independent SRI rating agencies such as Sustainable Investment Research Institute have been established. The Sydney Morning Herald/Age reputations index is also published annually (PWC 2001).

### ***Growth in SRI Market***

There has been rapid growth of the SRI market in the US and UK.

In the US, the SRI market has continued to grow substantially throughout events of the last ten years of boom time of the IT expansion, to the Asia melt-down and the burst of the dot com bubble. The SRI market in the US grew by 47.7% between 1998 and 1999 and most fund managers have developed guidelines for reporting on social, environmental and ethical matters. (UNEPFI 2002)

According to the Social Investment Forum in 2000, of the USD 16.3 trillion funds under management, 13% are deemed socially responsible. Today, investors can choose from a menu of SRI products that includes negatively screened, positively screened, best in class, SRI index funds and SRI venture capital products among others.

In the UK, the UK Social Investment Forum's survey found that 101 (59%) of the 171 funds, with collective assets of £302 billion, have asked their fund managers to adopt socially responsible investment strategies. In 2000, the total pension fund market was approximately £800 billion of which £3.3 billion was invested in SRI (PWC 2001).

In Australia, the Australian Institute of Superannuation Trustees has interviewed its members and found that six percent offered an ethical investment choice (Monash, 2000). A significant number of new 'green' investment products are being developed by Super funds, and according to the PWC 2001 report "75% of trustees are supportive of SRI alternatives". However, relative to international SRI growth trends, there is less demand for and less supply of SRI products; this is commensurate with the size of the market.

### ***Lending Products and Philosophies***

A number of environmentally focussed lending products and philosophies have been developed by the lending sector.

In response to environmental liability risks, many large banks are screening credit applications based on environmental criteria. Approximately 88% of all commercial banks in the US responded to CERCLA by changing their lending policies and 46% stopped granting loans to companies in areas that were particularly environmentally sensitive (Hansen, 1996).

Another trend has been the emergence of private equity businesses to feed capital to sustainability oriented companies and technologies, and development of credit and project screening processes (UNEPFI 2002).

On the social impact side, for families under or close to the poverty line, loans to micro-credit programmes that, in turn, extend small loans to poor people for self-employment are being offered throughout the world. These loans enable families to improve their lives through their own initiatives and are effective in enabling families to rise from poverty. This market currently reaches nearly 30 million borrowers and the field is growing rapidly as it maintains high repayment rates.

Some community banks and credit unions have also been developed for the purpose of investing in and serving the traditionally under-served markets. They make credit available to people who would otherwise have difficulty obtaining market-rate finance. In the US, this trend can be attributed in part to the US Community Reinvestment Act (1997) mentioned earlier. In Australia, the development of Bendigo Community Bank to operate in under-served markets and rural areas can be attributed to communities' needs in those areas.

### ***Involvement by Insurance and Reinsurance Sector***

The insurance sector has also recently acknowledged its role in guiding companies and their clients to implement environmentally sound practices. For example, an insurance company in Germany offers reduced car insurance premiums if a season public transport ticket is held by the customer (PWC 2001). This approach is based on the belief that minimising the use of cars will reduce the potential for accidents as well as reduce air pollution levels.

Insurance and reinsurance companies have also been involved in the climate change debate and have been pro-active in their approach to global warming (e.g. Munich Re, Swiss Re) (Monash 2000). These reinsurance companies have commissioned numerous studies on the impact of climate change on the insurance sector.

### ***Emissions Trading Mechanisms***

The prospect of a carbon constrained economy and a future adoption of market trading mechanisms as a result of the Kyoto Protocol (yet to be ratified), has stimulated significant awareness and response from the financial sector.

According to PWC 2001 report, Banks have been significant participants in the emerging carbon markets. However, the regulatory uncertainties and lack of liquidity to date have meant that finance sector participation has been basically limited to broking. Future opportunities to the sector do exist from these markets and this will be addressed further in Section 5.4.5.

### ***Greening Own Operations and Reporting***

In keeping with other industry sectors, an increasing number of financial institutions are implementing company-wide environmental management systems (EMS) and have also published separate public environmental reports.

According to the UNEPFI in its 2002 report, environmental reporting by banks is very much a European phenomenon with 63% of all European banks conducting environmental risk assessment in their financing decisions. Banks in other regions lag behind. While banks in Europe focus on environmental aspects, North American and Oceania counterparts concentrate more on community involvement. French and Italian banks are different again in that they report on neither. Interestingly, while the economy is global and most banks are as well, peer pressure appears to be confined to regional or national borders.

In Australia, according to PWC 2001 report, most financial institutions appear to have implemented environmental risk assessment procedures and undertaken energy efficiency and recycling programmes. However, few have implemented company-wide EMS or published public environmental and/or triple bottom line reports. The big four banks, for example, are currently developing internal environmental policies and environmental improvement programs, with Westpac having developed a company-wide EMS certified by ISO 14001.

