ENVIRONMENTAL PERFORMANCE AS A REFLECTION OF MARKET DEMANDS

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Abstract

This paper focuses on the concept of corporate social responsibilities (CSR), particularly its implementation on environmental issues. The main question aimed to be answered is on how can environmental performance be adequately signaled to the market? It assumes by performing proper environmental performance, companies could benefit from financial incentive for future improvement and reputation benefit for the companies' image, which eventually influence the bargaining position of companies in the market.

Keywords: CSR, environmental performance, market

A. Introduction

On her phenomenal book in the 1960s entitled "Silent Spring", Rachel Carson1 delivered a very unromantic story in lovely poetic words. The story follows meticulously the journey of DDT with its poisonous substances entered the food chain and accumulated in fatty tissues of stock animals, continued into the human body, which is causing cancer and genetic damages. Furthermore the story delivered another shock when it told the condition in United States regions after a long acid rain, springtime no longer be the same with no song from Robin. From one of its parts, the story said: "There was strange illness. The birds - where had they gone? The few birds seen anywhere were moribund; they trembled violently and could not fly. Only silence lay over the field and woods and marsh. It was a spring without voices".2

The issue of pesticide danger in this novel was raising awareness from society on man's impact on the vulnerable environment. However, it was also raising some resistances from chemical industries, which even argued that if the society continues to faithfully follow Carson's teaching, man would return back to the Dark Ages, and the insects, diseases and vermin would once again inherit the Earth.³

The most important legacy of Carson's teaching in Silent Spring, though, was the public awareness that nature was vulnerable to human intervention.⁴ The issue was resulting public debates on whether pesticides were dangerous, and as a result, DDT came under much closer government provision

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http://www.rachelcarson.org/ last visited on 5 June 2007.

http://www.abc.net.au/rn/science/ss/stories/s642033.htm last visited on 28 May 2007.

³ Ibid.

^{4 &}lt;a href="http://www.nrdc.org/health/pesticides/hcarson.asp">http://www.nrdc.org/health/pesticides/hcarson.asp last visited on 5 June 2007.

and was eventually banned from the market. For the first time, the need to regulate industry in order to protect the environment became widely accepted.⁵ Continuously, Silent Spring became a trigger on the need for environmental protection management in the United States. Later, it became a much influenced material that was pioneering the world concern on environmental issues, such as the Stockholm Conference on the Human Environment 1972. For this remarkable achievement, Time Magazine even mentioned Carson among the Time 100 Most Important People of the Century.⁶

At a certain point, the awareness for the need of balance between the technological processes used in industry and the responsibility for the environmental vulnerability created an early starting point for the concept of Corporate Social Responsibility (CSR) nowadays. The mainstream and framework of industry should be directed towards environmental fit strategies and decisions. A sense of strategic direction is a vital component in an effective approach to corporate responsibility. Johnson and Scholes mentioned in their book that one of the concerns for strategic decision for corporate responsibility is the matching of an organization's activities to the environment.7

Industry has a pivotal role to play in tackling the issue of environment, further to develop and deliver the responses.⁸ The

rivalry character of environmental resources has made the issue of environment often regarded as a threat that settled industry in an opposition side for it. The environment needs shifting values as much as shifting practice in the industry to change the environmental issues from a threat to an opportunity. This paper aim to make an analysis on the question whether an environmental performance can be adequately signaled the market? And how to achieve that?

B. Pillars on Corporate Social Responsibility

Corporate social responsibility is a concept where companies taking on voluntary commitments to contribute to a better society and a cleaner environment.9 From this commitment lies a duty to respect each other on the companies endeavor to raise the standards of social development, environmental protection and respect of fundamental rights. Since the word CSR has become a buzzword in recent years, it has been used as a reference on the corporate aim to improve their contribution to society and to ensure the future sustainability of their organizations. The concept of social responsibility has given rise for the concept of Triple Bottom Line (3BL) or the concept of People, Planet and Profit (3P).

Triple Bottom Line report is a method of quantifying and reporting of CSR per-

⁵ Ibid.

⁶ http://www.time.com/time/time100/scientist/profile/carson.html last visited on 28 May 2007.

⁷ Johnson, G. and Scholes, K. 1998, Exploring Corporate Strategy, London: Prentice Hall.

⁸ Cannon, Tom. 1994, Corporate Responsibility: a textbook on Business Ethics, Governance, Environment: Roles and Responsibilities. London: Prentice Hall. p. 207.

