

A proposed scholarly framework for measuring business responsibility to climate change in South Africa

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Abstract

Businesses are engaging with climate change at various levels. Many have started integrating climate change into their strategies with a view to addressing risks associated with global warming and climate change. With this in mind, this article focuses on how a scholarly framework could be used to inform the measurement of business response to climate change in South Africa. Business response to climate change in South Africa has been evaluated mainly using voluntary benchmarks such as the Johannesburg Stock Exchange Socially Responsible Index (JSE SRI) and the Carbon Disclosure Project (CDP). It is argued in this article that such benchmarks set the bare minimum requirements on climate change criteria. To assess business thinking around the subject under discussion, a proposed scholarly framework was circulated to key climate change experts within corporate South Africa and comments invited. The preliminary responses have shown that corporate South Africa is highly sensitive to detailed and scholarly reporting on business response to climate issues as part of corporate social responsibility. In addition, bodies responsible for the reporting frameworks expressed concern over the proliferation of reporting requirements in South Africa and globally. The same views were also expressed by some key respondents from industry.

Keywords: *Climate change, Corporate responsibility, Scholarly framework, South Africa*

Introduction

There is an urgent need for businesses to be aware of and address the negative impacts of climate change. However, from a business perspective, climate change presents both opportunities and risks to operations. The reputation of a business can either be a risk or an opportunity, depending on how a business responds to climate change. Measuring, a well-known phenomenon throughout the contemporary business world can greatly influence the reputation of a business, especially from a corporate social responsibility (CSR) perspective. One of the core criteria for measuring CSR currently

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is how businesses are responding to the global challenge of climate change. The corporate sector must be seen to be doing something to reduce its carbon footprint, especially the reduction of greenhouse gases (GHGs) that cause global warming leading to climate change. Many stock exchanges are also integrating climate change criteria into their CSR indexes and the Johannesburg Stock Exchange (JSE) of South Africa is not excluded from this global response. The JSE Socially Responsible Investment (JSE SRI) Index now integrates climate change parameters in its assessment criteria.

This article therefore reports on an investigation into the possibility of measuring corporate South Africa's response to climate change through a scholarly framework. The focus is moved from measuring CSR in general to climate change. In order to develop the scholarly framework, relevant literature dealing with commonly used CSR measuring criteria as well as indices that include or exclude companies based on their social responsibility, both within and outside South Africa was reviewed. These indices and measuring instruments include the FTSE4GOOD Index, the JSE SRI Index and the Carbon Disclosure Project (CDP).

Measuring and reporting in CSR

This section deals with a literature survey on measuring and reporting in CSR. Deliberations on specific CSR measuring through indices like the Global Reporting Initiative (GRI), FTSE4Good, JSE SRI Index and the Carbon Disclosure Project are presented. The aim of a comprehensive literature review is to present current thinking with regards to the subject matter in general as well as draw insights that could be superimposed on the proposed scholarly framework and the responses from the interviewees.

Measurement in CSR

Thirty years ago, Abbott and Mosen (1979 p. 501-515) observe that although there was substantive literature on CSR, work on measurement was still undeveloped. Thirty years later, the measurement of CSR (also known as Corporate Social Performance) is still described as challenging (Turker 2009 p. 411; Chen et al 2010 p. 1). Abbott and Mosen (1979 p. 501-515) explain that there are two main reasons why it is difficult to measure CSR. Firstly, it is hard to get large numbers of companies to follow same standards and methodologies. This is an aspect that makes it impossible to do appropriate comparative analysis studies. Secondly, one needs scientific knowledge and research to measure companies' CSR. To this end, one should have unlimited access to information about activities on CSR from a particular company and/or group of companies. The authors further discuss three methods commonly used to measure CSR namely: (1) social accounting, (2) the reputational method, and (3) content analysis of documents. Social accounting refers to the practice of adding 'categories pertaining to the social impact of the firm into the firm's formalized accounting system' (Abbott and Mosen 1979 p. 502). Social accounting, however, is still undeveloped, they say. The reputational method involves asking the public for their opinions on corporations. Generally

their answers are based on the companies’ reputation, hence the name. Content analysis of documents such as annual reports, company statements and policies are done.

Clarkson (1995 p. 92-117) reports on 10 years (1983 – 1993) of research on the measurement of corporate social performance and concludes that corporate social performance can be analysed and measured more successfully by using a framework that he developed. The research was done in three distinct phases: 1983 – 1985; 1986 – 1988; 1988 – 1993. The framework is based on the companies’ relationships with their stakeholders. Interestingly, it was not Clarkson’s original objective to develop such a framework. On the contrary, it started out as case studies on the corporate social performance of companies. It emerged that other methodologies used were not suitable to achieve their objectives and ‘it became clear that all corporations being studied had relationships with various groups or constituencies, which could be defined as stakeholder groups, and that these relationships were either being managed, or not being managed, for better or worse’ (Clarkson 1995, p. 98).

Almost 10 years later, Knox and Maklan (2004 p. 508-516) observe that the number of companies engaged in social reporting had increased rapidly. Although social reporting has made great strides, the authors note that it still has very little effect on the actual way businesses are being run. This phenomenon, popularly known as ‘green wash’, is one of the factors that have caused social reporting to be criticised. Knox and Maklan explore the reasons behind ‘green wash’ and suggest yet another framework (Figure 1) to better link CSR to business and social outcomes.

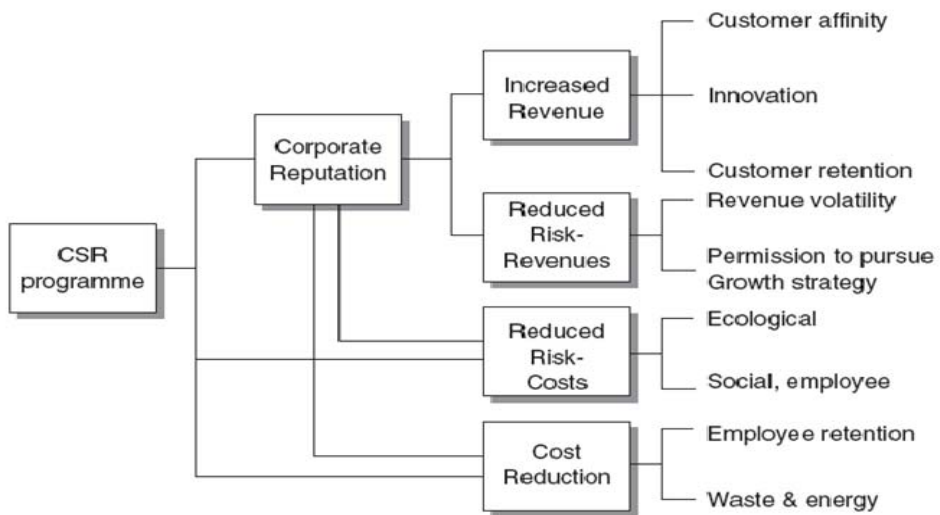


Figure 1. CSR link to corporate reputation and business performance (Source: Knox and Maklan (2004: 33))

One of Knox and Maklan's (2004 p. 33) key findings was that 'business attitude to CSR reporting is paradoxical'. The authors found that while companies confirmed that they understood CSR reporting and were comfortable with it, they rejected the idea of standardised reporting. Instead, companies preferred to report on whatever items they felt were important for their industry – a key fundamental embodied in self-regulation.