Industry bodies are also encouraging greening of financial institutions' operations with the Insurance Council of Australia committing itself to aiding the reduction of greenhouse gas emission as part of the Greenhouse Challenge (PWC Report citing Insurance Council of Australia, 2000). And EPA Victoria is presently working in conjunction with Environment Australia and the Institute of Chartered Accountants of Australia on an environment management accounting project. This project aims to promote improved practices and reform in management accounting techniques so that firms are able to improve profitability by reducing costs whilst achieving better environmental outcomes.

### **5.3.4 Finance and Insurance Case Study Examples**

#### **Introduction**

Sustainability or environmental reports of the following six financial institutions are included in the case study:

- Credit Suisse Group;
- HVB Group;
- ING Group;
- Munich Re Group;
- The Co-operative Bank; and
- Westpac Banking Corporation.

The aim of the case study is to highlight what these financial institutions are reporting on a triple bottom line basis and the sustainable operational processes and philosophies that have been implemented.

#### **Observations**

The table in Appendix 3 summarises some of the sustainability and other features for the six companies. The Appendix is by no means a comprehensive list of each company's achievements to date.

These companies have taken the progressive leap of publishing sustainability or environmental reports. They are all involved in various national and international groups aiming at one or more aspects of sustainability such as UNEPFI, UN Global Compact initiative, GRI committees, SPI Finance committees, World Business Council for Sustainable Development and Greenhouse Challenge group among others.

They have all set up environmental management systems to various degrees and they screen their suppliers for environmental and social processes. They are all included in sustainability and social indices such as DJSI and FTSE4Good.

Although, the report content and layout varied markedly, with some containing more quantitative information, others focussing more on qualitative information, sometimes with quantitative data supplied as a separate supplement to the sustainability report.

The indicators chosen to be displayed also varied, and despite most companies using GRI as a potential guideline, generally choice of indicators circled around what they felt were relevant to them rather than all the indicators recommended by GRI.

Furthermore, calculation methodologies of indicators were not transparent, nor were units of measurement and bases used always consistent. For example,

- Depending on the company, the level of measurement was on a company wide basis, or per branch, per employee, per full time equivalent or per customer account.
- The units of measurement also differed:
  - For electrical energy usage, for example, unit of measurements were in Joules or in Watt Hours;

- For paper usage, units of measurement were either kg or sheets of paper. Most common though was sheets per employee per day which ranged from 25 to 40 sheets of paper per employee every day; and
- For Water usage, most common unit of measurement was Litres per employee per day which varied from 46L to 107L for the six companies.

Inclusiveness of these indicators was another issue, for example, paper usage could include photocopier paper and/or printing paper. CO<sub>2</sub> emissions could refer to emissions from electrical energy use, heating, business travel by employees and daily commuting of employees.

The treatment of emissions credits also differed. For CO<sub>2</sub> emissions, some companies eg. The Co-Op Bank, reported emissions on a net basis (net of carbon credits sourced from plantations they put in place), at 0.57kg per customer account pa. For other companies, CO<sub>2</sub> emissions were reported on a gross basis, and they ranged from 6kg –18kg of CO<sub>2</sub> per employee per day.

Finally, it is too early to discern trends overtime and speed of progress because only recently have companies started publishing sustainability reports. For example, staff turnover rate ranged anywhere between 5%-20% depending on the company. These figures are a one year snapshot which may or may not be representative of the company's staff turnover in the medium to long term. For example, Munich Re's Munich branch staff turnover rate moved from 4.6% in 1997 to 7.6% in 1999, because staff moved to a newly established Asset Management branch, it then stabilised back to 5% in 2001. These types of trends would similarly affect other companies' staff turnover rates, and more research is needed to understand their medium to long term levels.

As a result of the issues above, it was difficult to make indicator comparisons across companies or for the same company across time. Although, we know progress towards sustainability development and reporting is being made, it is difficult to gauge and project into future periods.

Indeed, a number of challenges and opportunities lie ahead for financial institutions as they progress towards measurable, consistent and more transparent sustainability development and reporting.

### **5.3.5 Sustainability Challenges and Opportunities for Financial Institutions**

#### ***Introduction***

Progress towards sustainability presents tremendous opportunities for all Financial Institutions: Lenders, asset managers and insurers/reinsurers. However, there are multiple challenges and barriers that need to be overcome to make the most of these opportunities.

A considerable amount of evidence purports that a link exists between corporate sustainability and shareholder value, however, most of this evidence is anecdotal and lacks scientific rigour (SustainAbility, 2001), in particular, no one has managed to solve the ongoing dilemma of whether responsible companies are more prosperous, or prosperous companies are more responsible. A significant barrier to the further contribution of the finance sector to sustainable development is a prevailing view held by financial analysts that environmental and social risks, whilst important, are not material to company financial performance.