Ommission of the European Communities. 2001, Green Paper: Promoting a European Framework for Corporate Social Responsibility. Brussel: COM (2001) 366 Final.

formances, which covers three main areas: economic, environmental and social bottom lines. Economic bottom line covers revenues, operating costs, compensation and investments. The measurement will invoke on the relation between infrastructure and services provided for public benefits, together with the financial implications, risk and opportunities.¹⁰

Environmental bottom line measures the track of natural resources – materials, energy and water – used by company and the impact of the activities to biodiversity, protected areas and environment in general. While social bottom line covers the company internal policy on labors rights, worker's salary and safety issue also regarding the company's concern on child labors, discrimination and freedom of association. The social bottom line also emphasizes the impact of marketing and communication to the society.¹¹

People, Planet and Profit concept is another term to concisely describe the bottom line and the goal of sustainability development. People or Human Capital pertains to fair and beneficial industry practices toward workers, community and region in which company doing its activities. Planet (Nature Capital) concerns on the sustainable environmental practices. The company should demonstrate activities benefits the environments or develop innovative measures and technologies to avoid and correct harmful

effect of its activities for the environment. The last pillar of P is for Profit, which is the bottom line shared by all commerce, conscientious or not.¹²

The concept of 3P rising rapidly and quickly got attention from companies such as in the Netherlands, as a company will perform well in the eyes of society if it can find a good balance between these three pillars. All pillars in People, Planet and Profit concept are irreversibly linked with each other, which is mean that financial performance of a company depend on the environmental performance and social performance imposed by its activities. The integral performances demonstrated on these three aspects can effectively influence the market.

C. Socially Responsible or Socially Desirable

Corporate Social Responsibility is a container term, which means that the concept can be used either as a minimum standard or as a higher threshold. When it is used as a minimum standard – as the regulations have provided several duties for companies, the company policies regarding its social responsibility is directly enforceable. However, if it is used as a higher threshold, it must be qualified and satisfied several criteria for being enforceable. The criteria are including: the need to take due consideration of stakeholders and publics; good faith basis when imposing the company's policy and

Kean, Justin. and Turner, Alison. 2007. People, Planet, Profit: Property. Advance Magazine, Australia: Jones Lang La Salle. Available at http://www.joneslanglasalle.com.au/NR/rdonlyres/360C352E-783B-45AD-A865-F13B59803652/0/TripleBottomLineReporting2007.pdf

¹¹ Supra

Summarized from Triple Bottom Line concept at http://en.wikipedia.org/wiki/Triple_bottom_line last visited on 28 May 2007.

also adopting the principle of reasonableness, fairness and equity.

As a matter of fact, imposing corporate social responsibility has been regarded as another competitiveness to expand the market. Essential economic sense on triple bottom line performance rose from the problem that in this changing world, if companies do not prove as a good corporate citizen, eventually the stock prices, profits and entire business could suffer.¹³

In his article in 1970, Friedman underlined a significant understanding for the idea of companies' social responsibilities for the society. It is said that in the practice, the term of social responsibility actually used as a justification of companies actions rather than a reason for those actions. ¹⁴ The whole thing that highlights the need of social responsibility is profits.

At recent phase of emerging socially responsible corporate, CSR and environmental performance has often served as the organization's very raison d'étre. For many companies, social and environmental reporting provides a chance to display their clean laundry to the public, so to speak. So far, indeed, many companies make social responsibility as their corporate image.

However, these minor criticisms on CSR concept do not necessarily display that

corporate actually impose environmental and social performance only to gain market supports, or in other word Socially Desirable Responsibility. Indeed, profits will always be the reason a company existed. However, imposing a good habit into companies' activities does not mean it is prohibited to gain profits. It should be a good reason for company to adopt CSR in their policy as it is a chance to control the movement rising in present world – global movement to enforce labor, environment and economic standard in company's policy – before the movements control them.¹⁶

The other main motive, reasonable enough to be used, is that it is obvious that shareowners, customers and even employees are respecting and rewarding companies that achieve social change through business.17 As the company can affect the financial performance with the environmental and social performance, implementing CSR is not only a good thing to do, but it is also a smart thing to do.18 As if all companies implementing their concern on economic, social and environmental issues into their policies originated on these reasons, main idea of CSR concept can be achieved genuinely. Not only socially desirable for the profit purposes, but also in a true meaning of socially responsible.