Marquez and Fombrun (2005 p. 304-305) also report on the increase and demand for CSR ratings. They note a number of 'rating agencies' (2005 p. 304-305) providing CSR ratings including Vigeo, Oekom, Scoris, Avanzi, Good Bankers and Innovest. The authors also conclude that there are three basic steps typically followed in CSR ratings: (1) content analysis of publicly available information, (2) questionnaires sent to companies and (3) internal and external interviews. The initial assumption in this article that companies are highly sensitive to CSR ratings and measuring instruments, is also expressed by Marquez and Fombrun (2005 p. 304-305). One of the main reasons for this according to the surveyed companies is the proliferation of CSR ratings. Companies are noted to be complaining about the amount of time these exercises consume and the costs associated with such activities. This point is valid. In South Africa, companies – especially those listed on the JSE should respond to the CDP, JSE SRI and Broad Based Black Economic Empowerment Score Card among other social ratings, not to mention the other voluntary and research initiatives. The number of ratings or measuring instruments and their intended audience therefore constitute a key issue in the field of measuring CSR.

Another more recent issue in this field is the tension between traditional accounting, shareholder value and sustainable development (Gray 2006, p. 793-819; Jones 2010, p. 123 -138). It is implied that conventional accounting and sustainable development (including climate change) are opposites (Gray 2006, p. 793-819). It is highlighted that a need exists for a new holistic accounting system that includes accounting for environmental impacts. It is, however, stated that such a system is still missing from the world (Gray 2006, p. 793-819; Jones 2010, p. 123 -138). To this end, Gray (2006, p. 793-819) asserts that even initiatives like the Global Reporting Initiative (GRI) do not reflect the true triple-bottom-line reporting covering the financial, environmental and social aspects.

Turker's work (2009 p. 411) is nonetheless, probably the most comprehensive in terms of the measurement of CSR. It includes a substantial literature review in which he comments on more than 30 other authors' work on this subject (including some of the authors discussed in the aforementioned section). Turker and other authors suggest that the available measuring instruments are limited and proposes other methodologies (Turker, 2009 p. 411, Chen et al 2010 p. 2). Turker, specifically proposes a scale to measure CSR. This scale was conceptualized based on the following definition of CSR: '[c]orporate behaviours that aims to affect stakeholders positively and that go beyond its economic interest' (Turker, 2009 p. 413). Because of this definition's focus on stakeholders, Turker utilized Wheeler and Sillanpaa's (1997) typology to categorize stakeholders. Thereafter, the scale was developed by identifying statements from previous scales in the literature as well as the use of an exploratory survey that captured new

items. After a pilot study, a new survey in the form of a self-administered questionnaire was sent to 269 participants in Turkey. Turker argues that stakeholders' views are a reliable source for measuring corporate social activities. An interesting finding from Turker's work is the fact that he hints toward the notion that future studies might show that future generations or the natural environment are the most important stakeholders to business (Turker, 2009 p.424). For this reason plus the threat that climate change poses to both future generations and the natural environment, it is suggested that business should separately measure their response to climate change.

The literature on measuring CSR, therefore, suggests the lack of a standardised benchmarking, measuring and reporting instrument. More so, the existing measuring instruments and frameworks are all self-regulated. Self-regulation is a state that leaves the corporate sector with an easy task to fulfil: they decide which of the requirements they want to meet. The literature also reveals that companies are highly sensitive to CSR measuring exercises, most likely because of the risks it holds for their reputations. These issues most probably contribute to the fact that we do not see significant change in corporate behaviour based on the current CSR measuring instruments and the continuation of 'business as usual' in many respects.

Global Reporting Initiative (GRI)

The GRI is not a measuring instrument as such, but rather a framework to assist reporting on sustainability issues. It is also the most well known framework and rigorous exposition of sustainability reporting in the world. The GRI consists of the Sustainability Reporting Guidelines, Sector Supplements and the Technical Protocol (GRI 2011). It has helped thousands of companies all over the world to publish sustainability reports.

The so-called G3.1 guidelines are the most up-to-date version of the sustainability reporting guidelines and were launched on 23 March 2011. The G3.1 starts with an overview of sustainability reporting, providing the reader with a thorough background and foundation for sustainability reporting. It is divided into two parts. Part 1 is called 'Defining Report Content, Quality and Boundary' and Part 2, which is entitled 'Standard Disclosures', describing all aspects of standard disclosure, including how to report on the following topics: Strategy and Profile, Economics: Environmental issues, and Social Issues.

The Sector Supplements are versions of the sustainability reporting guidelines that are sector specific. Companies can use these guidelines to make their sustainability report suitable for their industry. The Technical Protocol provides companies with specific guidance on how 'to define the content of a sustainability report' (GRI 2011).

Hedberg and Von Malmborg (2003 p. 153 – 164) report on research under Swedish companies that started to use the GRI guidelines. They contend that the GRI guidelines are used for two main reasons. The first is that there is an expectation from companies that the application of the GRI guidelines will increase the credibility of their

sustainability reports. The second is that the GRI provides a template for the design of a sustainability report. For many companies this was very useful as they had never reported on these issues before.

Hedberg and Von Malmborg (2003 p. 153) also contend that the GRI guidelines have much to offer 'for gaining visibility and control of the triple bottom line', but that the guidelines are in need of further development. The issue of the credibility of the guidelines is also mentioned because of the fact that companies do not have to follow the guidelines strictly or in any specific manner. Companies can simply mention that they did use it in some way. The abovementioned authors conclude that 'the lack of possibility to provide verified and comparable reports would certainly be a key issue to solve if GRI is going to be a guideline that reduces criticisms of voluntary corporate reporting as being biased and self-laudatory' (Hedberg and Von Malmborg 2003, p. 163). Critique in the CSR reporting space seems to remain that companies still report on what they want.