## ***Lending Sector***

With developments of green lending in this sector, immediate opportunities exist whereby lending programs may take a number of different forms, from preferential interest rates for firms with good environmental records, to project development finance related to commercialisation of new environmental/renewable energy technologies. Although, there is reluctance on part of Banks to be transparent about their green and socially aware lending policies, particularly in North America. (Giuseppi, 2001)

In terms of emerging carbon market, Banks have been significant participants in the so called new e-commerce (environmental commerce)<sup>17</sup>, and it is widely anticipated that the scale of carbon markets in the future will dwarf all other commodity markets and many traditional financial markets. Other credits are also being considered such as biodiversity and salinity credits. Financial institutions, given their current involvement in market-based trading mechanisms, are best placed for involvement in environmental commerce.

In Australia, only two banks, Westpac and recently NAB, are signatories to the UNEP Finance Initiatives, and according to PWC report, only one credit union, Maleny Credit Union, has published a triple bottom line report. In terms of climate change, the four major banks are members of the Greenhouse Challenge programme, but some second tier banks such as St George are not members. Also, no banks appear to have developed differentiated loan pricing based on a borrower's environmental risk analysis. There is no evidence that Banks' lending terms have been tightened for companies exposed to potential carbon liabilities, although, this is a common trend with the international market. In terms of emissions trading markets, the withdrawal of Sydney Futures Exchange from the development of an Emissions Trading Platform has meant that this initiative will be delayed in Australia.

## ***Investment Sector***

The growth in SRI's is predicted to continue with the introduction of members investment choice in pension planning and superannuation funds, and elementary polls of public opinion eg. Millenium Poll, confirm existence of investor support for SRI's.

In Australia, The Australian Institute of Superannuation Trustees interviewed its members in early 2000, and found that despite the fact that only 6% of Trustees said that they offered an ethical investment choice, 63% believed there would be a growth trend towards SRI in the next 2-3 years (Monash 2000).

However, obstacles to SRI growth appear to be the absence of rigorous market research including quantitative analysis of SRI dimensions, large samples of SRI companies to allow for price sensitivity analysis, and lack of awareness and skills of investment professionals (UNEPFI 2002 and Monash 2000). Also, there is some debate among Superannuation fund Trustees over investment performance and whether SRI's are in the members' best interests (Mace, 2000).

For investors and analysts, the challenge appears to be firstly, scarcity of environmental and social data and secondly, finding the most appropriate techniques for integrating environmental performance into financial analyses. Legislation has not been implemented to require disclosure on environment and social performance, and there is a

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<sup>17</sup> This term was used by Aman Mehta, CEO, HSBC, in a keynote speech at the UNEP FE Asia Pacific Outreach Event, 2001.

lack of environmental and social information being exchanged between corporations and analysts. This trend is also reflected in the Australian market where environmental disclosure by corporations appears to be driven by legislation rather than analysts' needs.

### ***Insurance Sector***

Risks associated with climate change are a leading example of the new challenging environment in which insurers and reinsurers are operating. According to UNEPFI, a large proportion (as much as 80%) of the global costs of natural disasters are not insured and are therefore borne by those most affected by the disasters, financially or otherwise (UNEPFI 2002).

One particular challenge for insurers and reinsurers is to find solutions for flood and earthquake covers for heavily exposed risks, such as houses or factories on river banks with flood potential or property in areas of high earthquake risk.

It may be difficult to find cover for these risks, so more sophisticated products may be needed. Pooling of risks may be one technique to overcome these risks and good examples of this type of solution are the flood insurance schemes in the US and the Japanese earthquake scheme for private property. Even under these concepts, the insurance industry supports governmental effort through partial insurance cover, risk consulting and claims handling.

In the US, as much as 50% of corporate insurance is controlled by wholly owned subsidiaries, "captives", and this trend is spreading to other major economies in Europe. A major stimulus to this was the liability crisis in America in the 1970's when insurers were unwilling to provide cover required by potential insureds.

A similar trend has also occurred in Australia, although the market is taking on the challenge and finding solutions to provide insurance to all aspects of the community. An example of this is Community Care Underwriting Agency (CCUA), set up by IAG, QBE and Allianz to underwrite liability for non-profit organisations. CCUA is currently providing cover in NSW, WA and ACT and is looking closely at offering cover in SA, NT and Tasmania.

In terms of commitment, awareness and reporting, there are many challenges that lie ahead. In Australia, as at April 2003, only two insurance companies, QBE Insurance Group, and more recently IAG are signatories to the UNEP Finance Initiatives. While in North America, there is only a small number of insurance companies reporting on their environmental performance (PWC 2001).

## **6 A ROLE FOR ACTUARIES?**

And so we ask why should actuaries be interested in sustainability reporting?

Sustainability reports give a substantial amount of information on the operations of a company. We can use this information for

- risk management purposes;
- investment purposes; and
- Financial condition reporting.