Norman, Wayne. and MacDonald, Chris. 2003, Getting to the Bottom of "Triple Bottom Line". Business Ethic Quarterly April 2004. Available at http://www.businessethics.ca/3bl/triple-bottom-line.pdf last visited on 3 June 2007.

Friedman, Milton. 1970, the Social Responsibility of Business is to Increase Its Profit. New York Times Magazine, September 13, 1970. Available at http://www.colorado.edu/studentgroups/libertarians/issues/friedman-soc-resp-business.html last visited on 3 June 2007.

¹⁵ Supra.

¹⁶ Fiorina, Carly. 2003, Invention for the Common Good. Stanford Social Innovation Review – Spring 2004.

¹⁷ Supra.

¹⁸ Supra.

D. Sustainability and the Market

The basic message of the CSR principle in which encouraging the balance between economic growth, social cohesion and environmental protection are in line with the concept of sustainable development. It has been introduced in 1987 in a report of the World Commission on Environment and Development called *Our Common Future* – usually referred to *Brundtland Report*, sustainable development defined as a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". ¹⁹

Later, this term became worldwide known and inspired many developments on the environmental issues at international level. In European level, Article 2 Treaty of Maastricht improvised a wider concept regarding on sustainability issue. It states that:

"The Community shall have as its task, by establishing a common market and an economic and monetary union and by implementing common policies or activities referred to in Article 3 and 4, to promote throughout the Community a harmonious balanced and sustainable development of economic activities, a high level of employment and of social protection, equality between men and women, sustainable and non-inflationary growth, a high degree of competitiveness and convergence of economic performance, a high level of protection and improvement of the quality of the environment, the raising of the standard

of living and quality of life, and economic and social cohesion and solidarity among Member States".²⁰

This text is referred to in the legal literature as the principle of sustainable development. It requires the European Union to promote a harmonious, balance and sustainable development of economic activities. Yet it seems obvious that it is basically economic, within the constraints of sustainable resources.²¹ In other words, economic growth is the target, and it should be realized with a high level of protection and improvement of the quality of the environment as one of the elements.

Indeed, as the main target will be the economic growth, industries might care on the issue of environmental sustainability - like the decline number in oil stocks as being a non-renewable natural resource, not because they really intensively care for the sake of environment, but to avoid the high price might occurred if the demand is much higher than the supply. The basic motivation for the principle is the fear for overexploitation of natural resources. 22 As the economic growth and development is important for the future, the issue is rather to maintain wealth in the future. This is the point where sustainable development indeed has significant role to play by companies, as sustainable development aims to grow economic aspects in a sustainable way for the protection of nature and future generations.

¹⁹ Chapter 2 of Brundtland Report, http://ringofpeace.org/environment/brundtland.html last visited on 3 June 2007.

²⁰ The Maastricht Treaty, http://www.eurotreaties.com/maastrichtec.pdf last visited on 28 May 2007.

Faure, Michael. and Skogh, Göran, 2003. The Economic Analysis of Environmental Policy and Law: an Introduction, United Kingdom: Edward Elgar Publishing. p. 20

²² *ibid*, p. 127.

From the interpretation of sustainability development in economic concept, the correlation between sustainability and market are strapping, however it is based on different ways with environmentalist do. Thus, businesses will not be able to become proactive in their pursuit of sustainability, until they are ready to manage themselves as sustainability-promoting companies.

Sustainability development as promoted in the concept of CSR in fact is a golden gate to plan scenarios of transitions to sustainable futures and sustainable markets. With the recent diminishing rate of natural resources, the future becomes uncertain. Such as the diminishing rate of certain fish species in sea level, the future stocks of those species are become uncertain. In this circumstance, companies have a part to be played with. Companies will need to create several alternative scenarios sensitivity test a range of possibilities. Alternative and innovative plans or scenarios are the key to identifying possible sustainability-promoting market opportunities.23

Limitations on the resources add more rivalry on the use of natural resources. Further, the need for keeping environment in a sustainable way is resulting more competitiveness in the market and changing consumer demands, which are become a constant coerce for companies to innovate. Chances in environmental resources are leading companies towards a situation in which continuous innovation is a prerequisite to stay in the business. The problem arise is to change this situation into challenge in which companies can improve their performance in the market. To establish a link between changes in the market and the consequences for production system, companies must deal with the question about the desirability of new products, the feasibility of production and also the efficacy of the organization.²⁴

Companies today, deal with significant challenges in managing the combined impacts of globalization and environmental depletion. The main key to change the unsustainable behavior (overexploitation, reckless production, etc) rests in tackling the market, policy and institutional failure that have led to such behavior.²⁵ It needs the support from all related stakeholders to fix the market mechanisms, including the tools, policies and practices that influence market decisions and outcomes.26 The concept of CSR indeed, settles an important inception to link between sustainability development and market improvement in a better way for society and environment.