Financial Times and the London Stock Exchange (FTSE) 4 Good Index

The FTSE4Good Index aims to include or exclude companies on the basis of their overall performance with regard to corporate responsibility. The Index makes use of negative screening techniques automatically excluding specific companies from the FTSE4Good Index. Companies automatically excluded in the FTSE4Good Index include those involved in producing weapons, tobacco products, nuclear power and weapons, as well as extracting uranium (FTSE 2006). The FTSE4Good Index also differentiates among high-, medium- and low-impact companies. The rest of the companies' rating criteria are then based on this initial categorisation. The companies are rated on five main areas: environmental sustainability (including climate change), relationships with stakeholders, universal human rights, supply chain and labour standards as well as countering bribery. Furthermore, every category is subdivided into three subcategories: policy, management and reporting. Some of the subcategories contain core indicators. The companies should comply with most of or all the indicators as well as with desirable indicators.

Depending on whether the company is a high-, medium- or low-impact company the indicators differ – ensuring that the high-impact companies should meet higher standards in order to be included. In measuring CSR through the FTSE4Good Index an independent service provider, a company called EIRIS, does the research. The research mainly makes use of publicly available information like annual reports and websites, but it also utilises questionnaires that are sent to the companies in order to extract additional information.

Collison et al (2009 p. 35 – 58) report on an empirical study on the characteristics of the FTSE4Good Index. They contend that the inclusion is based on 'ethical criteria'. However, the authors criticise the use of the ethical criteria. They conclude that the meaning of ethical investing is stretched 'beyond its usual limits'. Collison et al. (2009

p. 35 – 58) also maintain that since the FTSE4Good Index focuses on policies instead of what companies actually do, inclusion on the FTSE4Good Index does not necessarily equate to massive positive steps having been taken on the CSR front. This is an element that speaks of intent versus action. This assumption could, however, not be verified with the results from their empirical study. The authors then pose a very important question:

‘Is the FTSE4Good initiative merely tinkering with the symptoms rather than addressing the key systemic drivers which build in anti-ethical postures and which reduce social responsibility to that which is allowed to co-exist within a framework based on maximising shareholder value?’

Collison et al. (2009 p. 35 – 58) conclude that they are not convinced that the FTSE4Good Index will ever lead to real change in corporate behaviour. It is such kinds of conclusions that led the authors to thinking of alternative instruments, developed by scholars and uniformly measurable.

The Johannesburg Stock Exchange (JSE) Socially Responsibility Index (SRI)

There are some important similarities between the FTSE4Good Index and the Johannesburg Stock Exchange Socially Responsibility Index (JSE SRI). Firstly, both indices focus on including companies on the basis of their corporate responsibility. Secondly, both indices make use of the same service provider company (EIRIS) to do the actual research that will determine whether companies are excluded or included in the indices. Thirdly, the JSE SRI also classifies companies as being high-, medium- or low-impact companies. However, unlike the FTSE4Good, this classification is only used for the environmental criteria. Fourthly, the JSE SRI mentions that the criteria are of a developmental nature and are reviewed every year and adapted as seen fit (JSE 2010). The FTSE4Good Index mentions the evolving nature of their criteria for exactly the same reasons. As with the FTSE4Good Index, mostly publicly available information is used in the JSE SRI research with indicators split between core and desirable indicators.

However, there are also some differences between the JSE SRI and the FTSE4Good Index. Since its inception in 2004, the JSE SRI used only three main criteria themes, based on the notion of triple bottom line, namely environment, society, and governance and related sustainability concerns. The themes are further subdivided into three subsections: policy and strategy, management and performance, and reporting. A fourth theme, only included in 2010, is climate change (Figure 2). The new focus area, climate change, is divided differently. The three subdivisions are policy, management and strategy, and disclosure.

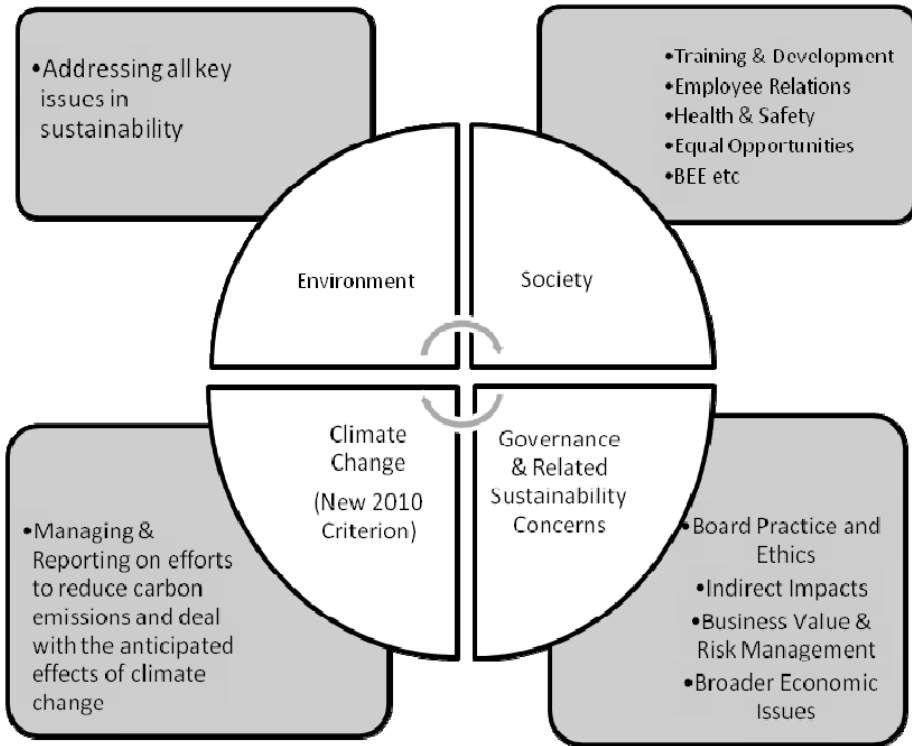


Figure 2. JSE SRI Measuring Criteria 2010

The JSE SRI minimum requirements in the climate change category must demonstrate evidence in relation to the following two indicators: issues related to senior responsibility for climate change and commitment to climate change. In terms of the recognition of best performers, the company should provide evidence in relation to all relevant indicators associated with climate change. Further details regarding the climate change criteria as of 2010 are shown in Table 1.