We can also assist government, companies and industry sectors by:

- Analysing sustainability type indicators across years, understanding trends in time series and projecting outcomes of contingent future financial events.
- Performing cost benefit analyses on projects in order to assess their impact on a triple bottom line basis ie. financially, socially and environmentally.
- Collating individual companies' ratios to higher levels of reporting ie from company impact to national and global impact. This can in turn assist in modelling, analysing and projecting progress towards desired sustainability targets such as the Koyoto Protocol emission targets, and in light of that progress, estimate revised targets.
- Advise on data issues – how and what to collect, how to determine statistically credible samples and how to interpret insufficient data.
- Dynamic financial analysis – investigate the impact of catastrophic type events on the running of a company.
- Quality controlling the collection of data, developing robust analyses, help monitor and regulate.
- Provide expert opinions e.g estimating incurred but not reported numbers and outstanding dollar amounts for asbestos injuries and fatalities.
- As the reporting system develops there is huge scope for helping with compliance.

## **7 CONCLUSION**

Sustainability reporting has come a long way in the last decade. Organisations such as the UN have played a key role in putting together various reporting and policy frameworks for promoting progress towards sustainability, for example the GRI and UNEP. There are still many challenges ahead. As seen from the case studies of the electricity generation, mining and financial services industries, corporations have a large role to play in this challenge.

The understanding of corporate sustainability, the relationship between a company's management of its environmental, economic and social spheres and its long term prosperity is an area of research still in its infancy. Similarly, the relationship between corporate activity and the sustainable development of society as a whole is still not well understood.

The development of sustainability reporting should facilitate the development of a better understanding of these relationships. The publication of these reports will play a significant role in raising general public awareness of sustainable development issues. Hopefully this will then be translated into greater action towards sustainable development by all players; governments, businesses and consumers.

Finally, this area is of interest to actuaries as they will be involved in various economic, social and environmental type analyses of information stemming from sustainability reporting frameworks.

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## **RELEVANT WEBSITES**

Agenda 21

[www.un.org/esa/sustdev/agenda21text.htm](http://www.un.org/esa/sustdev/agenda21text.htm)

Earthsummits

[www.earthsummit2002.org](http://www.earthsummit2002.org)

[www.worldsummit2002.org](http://www.worldsummit2002.org)

UNCSD

[www.un.org/esa/sustdev](http://www.un.org/esa/sustdev)

Brundtland Report

[www.rri.org/envatlas/supdeocs/brundt.html](http://www.rri.org/envatlas/supdeocs/brundt.html)

International Institute of Environment and Development

[www.iied.org/index.html](http://www.iied.org/index.html)

International Institute for Sustainable Development

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United Nations Earthwatch

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World Business Council for Sustainable Development

[www.wbcsd.org](http://www.wbcsd.org)

## **ABBREVIATIONS**

CCUA	Community Care Underwriting Agency
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
DJSI	Dow Jones Sustainability Indexes
EMS	Environmental Management Systems
EPA	Environment Protection Agency
ESAA	Electricity Supply Association of Australia
GRI	Global reporting initiative
IAG	Insurance Australia Group
ISD	Indicator of Sustainable Development
MMSD	Mining and Minerals and Sustainable Development
OECD	Organisation for Economic Cooperation and Development
OFGEM	Office of Gas and Electricity Markets
SAM	Sustainable Asset Management
SPI	Social Performance Indicators
SRI	Socially Responsible Investment
TBL	Triple Bottom Line
UNEP	United Nations Environment Programme
UNEPFI	UNEP Finance Initiatives

## APPENDIX 1

### Global Reporting Initiative – List of Recommended Indicators

Category	Aspect	Measure
Economic	Customers	<ul style="list-style-type: none"> <li>■ Net sales broken up by regions that comprise more than 5% of total sales.</li> <li>■ Major products/services including market share if this is more than 25% of country total.</li> <li>■ Market share and sales for each country where national sales represent more than 5% of GDP.</li> </ul>
	Suppliers	<ul style="list-style-type: none"> <li>■ Cost of supplies</li> <li>■ Percentage of contracts paid within agreed terms</li> <li>■ Suppliers which represent 10% or more of total purchases.</li> <li>■ Identify countries where total purchasing represents 5% or more of GDP.</li> </ul>
	Employees	<ul style="list-style-type: none"> <li>■ Payroll and benefits broken down by country or region</li> </ul>
	Providers of Capital	<ul style="list-style-type: none"> <li>■ Distributions by way of interest, dividends.</li> <li>■ Change in retained earnings.</li> </ul>
	Public Sector	<ul style="list-style-type: none"> <li>■ Payments of taxes, royalties by country.</li> <li>■ Subsidies received such as grants or tax relief.</li> <li>■ Donations.</li> <li>■ Spending outside main business activities for community benefit.</li> </ul>
Environment	Materials (other than water)	<ul style="list-style-type: none"> <li>■ Total use (by type) measured by weight or volume.</li> <li>■ Proportion of materials used that are from recycled sources (from outside organisation).</li> </ul>
	Energy	<ul style="list-style-type: none"> <li>■ Direct use segmented by source.</li> <li>■ Energy used to produce energy products (eg heat and electricity).</li> <li>■ Initiatives to use renewable energy and/or increase efficiency.</li> <li>■ Lifetime energy requirements of major products.</li> <li>■ Indirect energy use (upstream/downstream), eg travel.</li> </ul>
	Water	<ul style="list-style-type: none"> <li>■ Total water use.</li> <li>■ Water sources and related ecosystems affected by water use.</li> <li>■ Use of ground and surface water as % of renewable water available from the sources.</li> </ul> <p>Total recycling and reuse of water.</p>