E. Environmental Performance and Financial Performance

The challenge to balance between eco-

Sutton, Phillips. 1997. Tapping the Sustainability Market. Australia: Green Innovation Inc. http://www.green-innovations.asn.au/tapsmrkt.htm last visited on 5 June 2007.

²⁴ Jongen, Wim, M.F. and Meerdink, Gerrit. 1998, Food Product Innovation: How to link Sustainability and Market. The Netherlands: Wageningen Agricultural University Press. Available at www.p2pays.org/ref/26/25594.pdf

²⁵ Pearce, D.W. and Barbier E. 2000, *Blueprint for a Sustainable Economy*. London: Earthscan.

Roseland, Mark. 2005, Making Sustainability Happens: Market Mechanisms for Sustainable Community Development. Vancouver: Center for Sustainable Community Development. Available at http://www.sfu.ca/~ssbc/re-search/SSBC%20Making%20Sustainability%20Happen.pdf

nomic growth and environmental problems may present opportunities for innovation and competitiveness. Many evidences from research show that competitiveness through innovation and firm performance is compatible with and can be enhanced through environmental management.²⁷ The usage of environmental management means by the inclusion of environmental concern in a systematic and strategic manner in the firm's activities and performance.²⁸

In economic point of view, environmental problems are typical example of market failure where external environmental costs are not automatically internalized in the market system (externalization). Since Rio Declaration on Environment and Development 1992, many parties have encouraged to promote the internalization of environmental costs and the use of economic instruments to settle the problem of externalization.²⁹ As the emerging issue of environmental protection for the sustainable development, various corporate stakeholders are becoming interested on corporate environmental performance.

Corporate environmental performance can be regarded as a reflection on company's commitment on environmental related issues in which company fully support sustainability activities with intention for the good of society and environment.³⁰ Furthermore,

the concept also emphasizes the reflection on company's management on material and energy use in which the company operates within the finite ecological limits of natural resources, and effective stakeholders' engagement in which the company is fully transparent and accountable.

To meet this need and also to manage stakeholders' pressure on environmental sustainability issues, many companies have disclosed environmental information in company environmental reports, strategic advertisements or marketing campaigns.31 On economic variables, in the need for corporate environmental performance, larger companies likely tend to have better environmental performance than smaller companies. Indeed, logically companies that are more profitable and have greater financial support should be able to sustain better environmental performance than companies in the same industry that financially strained. However, the social pressure on it also affects the environmental performance. In line with how the companies deal with certain pressure in which show the companies' attitude toward its environmental responsibilities.

Along several past decades, corporate has been constantly facing competitive challenges. In the 1960s, low cost was the most competitive priority for businesses. Flexibil-

Principle 16 of the Rio Declaration, available at http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=78&ArticleID=1163 last visited on 28 May 2007.

²⁷ Crowe, Dréirde. and Brennan, Louis. 2005, Environmental Consideration within Manufacturing Strategy: an International Study. Business Strategy and the Environment, Bus.Strat.Env.16, 266-289 (2007).

²⁸ Ibid.

Formulated from the concept of corporate environmental responsibility from Canadian ENGO perspectives, a report from the Pembina Institute and Pollution Probe, October 2005. Available at http://www.pollutionprobe.org/Reports/cerreport.pdf last visited 5 June 2007.

³¹ Gray, R. and Stone, D. 1994, Environmental Accounting and Auditing in Europe. The European Accounting Review 3(3): 581-590.

ity became the strategic measures in 1970s, and during 1980s companies implemented total quality management for achieving good performance. At the beginning of 1990s, many companies considered their environmental performance by the implementation of environmental efficiency for the best strategic approaches.³²

The growing concern of the companies about environmental issues is mainly due to pressures put forth by government regulations and public opinions.³³ Swift development on environmental protection has forced corporations to improve their environmental performance. The environmental management systems provided in environmental performance report are used to show companies' ability to manage their environmental problems in an effective manner. As if effective environmental performance needs to be achieved, companies need to embrace all their areas on environmental related activities through their policies.