Table 1. JSE SRI Climate change criteria

Climate change criteria	Sub-criteria
Policy/governance	Senior responsibility for issues related to climate change Commitment to climate change Product-related climate change commitment (where relevant)
Management/Strategy	Any targets/goals linked to GHG emissions reductions (long/short term)
Disclosure	Emissions disclosure (absolute or normalised) Scope of data Methodology applied

The JSE SRI has recently been sharply criticised by nine environmental non-government organisations (NGOs) in South Africa. A number of these organisations compiled an open letter which was sent to the JSE SRI (Salgado 2010). These NGOs argue that the JSE SRI uses bare minimum criteria for inclusion, which makes it possible for even the worst companies, when it comes to environmental compliance, to look like good corporate citizens. The NGOs attached an addendum to their open letter with a list of companies that committed specific offences between 2007 and 2009 and still appear on the JSE SRI. Among the offences committed by the companies were included: issuance of 54 non-compliances including air emission exceedances; operating without an integrated water use licence; non-compliances including various air and waste permit conditions; as well as non-compliance on waste permits.

In response to this letter the JSE indicated that they 'might request further information from the nine companies, as well as the data provider and the advisory subcommittee that considers 'controversial issues' (Salgado 2010). It was also noted that it is not the role of the JSE to enforce compliance and that their criteria are of a developmental nature and will change over time to become more stringent.

Carbon Disclosure Project

An underlying objective of the Carbon Disclosure Project (CDP) is to review and assess the action and disclosure of companies and sectors against what is seen as a best practice response to the challenges of climate change (CDP Global 500, p. 2009). The project was started in 2000 and the response rate from companies has increased ever since. Questionnaires are sent out to all the major companies in the world and the companies have a choice whether to participate or not. The questionnaires are in line with the key elements of an effective climate change strategy, focusing on the four key areas of climate change governance, risk and opportunity identification, greenhouse gas (GHG) emissions accounting, and performance. These questions provide companies with an opportunity to identify the strengths and current limitations in different aspects of their management of issues related to climate change.

The South African Carbon Disclosure Project (CDP-SA), which is run as a partnership between the National Business Initiative (NBI) and the CDP, was originally brought to South Africa at the initiative of Incite Sustainability (CDP-SA, 2009). The NBI is now the lead partner with the CDP. Its role includes overall management of the partnership with CDP and all stakeholders, including managing the relationship with the JSE, business and government. The NBI also solicits the support of local investors and sponsors of the CDP in South Africa. South African companies that score more than 50 points in the disclosure category are included in the South African Carbon Disclosure Leadership Index (CDLI). As of 2010, the CDP-SA compiled a composite index made up of both the CDLI and Performance Rating. The Performance Rating assessed the nature of a company's climate mitigation and adaptation actions (CDP-SA, 2010). The main aim was to provide investors with greater insight into the extent to which companies are preparing to transition to and compete in a low-carbon economy.

To illustrate how CSR measurement frameworks can change the rankings of a company we used the CDP-SA CDLI and Performance Index composite of 2010. The top four companies in the joint CDLI and Performance Ratings (Category A) in 2010 were Barloworld, Gold Fields, Nedbank and Woolworths Holdings. This list is in sharp contrast to the top four in the single CDLI which were FirstRand and Gold Fields (joint first with 93 out of 100 points) and Anglo Platinum and Medi-Clinic Corporation (joint second with 89 out of 100 points).

Call for an alternative measuring instrument

The authors are not alone in their view that a need exists for alternative ways to measure business response to CSR, particularly to climate change (Chatterji et al 2007, p. 29). For instance, Jones (2010, p. 129) builds a theoretical framework for environmental accounting and reporting, basing his framework on eight basic assumptions:

1. Environmental threats put the planet at risk.
2. Industry has a great impact on the environment.
3. Society legitimises industry.
4. Industry has a duty to act.
5. Long-term radical reorientation with sustainable development is an immediate target.
6. Current accounting is inadequate.
7. New holistic accounting is required.
8. Stewardship function.

Jones (2010 p. 129) emphasises:

If the necessity of measuring business impact is accepted, then there are two interrelated premises: First, conventional accounting is not suitable for environmental accounting and reporting and, second, we need to develop a new system of environmental accounting and reporting.

Jones goes on to discuss the six barriers that conventional accounting poses to environmental accounting, of which a capitalist orientation which does not consider the environmental impacts on business is only one. Although Jones's article focuses mainly on the changes required in conventional accounting, it reiterates the notion that business response to climate change is not measured appropriately. He further states that '[n]ew environmental systems and approaches are needed to capture and measure the environmental impacts' (Jones 2010, p. 132).

Finally, none of the mentioned authors focused on the measurement of business response to climate change specifically. Essentially, this is the reason for the development of the proposed scholarly framework in this article.

Methodology

The objective of this article is to report on an investigation into the possibility of measuring business response to climate change in South Africa through a scholarly framework. Such an approach would separate corporate 'green wash' from genuine concern on climate change as embodied in climate change response. 'Green wash' can be described as the phenomenon where business portrays an image of going green, but in reality the business is run as usual. Since this work focuses on a long-term development of a scholarly instrument, the first phase of the research made use of an exploratory qualitative approach. According to Burns and Grove (1993, p. 301), exploratory research designs should be chosen if the purpose of the study is to draw insight on a specific phenomenon as it stands at a specific time.

In order to achieve the objective of the article, a scholarly framework to measure business response to climate change in South Africa was developed. The proposed framework included the following five key thematic measurement areas: policy and governance; management and strategy; disclosure; performance and reporting; other cross-cutting and relevant aspects. Sub-categories were included within the key thematic measurement areas.

After internal peer reviewing to check the quality of the scholarly framework, it was sent to a group of representatives of corporate South Africa selected through purposive, voluntary sampling as Du Plessis et al (2004, p. 5) recommend. What this implies is that the group of individual respondents approached for comments was directed by the purpose of the study and it meant that the researcher needed to approach individuals who are highly knowledgeable on business and climate change and measuring instruments. These individuals were asked to make observations and comment on the range of items covered by the proposed scholarly framework.

The group of those selected included members of the Advisory Council to the Exxaro Chair in Business and Climate Change. Given the rapport between the members of the Advisory Council and the Exxaro Chair, the authors were convinced that honest opinions would be given on the scholarly framework. Indeed, those who reviewed and commented on the scholarly framework did so professionally and constructively. The method of correspondence was electronic mail. This was followed by telephonic interviews where further clarity was required. The proposed scholarly framework was sent to 13 individuals, of whom five responded.