Category	Aspect	Measure
	Waste and Emissions	<ul style="list-style-type: none"> <li>■ Greenhouse gas emissions from operations and indirect emissions from energy use.</li> <li>■ Emissions of ozone depleting substances.</li> <li>■ Air emissions of NOx, SOx and other regulated substances.</li> <li>■ Amount of solid waste by type and destination.</li> <li>■ Discharges to water.</li> <li>■ Number and volume of chemical and oil spills.</li> <li>■ Indirect greenhouse gas emissions (controlled by another entity but consequence of activities of reporting entity.</li> <li>■ Production, transport, import or export of "hazardous wastes"</li> </ul>
	Suppliers	<ul style="list-style-type: none"> <li>■ Environmental performance of suppliers.</li> </ul>
	Products & Services	<ul style="list-style-type: none"> <li>■ Significant environmental impacts of products and services during life cycle.</li> <li>■ % of weight of products that is recyclable and % that is reclaimed.</li> </ul>
	Compliance	<ul style="list-style-type: none"> <li>■ Incidences of and fines for non-compliance with environmental regulations/conventions.</li> <li>■ Significant spills of chemicals, oils or fuels (no and volume).</li> </ul>
	Transport	<ul style="list-style-type: none"> <li>■ Environment impacts of transport used for logistical purposes.</li> </ul>
	Overall	<ul style="list-style-type: none"> <li>■ Environmental expenditures.</li> </ul>
<b>Social – Labour Practices</b>	Employment	<ul style="list-style-type: none"> <li>■ Workforce by region and status (permanent/casual, full time/part time, temporary, contractors, etc).</li> <li>■ Net employment creation and average turnover by region.</li> </ul>
	Labour /Management Relations	<ul style="list-style-type: none"> <li>■ % of employees covered by trade unions/collective bargaining agreements by region.</li> </ul>
	Health and Safety	<ul style="list-style-type: none"> <li>■ Injuries, fatalities, lost days, absentee rates.</li> </ul>
	Training and Education	<ul style="list-style-type: none"> <li>■ Average hours of training p.a. per employee by category (management, administration, production, etc).</li> </ul>
	Diversity and Opportunity	<ul style="list-style-type: none"> <li>■ Male/female or cultural composition of senior management and governance bodies.</li> </ul>

In addition to the generally quantitative information listed above, the Guidelines recommend that the following qualitative information be included.

## **Economic**

### ***Indirect Economic Impacts***

- Externalities associated with products and services

## **Environment**

### ***Waste and Emissions***

- Water sources or ecosystems significantly affected by water discharges or runoff.

### ***Biodiversity Impact Information***

- Location & size of land used in biodiversity rich habitats.
- Description of major impacts on biodiversity of activities and products/services.
- Area of land owned or managed for production or extraction.
- Amount of impermeable surface as percentage of land owned or leased.
- Impacts of activities on protected or sensitive areas and natural habitats.
- Protection measures.

## **Social**

Details of policies and management procedures in relation to:

### ***Employment***

- Employee benefits over mandated requirements.

### ***Labour Management Relations***

- Policy and procedures when changes occur in company's operations (eg restructuring).
- Worker representation in decision-making and governance

### ***Health and Safety***

- Practices for managing accidents and diseases.
- Structure of health & safety committees.
- Policies relating to HIV/AIDS.
- Compliance with ILO management requirements.
- Formal agreements with employee representative organisations covering health and safety

### ***Training and Education***

- Programme to support continued employability
- Skills management and development

### ***Diversity and Opportunity***

- Equal opportunity policies.

### ***Human Rights***

- Consideration in investment and procurement decisions.
- Consideration within supply chain and use of contractors.
- Employee training on human rights.
- Non-discrimination policy and procedures
- Freedom of association
- Exclusion of child labour
- Policy to prevent forced or compulsory labour.
- Employee grievance system.
- Policies to address needs of indigenous people.
- Community grievance mechanisms.
- Share of operating revenues from area of operations redistributed to local indigenous communities.