The state of environment that has been achieved by the companies reflecting the companies' contribution with the national and international environmental problems, as it is also reflecting the companies' compliance to environmental regulations. With a more effective production activities resulted by the effective environmental management, it may impose to the improvement for the financial performance of the companies.

Better environmental management system indeed can be regarded as a valuable investment. By reducing energy and waste disposal can also be good for the business, as it will reduce the external cost imposed from production activities.

Improving environmental performance can affect the improvement on market acceptance in which will improve the financial performance of the companies. The first thing must be prepared is the compliance with environmental requirements and regulations, together with the commitment to continuous improvement in environmental performance and the commitment to provide accountability by sharing the information with stakeholders.

Next thing to be prepared is the certainty of company objectives on improving the environmental performance. The feasibility of objectives is reflected on the display of structures, resources management, operational procedures and preventive measures imposed in company's activities.³⁴

Markets do respond for the information provided in company's environmental performance and if presented properly, it may provide financial incentive to improve the performance and reputation incentives for the company's image. For example, the criteria for environmental performance are toxic emission number a company produced and the number of environmental lawsuits

From several source mentioned in Azzone, Giovanni. and Noci, Giuliano. 1996, Defining Environmental Performance Indicators: an Integrated Framework. Business Strategy and the Environment Journal Vol. 5, 69-80 (1996).

³³ Bartolomeo, 1995, Environmental Performance Indicator in Industry. Supra.

³⁴ Summarized from Guidance Document Improving Environmental Performance and Compliance. Commission for Environmental Protection – EPA 2000. Available at http://www.epa.gov/compliance/resources/policies/in-centives/ems/cecguidedoc.pdf last visited on 3 June 2007.

against a company.³⁵ Commonly, those two aspects significantly affected in the financial performance of a company in the market, with toxic emission quantity is the most economically significant value.

On this basis, we can assume that environmental performance, in regard to the company's treatment on the environment is significant to affect the company's financial performance. Environmental performance emphasizes the concern of a company on the environment and also the concern on society interest. By demonstrating a good environmental performance, a company has get attention from the market in which it may result in the improvement of financial performance. An old quote said that "respect from others depends on how you respect them", indeed in line with the relation between people and environment.

F. Conclusion

Environmental performances are a vital measure can be used as indicator to step toward effective and accountable reporting mechanism to stakeholders and strategy formation. Corporate policy is important to show the company's goal and objectives for a certain period. On the environmental matters, company's policy gives a meaningful and useful sign of the company's attitude toward environment. It also used as company's reflection and image to the public, which are the main influenced element of market.

However, it is actually difficult to change a policy without influencing the market.³⁶ Thus, to achieve effective influence in the market, companies should provide their good will to change company strategies in line with the market demands. The present trend is "creating innovative company's policies which are in line with the sustainable use of environment". Financial markets are demanding more and more information on companies' environmental performance because there is increasing evidence that good performance on environmental issues translates into better overall performance.³⁷

To present environmental performance report which is sufficiently informative to the market must be comprehend the required elements for an effective environmental management system which include: the qualitative nature of much of the data; the length of the time scales involved and the interdependencies between effects.³⁸ A combination of openness and transparency is an integral aspect in designing the effective environmental management information system. Openness ensures that all the key actors of the companies' management have access to the process of information decision. Transparency is important to enable all stakeholders to observe the choice and decision process and approve the outcomes.

Sustainability is best achieved through markets that encourage innovation and efficiency, while the main contribution of busi-

³⁵ Konar, Shameek. and Cohen, Mark A. 1997, *Does the Market value Environmental Performance?*. Available at http://www2.owen.vanderbilt.edu/fmrc/pdf/wp9719.pdf last visited on 3 June 2007.

³⁶ Point taken from the lecture of CSR 17th April 2007.

³⁷ World Business Council for Sustainable Development, 2002. Striking the Balance: Sustainable Development Reporting. England: Earthprint.