Proposed scholarly framework

The proposed scholarly framework for measuring business response to climate change has been developed, drawing insights from a collection of measuring criteria for assessing business response to climate change that include the following: the Dow Jones Sustainability Index; the FTSE4 Good Climate Change Criteria; the Carbon Disclosure Project; and the JSE-SRI Index Climate Change Criteria. The JSE SRI company categories in terms of environmental impacts apply when measuring business response to climate change in South Africa. The criteria that might not apply to low and me-

dium environmental impact companies are delineated as appropriate following further consultation and application of the scholarly framework. So far the framework would apply to all high environmental impact companies (including carbon footprints emerging from products).

Measuring parameters for the proposed scholarly framework

Measuring parameters for the proposed scholarly framework are depicted in Figure 3. The proposed measuring parameters are interlinked. For readers to have a better grasp of the parameters included in the scholarly framework, space is allocated in the next paragraphs to briefly explain theoretical perspectives underpinning the proposed parameters and how they are related to each other.

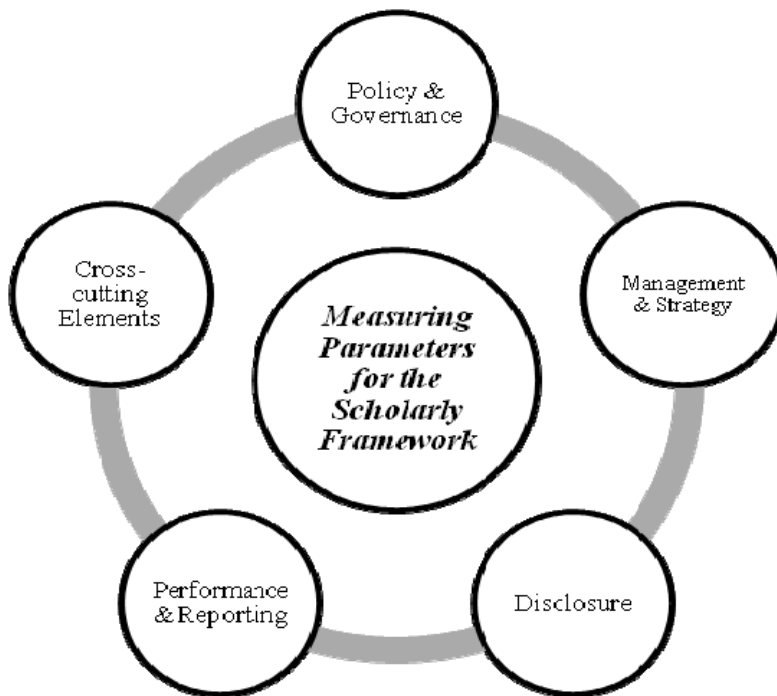


Figure 3. Measuring parameters for the proposed scholarly framework

Policy and Governance

Governance in this context would refer to the governing bodies of corporate institutions. The board of directors usually have a large proportion of control over the firm's policies. In this regard, it might mean that the company employs a climate change expert to develop a policy for the company on how it should address climate change, but the final decision on implementation of the policy will be at board level. Policy and Governance are therefore grouped together as these two aspects are directly linked to

each other.

If the board has for instance accepted a new policy on climate change it will have a tripling effect. It must then be decided how this policy will be implemented and in order to implement, a strategy is essential. The strategy and the implementation of the policy must be managed. The companies can decide to disclose information to their stakeholders on this process in many ways, but might include reports on past and current performance (Berthelot et al 2003, p.37).

Management and Strategy

Garrod and Chadwick (1996, p. 40) asserts that a number of 'environmental management tools' have been developed, including, environmental reviews, environmental policies, environmental audits and life-cycle assessments of products and processes. This also illustrates how policy and management are linked. In their view a policy can therefore be seen as a tool for the management of environmental issues. The proposed scholarly framework therefore falls within the broader realm of environmental management tools.

Garrod and Chadwick (1996, p. 38) argues that the literature on environmental business management has promoted the idea that environmental management strategies can be inserted into existing business strategies without changing much in the existing strategy. In other words that greening your business will result in more profits, where this is not necessarily true. As a consequence, a lot of businesses develop their environmental management strategy with the motive of making more money instead of really thinking about the environmental issue that they would like to address.

Chatterji et al (2007, p. 1) states that companies should develop strategies in order to manage how they are viewed by their stakeholders and that their impact on the natural environment plays a pivotal role in this. In the current context this could mean that companies should have a strategy with regard to addressing climate change, because this will influence how they are viewed by their stakeholders.

Disclosure

Disclosure is another element that needs further clarity in line with the proposed scholarly framework. Disclosure is one of the commonly accepted principles of corporate governance. Organizations should implement procedures to independently verify and safeguard the integrity of the company's financial and non-financial reporting. Disclosure of material matters concerning the organization should be timely and balanced to ensure that all investors have access to clear, factual information. Berthelot et al (2003, p.2) say the following regarding disclosure:

“We define corporate environmental disclosure as the set of information items that relate to a firm's past, current and future environmental management activities and performance. Corporate environmental disclosure also comprises information about the past, current and future financial implications resulting from a

firm's environmental management decisions or actions.”

It is also said that: ‘[S]takeholders are often unaware of the full range of firms’ activities and lack access to or the expertise needed to analyze relevant environmental and/or climate change data’ (Chatterji et al 2007, p. 1). From the quotation above, a company might decide to disclose a lot of environmental and/ or climate change data on their website, but not until it is analyzed in a report will it make sense to some of its stakeholders.

It is therefore important to differentiate between disclosure and reporting. At first glance they might sound similar and the literature has not necessarily assisted in understanding the difference between the two (Berthelot et al 2003, p.1 - 44). However, put simply, reporting is a small part as well as integral element of disclosure. Disclosure may include reports, but also comprises all the information a company decides to reveal to its stakeholders. This is also the reason for including both disclosure and reporting as measuring parameters in the scholarly framework.

Performance and Reporting

Performance and reporting are grouped together because companies generally report on their performance. As alluded to earlier, in many cases companies only report on their successes with regard to environmental and/or climate change impact (Chatterji et al 2007, p. 1). Companies therefore report for various reasons, one of which is to communicate with stakeholders on certain issues. When performance is reported, this also serves to judge progress in terms of company strategy and annual commitments. Hence reporting performance of addressing climate change becomes part of the proposed scholarly framework.