## APPENDIX 2

### Summary of Reporting by a Sample of Mining Companies

Company	Alcoa	BHP Billiton <sup>18</sup>	Mount Isa Mines	Newmont Australia <sup>19</sup>	Rio Tinto	WMC Resources
Year of Report	Calendar 2002	2001/ 2002	2001/2002	Calendar 2001	Calendar 2001	Calendar 2002
Title of Report	Environment, Health & Safety	Health, Safety, Environment and Community Report	Environment Report Community policy to be developed in 2003.	Sustainability Report	Social and Environment (website based)	Sustainability Report
First report	1992	1999/2000	1996/97		Some data back to 1997	1995
Structure of report	International company wide	International company wide.	Mostly Australia Most data broken up by site	Australia & New Zealand	?Network of web pages; plus site reports (mstly qualitative).	Total company plus site reports
Relationship to GRI	Will produce full report in 2003	In accordance.	Some use of GRI	In accordance		Close to GRI Guidelines
Verification		Partly externally verified	PWC	IES & Audit Services Int'l		PWC
Nature of operations	Aluminium mining, smelting, fabrication and recycling. 38 countries	20 countries. Minerals, coal, oil and gas.	Mining minerals, gold, coal, smelting, exploration in Aust., Argentina, UK, Germany.	Gold mining and exploration.	Aluminium & copper mining & smelting. Gold, diamonds, coal, iron ore mining.	Mining minerals, uranium oxide, smelting, fertilisers

<sup>18</sup> Still integrating the two companies.

<sup>19</sup> Formerly Noranda

Company	Alcoa	BHP Billiton <sup>18</sup>	Mount Isa Mines	Newmont Australia <sup>19</sup>	Rio Tinto	WMC Resources
Year of Report	Calendar 2002	2001/ 2002	2001/2002	Calendar 2001	Calendar 2001	Calendar 2002
Period of comparative data	Some data since 1990.	Mostly previous year only – since merger of BHP and Billiton	4 years.	4 years	Mostly 2 years, some back to 1997.	5 years
<b>Environmental data</b>						
EMS	75% locations have ISO14001 certification		2 sites have ISO 14001 certification		57% operations have ISO 14001 certification	
Normalising factor		Tonnes production	Tonnes production	Tonnes production	Tonnes production	Tonnes production
Targets	Explicit goals in major impact areas. Set in 2000 (see below).	See below	Targets not quantified. Description of reduction initiatives	Targets reviewed during 2001. New targets set for next 3 years.	See below	Targets set in 1999 currently being reviewed.
- Energy Use	14.3 Kwh/kg. (14.6 Kwh/kg in 1994)	Target 5% reduction in intensity of use over next 5 years. Total use 396 petajoules. 3 years data of intensity per unit of production by type of process.		Target -10% by end 2004. Total use 457 petajoules.	Reduced 31% in 5 years. 0.73 GJ/tonne Total 220.5 PJ in 2001.	5 year history no targets described 17,900 terajoules or 673 megajoules per tonne
- Greenhouse gas emissions CO <sub>2</sub> –e	38 million tonnes, down from 51 million tonnes in 1990.	Target 5% reduction in intensity over next 5 years. Total 60 million tonnes in current year.	4.7 million tonnes. (% increase over 2001)	Target -10.9% by end 2004. 641,000 tonnes in 2001. 48.3 kg/ tonne	Target 5% below 1998 levels by 2001/ achieved 4.8%. Currently reviewing target. Total 23 million tonnes. 2001 80 kg/tonne. (120 kg/tonne in 1997)	Increased mostly due to change in gov't calculation factors. Profile of sources by site and process. Total emissions 3 million tonnes

Company	Alcoa	BHP Billiton <sup>18</sup>	Mount Isa Mines	Newmont Australia <sup>19</sup>	Rio Tinto	WMC Resources
Year of Report	Calendar 2002	2001/ 2002	2001/2002	Calendar 2001	Calendar 2001	Calendar 2002
Water Use Fresh Recycled		Target 10% reduction per unit production over next 5 years. Fresh water use 147,000 megalitres Recycled use 543,000 megalitres	5 years data Total use 40,000 megalitres. Mostly ground water.	Target -2 kilolitre/tonne by end 2002. Total use 24,000 megalitres. 0.55 kilolitres/ tonne.	Fresh water use 622,000 megalitres. Recycled use 138,000 megalitres.	33,500 megalitres 1.2 kilolitre per tonne 5 year history No mention of recycling Mostly ground water.
Land rehabilitation New rehabilitation Requiring rehab		2,230ha out of 82,910 ha disturbed land 3 years data provided. 82910 ha	2,980 ha out of 18,397 ha disturbed.	191 ha out of 10,006 ha disturbed land.	36 sq km rehabilitated out of 607,000 sq km used for mining.	Last year's programme affected by drought. 52 ha out of 8,452 ha disturbed. 5 year history provided.
<b>Social data</b>			Not included			
Injury rates	LTIFR 2.2 (LTIFR 6.7 in 1990)	LTIFR 2.24		LTIFR 3.0 4.9 previous year. Target <2.7 by Dec 2002.	LTIFR 5.0 (LTIFR in 1999 8.0). Target 2.8 by ?	Comparison against industry and since 1995 LTIFR <sup>20</sup> 3.0 MTIFR <sup>21</sup> 8.5
Deaths	2	13		nil	6	One
Staff Turnover				Target <11% by Dec 2002.		13%

<sup>20</sup> LTIFR – lost time injury frequency rate per million hours worked.