³⁸ Cannon, Tom. Op. Cit. p. 234

ness to sustainable development is eco-efficiency. By adopting eco-efficiency policies, a company will improve both its environmental performance and its financial results. With the achievement of eco-efficiency poli-

cies, innovative production, responsibility for informing consumers and a good partnership with all stakeholders, environmental performance of a company can sufficiently signaled and informative for the market

BIBLIOGRAPHY

A. Books

- Cannon, Tom. 1994, Corporate Responsibility: a textbook on Business Ethics, Governance, and Environment: Roles and Responsibilities. London: Prentice Hall.
- Faure, Michael. and Skogh, Göran, 2003. The Economic Analysis of Environmental Policy and Law: an Introduction, United Kingdom: Edward Elgar Publishing.
- Johnson, G. and Scholes, K. 1998, Exploring Corporate Strategy, London: Prentice Hall.
- Pearce, D.W. and Barbier E. 2000, *Blueprint* for a Sustainable Economy. London: Earthscan.
- B. Articles and Journals
- Azzone, Giovanni. and Noci, Giuliano. 1996, Defining Environmental Performance Indicators: an Integrated Framework. Business Strategy and the Environment Journal Vol. 5, 69-80 (1996).
- Commission of the European Communities. 2001, Green Paper: Promoting a European Framework for Corporate Social Responsibility. Brussel: COM (2001) 366 Final.
- Crowe, Dréirde. and Brennan, Louis. 2005, Environmental Consideration within Manufacturing Strategy: an International Study. Business Strategy and the

- Environment, Bus.Strat.Env.16, 266-289 (2007).
- Fiorina, Carly. 2003, *Invention for the Common Good*. Stanford Social Innovation Review – Spring 2004.
- Friedman, Milton. 1970, the Social Responsibility of Business is to Increase Its Profit. New York Times Magazine, September 13, 1970. Available at http://www.colorado.edu/studentgroups/libertarians/issues/friedman-soc-resp-business.html.
- Gray, R. and Stone, D. 1994, *Environmental Accounting and Auditing in Europe*. The European Accounting Review 3(3): 581-590.
- Guidance Document Improving Environmental Performance and Compliance. Commission for Environmental Protection – EPA 2000. Available at http://www.epa.gov/compliance/resources/policies/incentives/ems/cecguidedoc.pdf
- Jongen, Wim, M.F. and Meerdink, Gerrit. 1998, Food Product Innovation: How to link Sustainability and Market. The Netherlands: Wageningen Agricultural University Press. Available at www.p2pays.org/ref/26/25594.pdf
- Kean, Justin. and Turner, Alison. 2007. People, Planet, Profit: Property. Advance Magazine, Australia: Jones

- Lang La Salle. available at http://www.joneslanglasalle.com.au/NR/rdonlyres/360C352E-783B-45AD-A865-F13B59803652/0/TripleBottom-LineReporting2007.pdf
- Konar, Shameek. and Cohen, Mark A. 1997, Does the Market value Environmental Performance?. Available at http://www2.owen.vanderbilt.edu/fmrc/pdf/wp9719.pdf
- Norman, Wayne. and MacDonald, Chris. 2003, *Getting to the Bottom of "Triple Bottom Line"*. Business Ethic Quarterly April 2004. Available at http://www.businessethics.ca/3bl/triple-bottom-line.pdf
- Report on the Concept of Corporate Environmental Responsibility, Pembina Institute and Pollution Probe, October 2005. Available at http://www.pollutionprobe.org/Reports/cerreport.pdf
- Roseland, Mark. 2005, Making Sustainability Happens: Market Mechanisms for Sustainable Community Development. Vancouver: Center for Sustainable Community Development. Available at http://www.sfu.ca/~ssbc/research/

- SSBC%20Making%20Sustainability% 20Happen.pdf
- Sutton, Phillips. 1997. *Tapping the Sustainability Market*. Australia: Green Innovation Inc. http://www.green-innovations.asn.au/tapsmrkt.htm
- World Business Council for Sustainable Development, 2002. *Striking the Balance:*Sustainable Development Reporting.
 England: Earthprint.

C. Internet Sources

- http://ringofpeace.org/environment/brundtland.html
- http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=78&Ar ticleID=1163
- http://www.eurotreaties.com/maastrichtec.pdf
- http://en.wikipedia.org/wiki/Triple_bottom_line
- http://www.rachelcarson.org/
- http://www.abc.net.au/rn/science/ss/stories/s642033.htm
- http://www.nrdc.org/health/pesticides/hcarson.asp
- http://www.time.com/time/time100/scientist/profile/carson.html