Rating and applications

The scholarly framework proposes rating on scores ranging from 0-3 per each indicator where a score of zero (0) denotes non-existent, 1 (Sufficient indication of movement towards achieving the indicator), 2 (Adequate evidence of having achieved the indicator) and 3 (Exceeds expectations in terms of the indicator).

Where a researcher wishes to have a quick qualitative evaluation of a company's response to climate change, one can convert the scholarly framework indicators to ‘Yes’/‘No’ responses. In addition, the scholarly framework can be used to evaluate data and information from both secondary and primary sources. Secondary data and information sources would include the Carbon Disclosure (CDP) reports, sustainability reports and various proclamations related to climate change and energy policy. To generate primary data, the scholarly framework can be used as a questionnaire/survey instrument.

It is this kind of flexibility that would render the tool user friendly. Overall, it is hoped that although it is of a closed-ended nature, the scholarly framework would go beyond

reporting business response to climate change and be in a position to tease out genuine versus traditional corporate green wash in terms of business response to climate change. It is also hoped that independent evaluations on business response to climate change using this scholarly framework can provide constructive and valuable information to companies that would have been sampled in terms of how those firms should be responding to climate change.

The real benefit will be in moving companies to a new business philosophy based on genuine response to addressing environmental issues in business, in particular climate change. Such insights are not commonly reflected through rushed reporting and assessments for inclusion in some of the indices that include the FTSE4 Good, the Carbon Disclosure Leadership Index and the JSE SRI.

The scholarly framework can also be adopted for evaluating business response to climate change in other countries and environments such as regional groupings. In its current form, the tool has merged international with South Africa-specific indicators. Scholars may therefore maintain international indicators and substitute South African indicators such as the Energy Efficiency Accord and the JSE SRI Criteria with known regional and/or national indicators of choice. The range of scoring can also be widened. It is envisaged that the instrument be subjected to both international and South African indicators. If results confirm otherwise, then the instrument can only be applied when measuring business response to climate change for homogeneous sectors, for example retail, banking, insurance, tourism and so forth.

In terms of interpretation, a total score from a company will be assessed based on the four quartiles reduced to 100 percentage points as follows: 0-25% (Very low and insignificant business response to climate change); 26-49% (Sufficient indication of movement towards achieving the indicator); 50-74% (Adequate evidence of having achieved the indicator); and 75-100% (Exceeds expectations in terms of business response to climate change).

To minimise subjective interpretation of the indicators, guidelines will be developed in terms of how individuals can interpret the indicators objectively. Validity test will be conducted by subjecting the instrument to a series of pilot tests in evaluating selected company responses to climate change and comparing results from different evaluators.

All the five sets of parameters are allocated equal weighting. This decision was reached based on the fact that the parameters are holistic rather than discrete and as such a company must address them equally.

Findings and discussion

This section looks at the overall response to the proposed scholarly framework. A detailed response on a theme-by-theme basis is considered in the next subsections. Overall, most of the comments pertained to the technical aspects of the actual measuring and scoring tools and not the range of items that were covered. The impression was that the proposed scholarly framework was a very comprehensive piece of work al-

though it will be difficult for companies to meet the requirements of this measuring framework. Two of the respondents were concerned about the use of the scoring system and more specifically asked: ‘What activities constitute exceeding expectations in terms of the indicator?’ One of the respondents had this to say regarding the possibility of assessing companies on the proposed framework: ‘Overall, it does seem a rather ambitious set of indicators in the extent of what it wants to cover if companies are to be assessed on all of them ... You may find a very low pass rate.’

The latter comment was very interesting as it confirms our initial assumptions that business in general is content with the typical minimum-standard measuring instruments for CSR (including climate change). Such minimum standards suit them and mitigate against reputational damage as every other company that puts minimum effort is considered a good corporate citizen. Other noticeable observations from the respondents requested the authors to provide an outline as to how the scholarly framework will be implemented. Questions on who will undertake the research and analysis as well as how the results will be used emerged. The issue of data availability was also raised.

The concern regarding the scholarly framework also indicated that the proliferation of CSR assessments is a problem in the sustainability field. Consequently, the proposed scholarly framework needed to make it clear that it offers something of real value to a target set of users. If this was not clarified, the instrument could run the risk of being an irritation factor for companies. There was also a danger that what gets measured was largely based on companies’ publicity work and involvement in various initiatives, rather on than real and true progress.

Policy and governance

One of the two participants who provided in-depth comments gave four comments that were specific to this category. Each of the comments was aligned to a specific item in this category. The key indicators under the thematic area of policy and governance are presented in Table 2.

Table 2. Policy and governance indicators

Parameter	Indicator
Policy and governance	Stand-alone, publicly proclaimed climate change policy in place
	Assisting government in developing national climate change policy regime
	Green procurement policy in place
	Years green procurement in place
	Publicly proclaimed commitment to being carbon neutral
	Policy on low carbon and renewable energy use
	Signing up to the Energy Efficiency Accord (EEA)
	Product related to climate change commitment (where relevant)
	Senior level climate change specialist at board level
	Policy on water usage and recycling
<i>Possible achievable score under this parameter</i>	
<i>Raw sub-total score</i>	
<i>Weighted sub-total score out of 20 percentage points</i>	

The first comment was that the indicator ‘Assisting government in developing national climate change policy’ is very vague. A question arose as to what would constitute assistance to government. Secondly, the respondent mentioned that the word ‘Green’ in the item ‘Green procurement policy in place’ should be contextualised. The respondent mentioned that there was need for clarity as to whether this relates to sourcing green products or to sourcing from green-accredited organisations. The third comment was on the item ‘Publicly proclaimed commitment to being carbon neutral’. The respondent said that for this item to be relevant, different sectors should be assessed. Lastly, the respondent commented on the item ‘Senior level climate change specialist at board level’ and said that the indicator was contradictory in terms of the level required. Another respondent also commented on ‘Publicly proclaimed commitment to being carbon neutral’. The concern was that carbon neutrality is often achieved through the process of buying carbon credits of some sort and that not all credits are properly monitored or verified. The respondent further indicated that this could call the process into question and potentially prejudice those who make the effort to be more careful and take their time to get credible standards compared to those who take the lowest cost.

Management and strategy

In this category only two comments were received. The respondent asked whether the item ‘Annualised budget line for climate change or carbon disclosure related work’ was practical. Secondly, it was implied that the item ‘Climate change or carbon disclosure committee/team in place’ was superfluous. There was also a need to clarify the role of the committee. No other comments were raised under the ‘Management and strategy’ category. Details regarding other indicators in this category are shown in Table 3.