<sup>21</sup> MTIFR – medically treated injury frequency rate per million hours worked.

Company	Alcoa	BHP Billiton <sup>18</sup>	Mount Isa Mines	Newmont Australia <sup>19</sup>	Rio Tinto	WMC Resources
Year of Report	Calendar 2002	2001/ 2002	2001/2002	Calendar 2001	Calendar 2001	Calendar 2002
<b>Economic data</b>			Not included			
Indigenous employment		Some privacy issues with data collection. Pilbara target 12% (same as population proportion) by 2010, currently 3%		Target +2.5% p.a. Actual +67% over 2000.		3 years indigenous employment data
Community contributions	Descriptions of activities	1.4% pre-tax profit Descriptions of activities	Descriptions of activities	Descriptions of activities	Descriptions of activities	Descriptions of activities. Strategy to meet GRI being developed.
Employment data	167,000 employees.	51,000 employees (18,000 in Australia) plus 36,000 contractors.		2,900 employees. Description of female employment levels.	28,000 employees.	Total 2,900 employees. 2 years data of number of employees by sex and type.

## APPENDIX 3

### Summary of Reporting by a Sample of Finance and Insurance Companies

Company	Credit Suisse	HVB	ING	Munich Re	The Co-op Bank	Westpac
Year of Report	2001	2002	2001	2001	2001	2002
Title of Report	Sustainability Report	Sustainability is moving...	ING in Society	Perspectives: Today's Ideas for Tomorrow's World	Our Impact	A fresh perspective...
Nature of Operations	Financial Services company based in Zurich. Provides private and corporate banking, insurance solutions and pension products.	One of largest European banks operating in Germany, Austria, Central and Eastern Europe. Provides Asset management, banking and real estate services to private and corporate client base.	Financial Services Company based in the Netherlands, offering Insurance, Banking and Asset Management services	One of the leading global risk carriers and providers of financial services. Offers reinsurance, insurance and asset management services.	Part of Co-operative movement founded in 19 <sup>th</sup> century. Aim of the banks is to pursue its operations in an ecologically and ethically sound manner. It is regarded as a leader in Corporate Social Responsibility policies.	Australia's first bank. One of Australia's big 4 banks offering retail, SME and institutional banking, asset management and insurance solutions to its customer base.
Involvement in Sustainability groups	<p>UNEPFI Signatory</p> <p>UN Global Compact Initiative signatory</p> <p>GRI committee member</p> <p>Social Performance Indicators (SPI)-Finance<sup>22</sup> committee member</p>	<p>UNEPFI Signatory</p> <p>Climate Alliance group committee member</p> <p>Active in promotion of sustainability in multiple local, national and international groups.</p>	<p>WBCSD committee member<sup>23</sup></p> <p>World Economic Forum committee member</p>	<p>UNEPFI Signatory</p> <p>UNEPFI Climate Change Committee member</p> <p>UNEP Insurance Initiatives Steering committee member</p> <p>Intergovernmental panel for climate change committee member</p>	<p>UNEPFI signatory</p> <p>UK Company Law review with push towards mandatory disclosure of ethical and social issues</p> <p>SPI Finance member</p> <p>Development of social and environmental auditing standards that may be used by GRI.</p>	<p>UNEPFI signatory</p> <p>Member of Greenhouse Challenge Group</p> <p>UN Global Compact Initiative Signatory</p> <p>SPI-Finance committee member</p> <p>GRI committee member</p> <p>Human Rights Declaration Group member</p>

<sup>22</sup> SPI-Finance committee aims to develop reporting standards for Social performance indicators

Company	Credit Suisse	HVB	ING	Munich Re	The Co-op Bank	Westpac
Year of Report	2001	2002	2001	2001	2001	2002
Inclusion in Indices	DJSI and FTSE4Good	DJSI and FTSE4Good	DJSI and FTSE4Good	DJSI and FTSE4Good	DJSI and FTSE4Good	DJSI and FTSE4Good
GRI Compliance		GRI Compliant	GRI Compliant		GRI Compliant	GRI Compliant
Community Involvement	Yes	Yes	Yes	Yes	Yes	Yes
Staff Turnover Rate	10.3%	10.6%	17%	5.0%	11%	19.5%
Staff Sickness Rate		3.3%		3.2%	5.3%	
Environmental Management System	EMS certified by ISO 14001 <sup>24</sup> , this endeavours to fulfil Credit Suisse's UNEP FI and Insurance initiatives declarations and implement UN Global Compact initiatives.	A Sustainability Management System in place to develop issue of sustainability throughout the whole group.  Sustainability Management System meets requirements of international standards such as EMAS and ISO.	Business units in the Netherlands, ING Greece, ING Life Insurance Korea and BBL Belgium all reported having an Environmental Management System in place. The Antwerp office of BBL in Belgium is certified according to the ISO 14001 standard and ING Korea intends to certify its system. Of the respondents who do not have an environmental management system, approximately 10% plan to develop one between 2003 and 2007.	Environmental Management System based on work processes is in place, this EMS has been validated in line with EMAS Regulation since the end of 2000.	EMS has been developed. Received highest rankings amongst Indices of Corporate Environmental Management. Although it is not certified, company has preferred to concentrate on 3 <sup>rd</sup> party verification of its Sustainability Report.	EMS based on ISO 14001 has been developed

<sup>23</sup> World Business Council for Sustainable Development

<sup>24</sup> Voluntary Environmental Standard on environmental management systems

Company	Credit Suisse	HVB	ING	Munich Re	The Co-op Bank	Westpac
Year of Report	2001	2002	2001	2001	2001	2002
Suppliers	In future require suppliers to adhere to principles set out in ISO14001, UN Global Compact and social standard SA8000.	Ecological and social criteria included when choosing suppliers	Terms added for ING worldwide in 2001 for compliance of suppliers with relevant environmental, health and safety laws. These include requirements for the supplier to minimize the environmental impact of its operations.	Plan do develop catalogue of criteria for environmental and social requirements with regards to office furniture, catering and other supplies.	Screening of suppliers using ethical standard SA8000. Dialogue with suppliers to assess their relation with the bank in terms of prompt bill payments, extent of long term relation, comparison to other banks.	At time of contract renewal, suppliers are required to provide detailed information on social and environmental policies and processes they have in place, and any future plans for implementation. This is a key determinant in decision to enter relation.
Info in report	Detailed quantitative and qualitative indicators on environmental commitment and social involvement available but not incorporated directly into the Sustainability report	Qualitative and quantitative information supplied.	Environmental Dutch Data not supplied as part of the report, although, environmental reporting in Netherlands is part of standard business monitoring processes on ING website.	Environmental quantitative info supplied from a dedicated environmental data collection system. Qualitative info also supplied.	Detailed quantitative and qualitative information, trends, analysis, and survey results from all stakeholders.  Detailed analysis of targets and performance relative to targets.	Detailed quantitative and qualitative information. Around 70 economic, social and environmental indicators presented as per GRI Guidelines.
Water usage	107L/employee per day	71L/employee per day	46.3L/FTE per day	102L/employee per day	17655cm3/customer account	
Electricity usage	21.4kWh/employee day (Switzerland site)	22.5kWh/employee day	55.9MJ/FTE per day	10.1 kWh/employee day	35335 MWh in 2001 (60.4% from renewable energy resources)	14.8MWh/employee day
Paper usage	26.7 sheets/employee per day (coper paper only) (Switzerland site)	26.8sheets/employee per day (printer and photocopier), 25-40 depending on business unit in question		40 sheets/employee per day	0.57kg/customer account pa.	0.88kg/person per day or 31.2 sheets/person day (copying paper only)

Company	Credit Suisse	HVB	ING	Munich Re	The Co-op Bank	Westpac
Year of Report	2001	2002	2001	2001	2001	2002
CO <sub>2</sub> usage	8.1 kg/employee day (electricity, heating and air travel)	6.3 kg/employee day (building and business travel)		17.3kg/employee day	2.075kg/customer account (Net basis due to 42 hectares plantations)	18.4kg/employee day
Other	Technical and construction standards set up for home offices to achieve energy savings New financial products launched that invest in high-potential markets of water supplies, alternative energy sources eg fuel cells, solar and wind power.	Use of photovoltaic cells to provide Head office energy needs. Target =5% Waste management plan to recycle paper into sanitary paper for HVB.	Participating in a committee that is investigating feasibility of an NOx emissions trading platform with a business plan being developed to made a cost effective contribution to realising Netherlands NOx target emissions	Incentives to employees to travel via rail to lower CO2 emissions. Online courses and CD ROMs produced to increase staff awareness of environment and sustainability issues Various publications and research material on subjects of climate change, natural catastrophes and environment.	Numerous awards for commitment to the Environment, Sustainability reporting, Sustainability development and Social reporting	Investing \$2 in Regional Australia communities for every \$1 deposited from regional customers
Report Auditing	Validated by SGS International Certification Services, AG.		Verified by KPMG Sustainability	External verification in line with the EU Eco-Management and Audit Regulation by an accredited environmental verifier.	Independent verification covering assessments of 1. Ethics: Institute of Social and Ethical Accountability 2. Delivering Value: The Centre for Tomorrow's Company 3. Social responsibility: Business in Community 4. Ecology sustainability: The Natural Step.	Independent Verification to cover 1. Social verification: Australian Institute of Corporate Citizenship 2. Environmental verification: Gutteridge, Haskins & Davey Pty Ltd  Also audits of OH&S systems and Financial accounts