Table 3. Management and strategy indicators

Parameter	Indicator
Management and strategy	Long-term strategic goal of significant quantified reductions of operational GHG emissions
	Short/medium-term management targets for quantified GHG operational emissions reduction over less than five years
	Target year(s) set for being carbon neutral
	Annualised budget line for climate change/carbon disclosure related work
	Climate change /carbon disclosure committee/team in place
	Effective and realistic energy intensity reduction targets set
	Green procurement policy operational
	Low carbon and renewable energy use policy operationalised
	Firm level climate change vulnerability assessment conducted (including water risk)
	Firm level climate change adaptation strategy in place (including water adaptation measures)
	Firm level climate change mitigation strategy in place
	Water usage and recycling policy operationalised
	<i>Possible achievable score under this parameter</i>
<i>Raw sub-total score</i>	
<i>Weighted sub-total score out of 20 percentage points</i>	

Disclosure

A number of comments were received regarding the disclosure thematic focus. A total of 12 comments were made on this category, of which nine came from one respondent and two from another. The first respondent posed the question on the item 'Sound methodology applied': 'Who determines what sound is?' The second question from the same respondent related to the item 'Emissions externally monitored'. The respondent asked whether such monitoring was common practice. Thirdly, it was implied that the wording in the item 'Member of the Carbon Disclosure Project (CDP)' should be changed to 'Participant of the CDP'. Then the respondent also asked whether the term 'Pioneer' in the items 'Pioneer in CDP' and 'Pioneer in CDP CLDI' are defined in the specific context. Another question was how it would be possible to achieve a score of one or three as set out in the scoring system of the framework with regard to: 'Number of years appearing in the CDP CDLI', 'Number of years participating in EEA' and 'Pioneer on the EEA'. The same participant asked two more questions on this section. She asked who determines what is 'regular enough' and how one would exceed this expectation with regard to the item 'Full disclosure on CC risk regularly communicated to shareholders'. She also asked what 'involvement' entails in the item 'Involvement with the Renewable Energy Efficiency Partnership (REEP)'. Details concerning the indicators in the disclosure theme are shown in Table 4.

Table 4. Disclosure indicators

Parameter	Indicator
Disclosure	Emissions disclosure (absolute or normalised) per Rand profit
	Scope of data disclosed (1,2 & 3)
	Sound methodology applied
	Emissions externally monitored
	Emissions externally verified
	Member of the Carbon Disclosure Project (CDP)
	Pioneer in CDP
	Pioneer in CDP CLDI
	Consistent/regular inclusion in the CDP CLDI
	Number of years participating in CDP
	Number of years appearing on the CDP CDLI
	Number of years participating in EEA
	Pioneer on the Energy Efficiency Accord (EEA)
	ISO 50001 certified (New Energy Management Standard)
	Meeting the JSE-SRI CC reporting criteria
	Disclosure on total energy consumed
	Full disclosure on CC risk regularly communicated to shareholders (to include, especially regulatory and physical risks)
	Involvement with the Renewable Energy & Energy Efficiency Partnership (REEEP)
Quantity of water used per Rand profit share	
Quantity of water reused and recycled per Rand profit share	
Ratio of reused and recycled water to raw/treated water usage	
Quantity of water discharged/lost in production per Rand profit share	
<i>Possible achievable score under this parameter</i>	
<i>Raw sub-total score</i>	
<i>Weighted sub-total score out of 20 percentage points</i>	

The other respondent made two main comments on the disclosure theme. The respondent suggested that the indicators contained in the items ‘Number of years appearing on CDP CDLI’ and ‘Number of years participating in EEA’ should be tested against the proposed requirements for the Carbon Disclosure Standards Board to ensure consistency. Furthermore, the respondent asked if the scholarly framework had been tested to see which companies qualify to participate in the Renewable Energy and Energy Efficiency Partnership (REEP) programme. This respondent added that some companies might be at a disadvantage if this item is used in the framework, as only a few companies were part of the Energy Efficiency Accord. Overall, the comments received reinforce the notion that business prefer the minimum standard measurement tools and are weary of more stringent frameworks.

Performance and reporting

Four comments were received on this category. Three were from one respondent and one from another. The first respondent questioned the value of the following two items: ‘Climate change Chair statement’ and ‘Climate change in the CEO statement’. The respondent commented that these indicators add little value since they give no guidance on what the statement should cover in relation to climate change. In addition, the respondent asked whether the concept ‘carbon intensity’ in the item ‘At least a 5% reduction in carbon intensity over the last two years’ was defined. The other observation related to how the company would demonstrate that ‘for the past two years it was in the top quartile of companies in its sub-sector when assessed on accepted carbon efficiency metrics’. The content in terms of the indicators falling under performance

Table 5. Performance and reporting

Parameter	Indicator
Performance and reporting	Climate change in Chair statement
	Climate change in CEO statement
	At least a 5% reduction in carbon intensity over the last two years
	The company is able to demonstrate that for the previous two years it was in the top quartile of companies in its sub-sector when assessed on accepted carbon efficiency metrics.
	Internal climate change specialist(s) recruited/identified
	Internal capacity for carbon reporting
	Addressing climate change /energy as integral components of CEO and other top management Key Performance Areas/Indicators (KPA/KPIs)
	Consistency in articulating climate change issues within and across reports
	Ration of projected low carbon portfolio investment (in Rands) to existing business portfolios within the company
	Internal water specialist(s) recruited/identified
	External verification of quantity of water usage
<i>Possible achievable score under this parameter</i>	
<i>Raw sub-total score</i>	
<i>Weighted sub-total score out of 20 percentage points</i>	

The other respondent also posed a question on the ‘carbon intensity’ item: ‘What about the reduction in overall absolute emissions as opposed to carbon intensity?’ The respondent suggested that it might be better to make room for the use of measurements regarding the reduction in absolute emissions.

Other cross-cutting and relevant aspects

This section focuses on issues that do not fall within the other four thematic areas considered earlier. There were two comments on this last category – one apiece from each of the respondents. The first comment was on a scoring issue. A respondent asked what percentage warrants a score of two or three, where the item indicates that the score should be determined on the percentage of coverage to the whole workforce. This question once again focuses on a scoring issue as opposed to the actual inclusion of a specific item. The second comment from the other respondent focused on the item ‘Involvement of Clean Development Mechanism project (CDM)’. It was suggested that the indicator might create the impression that CDM is the only worthwhile type of carbon credit-generating standard to be involved in. The full list of proposed indicators in this category is presented in Table 6.

Table 6. Other cross-cutting and relevant aspects

Parameter	Indicator
Other cross-cutting and relevant aspects	Internal capacity building/training on climate change Appreciation (Score to be determined on percentage coverage to the whole workforce)
	Green jobs policy/strategy in place
	Other relevant recognitions of achievements and leadership in climate change related work
	Sponsorship of climate change related education projects/programmes
	Noticeable technological innovation and advancement linked to climate change
	Involvement with Clean Development Mechanism (CDM) project
	Hands-on training and capacity building on greening supply chains, especially those falling under BEE
	<i>Possible achievable score under this parameter</i>
	<i>Raw sub-total score</i>
	<i>Weighted sub-total score out of 20 percentage points</i>

The authors found the overall comments of the respondents to be helpful with regard to future research and the further testing of the proposed scholarly framework.

Conclusion

The overall impression deduced from the respondents’ comments was that the proposed scholarly framework is a comprehensive tool that could possibly add value in the realm of measuring business response to climate change. The respondents also suggested that the scoring system needs to be refined. This is an aspect that can be clarified further with pilot testing of the scholarly framework. Furthermore, it was evident that businesses are highly sensitive to a more rigorous measuring tool. The respondents even stated that the proposed scholarly framework will result in ‘a very low pass rate’.

It also emerged that companies are sensitive due to the high proliferation of CSR measuring instruments, questionnaires and ratings. This view is also articulated in the literature as reviewed. The question that remains is why yet another framework is suggested. The answer is simply that the proposed scholarly framework has a very specific purpose: to determine genuine CSR, particularly how corporate South Africa is responding to climate change. In addition, current CSR ratings include climate change as part of the main CSR rating. Our proposition is that climate change is such a huge environmental concern that it is about time that corporate South Africa's involvement in addressing it is measured separately. Although the CDP has been moving in this direction, the major weakness has been in measuring disclosure and not performance. One could still argue that the existing measuring instruments in South Africa, like the JSE SRI and the CDP, use bare minimum requirements that will probably not trigger real change in corporate behaviour. The proposed scholarly framework can therefore become a useful tool in the hands of scholars to do further research and to advocate for more stringent legislation on these issues in order to accelerate change.

References

- Abbott, W.F. & Monsen, R. J. (1979). On the Measurement of Corporate Social Responsibility: Self-Reported Disclosures as a Method of Measuring Corporate Social Involvement. *The Academy of Management Journal*, 22(3), 501 – 515.
- Berthelot, S., Cornier, Denis & Magnan, M. (2003). Environmental Disclosure Research: Review and Synthesis. *Journal of Accounting Literature*, 22, 1 – 44.
- Burns, N. & Grove, S.J. (1993). *The practice of nursing research*. Philadelphia: Saunders.
- Carbon Disclosure Project. (2011). Carbon Disclosure Project 2011 South Africa JSE 100. [Online] Available: <http://www.cdproject.net/en-US/Respond/Pages/CDP-Investor.aspx> (Accessed: 2011-05-31)
- Carbon Disclosure Project. (2010). *Carbon Disclosure Project 2010 South Africa JSE 100*. Johannesburg: NBI & Incite Sustainability.
- (2009) Carbon Disclosure Project 2009 South Africa JSE 100. Johannesburg: NBI & Incite Sustainability.
- (2009) Carbon Disclosure Project 2009 Global 500. London: Carbon Disclosure Project.
- Chatterji, A. L., Levine D. I., & Micheal W. T. (2007). How well do Social Ratings Actually Measure Corporate Social Responsibility? *Corporate Social Responsibility Initiative*. Working Paper 33. Cambridge, MA: John F. Kennedy School of Government, Harvard University.
- Chen, C. M. & Delmas, M. (2010). *Measuring Corporate Social Performance: An Efficiency Perspective*. Production and Operations Management UCLA Institute of the Environment, University of California.

- Clarkson, M. B. E. (1995). A Stakeholder Framework for Analyzing and Evaluating Corporate Social Performance. *The Academy of Management Review* 20(1), 91 – 117.
- Collison, D. (2009). FTSE4Good: exploring its implications for corporate conduct. *Accounting, Auditing and Accountability*, 22(1), 35 – 58.
- Du Plessis, E., Greef, M. & Koen, M. P. (2004). The Psychiatric outpatient's family as a support system. *Health South Africa Gesondheid*, 9(2), 3 – 19.
- GRI (Global Reporting Initiative). (2011). Reporting Framework Overview. [Online] Available: <http://www.globalreporting.org/ReportingFramework/ReportingFrameworkOverview/> (Accessed: 2011-06-09).
- Garrod, B. & Chadwick, P. (1996). Environmental Management and Business Strategy: Towards a New Strategic Paradigm. *Futures*, 28(1), 37 – 50.
- Gray, R. (2006). Social, environmental and sustainability reporting and organisational value creation?. *Accounting, Auditing and Accountability Journal*, 19(6), 793 – 819.
- Hedberg, C. J. & Von Malmberg, F. (2003). The Global Reporting Initiative and Corporate Sustainability Reporting in Swedish Companies. *Corporate Social Responsibility and Environmental Management*, 10, 153 – 164.
- JSE (Johannesburg Stock Exchange SRI). (2010). Background and selection criteria. [Online] Available: http://www.jse.co.za/Libraries/SRI_Criteria_Documents/01_Background_and_criteria_2010.sflb.ashx (Accessed: 2011-05-09).
- Jones, M. J. (2010). Accounting for the environment: Towards a theoretical perspective for environmental accounting and reporting. *Accounting Forum*, 34, 123 – 138.
- Knox, S. & Maklan, S. (2004). Corporate Social Responsibility: Moving Beyond Investment Towards Measuring Outcomes. *European Management Journal*, 22 (5), 508 – 516.
- Marquez, A. & Fombrun, C. J. (2005). Measuring Corporate Social Responsibility. *Corporate Reputation Review*, 7(4), 304 – 308.
- Salgado, I. (2010). JSE's green index gets red light from NGO's. [Online] Available: <http://www.pretorianews.co.za/jse-s-green-index-gets-light-from-ngos-1.1004401> (Accessed: 2011-04-18).
- Turker, D. (2009). Measuring Corporate Social Responsibility: A Scale Development Study. *Journal Of Business Ethics*, 85, 411 – 427.