

Comparing Sustainability Performance Indicators from GRI Reports

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Abstract

The possibility of measuring and comparing sustainability performance is generally taken for granted in management studies and practices based on the evaluation, selection or ranking of the supposed best companies in the field. The purpose of this paper is to question this basic assumption by analyzing the comparability of sustainability performance through a systematic review of 12 mining company reports using Global Reporting Initiative (GRI) guidelines. The analysis of information based on 92 GRI indicators raises serious questions concerning the hypothesis of measurability and comparability of sustainability performance, drawing attention to the main reasons that make it very difficult if not impossible to establish a credible and justifiable classification among organizations. Several theoretical perspectives, in particular functionalist, critical and postmodernist approaches, are explored to explain the results.

Key words: sustainable development, reporting, standardization, GRI, comparability, postmodernism.

Introduction

Although formerly considered a measure reserved for a few proactive companies, the publication of corporate sustainability reports has become endemic in recent years, despite the few studies conducted on the subject to date (Reynolds and Yuthas, 2008; Moneva *et al.*, 2006, Deegan, 2002). Between 2005 and 2008, the proportion of the 250 largest corporations in the world publishing a sustainable development report rose from 52% to 79% (KPMG, 2008). The trend, prevalent in most regions of the world and in all sectors of activity, explains the need to demonstrate accountability to various stakeholders. However, the credibility of the approach to reporting is based on the initial assumption that it is possible to measure and compare sustainability performance to demonstrate true corporate commitment in this respect (Déjean *et al.*, 2004; Igalens and Gond, 2005, Hopwood, 2009). All too often, studies on sustainable development assume that the concept is relatively clear and measurable, and that corporate sustainability reporting contributes automatically to more transparency in a controversial area.

In this context, reporting in itself would appear to be an efficient means to improve accountability and comparability among companies involved in sustainable development. The growing institutionalization and standardization of corporate sustainability reporting

based on Global Reporting Initiative (GRI) guidelines has contributed to the belief that it is indeed possible to paint a clear, accurate picture of a company situation. The purpose of this paper is to analyze the comparability of sustainability performance reported by companies in the same sector of activity, in this case mining, using the same GRI guidelines. This paper does not aim to analyze the reasons underlying corporate sustainability reporting, the quality of report format or the evolution in time of performance touted by companies. Rather, the study focuses primarily on the possibility of comparing information published in reports supposed to use indicators and similar guidelines in this field.

Institutionalizing Sustainability Reporting

Exploring the comparability of sustainability performance and the possibility of establishing a classification between companies addresses several major concerns. First, questioning comparability between companies raises issues regarding the measurability and transparency of sustainability performance taken for granted in numerous studies. This assumption is generally a premise of studies attempting to establish links between performance in sustainable development and other supposedly measurable variables: financial performance, managerial leadership, integration of management systems such as ISO 14001 or ISO 9001, stakeholder trust, etc. (Ambec and Lanoie, 2008; Aragón-Correa, and Rubio-López, 2007). Secondly, the degree of comparability of sustainability performance appears to be a meta-criterion for assessing the quality, pertinence and truthfulness of the reporting process taken as a whole. Indeed, if the performances described in these reports are truly comparable, one must assume that several fundamental conditions have been met initially: use of similar criteria and indicators, clarity and exhaustiveness of information, quality of information disclosed, use of the same reporting standards, etc. Viewed from a different perspective, an analysis of the comparability of GRI performance reports in the same sector is likely to reveal challenges, problems and uncertainties that may raise questions regarding preconceived notions on the issue. Finally, and most importantly, comparability is an issue underlying stakeholder use of corporate sustainability reporting. Corporate clients and the public in general are increasingly concerned about sustainability performance and recognition of the best companies. The publication of different rankings on the question in the economic press bears witness to this need to measure, compare and rank companies in relation to this issue (Waddock, 2008; Déjean *et al.*, 2004). The rapid growth of ethical and environmental investment funds also raises the spectre of measurement and comparability of corporate sustainability reporting. Indeed, how does one make a credible selection of companies deemed the most advanced in their field without performance indicators and clear, accurate and comparable information? Public authorities are also increasingly interested in corporate sustainability reporting and comparability. In fact, the promotion of voluntary approaches and the logic of self-regulation, in particular in environmental matters (Christmann and Taylor, 2006; King et Lenox, 2000), assumes that it is possible to measure performance, ensure rigorous follow-up and differentiate between companies that meet their commitments and those that do not.

These different motivating forces justify the strengthening of comparability and accountability in sustainability performance through a reporting approach that should

reflect the true situation of a company. However, this optimistic view of reporting is at odds with three items raised in the literature: the relatively vague and elusive definition of sustainable development, the difficulty of measuring performance in this area and the uncertain quality of the information disclosed in reports.

The very broad and vague definition of sustainable development is the problem raised most frequently (Moneva *et al.*, 2006; López *et al.*, 2007). Indeed, the lack of precision regarding the meaning and practical implications of sustainable development do not favour its implementation and may result in stances more or less dissociated from reality (Devinney, 2009; Boiral, 2003). Thus, no consensus exists regarding the means to measure environmental performance, given the multiplicity of problems (greenhouse gas emissions, biodiversity, water contamination, etc.), possible measurement criteria or methods of evaluation considered (Jiang and Bansal, 2003; Hopwood, 2009). Another problem frequently raised in the literature is linked to uncertainties associated with the disclosure process itself. The quality of reports and information disclosed is relatively unequal (KPMG, 2008). Then again, contrary to financial reports in general, sustainability reports do not follow precise regulatory constraints. Consequently, they are rarely structured in the same way, given the lack of standardization in this domain. Although, at first glance, such problems and critical remarks would appear to question the possibility of credibly comparing corporate sustainability performance based on disclosure reports, the question does not seem to have been the subject of in-depth study. Paradoxically, the comparability of sustainability performance is generally taken for granted, conditional upon reports using the same reporting standards. In this context, the growing standardization of sustainable development reports and, in particular, the use of the GRI guidelines, is generally presented as a *de facto* approach to making reports more transparent, comparable and precise in the measurement of performance (Global Reporting Initiative, 2006).

Given the absence of specific empirical studies on the question, compliance with the principle of comparability may seem quite theoretical. However, with the exception of some critical research (Moneva *et al.*, 2006; Devinney, 2009), most empirical studies on sustainable development assume from the onset that performance in this domain is comparable without verification of this hypothesis. Such is the case, for example, of the many studies on the relation between performance in sustainable development and economic performance (Ambec and Lanoie, 2008; Aragón-Correa and Rubio-López, 2007). Indeed, these authors postulate that indicators of sustainable development, in particular environmental issues, may be measured and compared to calculate correlations with economic variables. Generally speaking, the comparability of sustainability performance disclosed in the reports has not been an object of the study itself; rather, it is a premise for research on the measurement of sustainable development or for criticism of the way this concept is used by companies.

Method

The research approach is based on a systematic, criterion-by-criterion analysis of sustainable development reports in which performance measurement indicators were theoretically similar. To avoid major differences in activities and sustainable

development problems resulting from different sectors, the study focuses on one sector only, mining. This study examines sustainable development reports tabled in English in 2007 by mining companies registered by the GRI and having obtained the A or A+ application levels of this guideline. The choice of 2007 was based on report availability: most were published in 2008 or early 2009. The choice was also based on the need to compare reports using the same GRI guideline. This guideline and the accompanying sector supplements are amended quite frequently. Reports analyzed were all available in English, making it easier to compare data. Finally, the choice of a high application level (A or A+) may be explained by access to reports making the most systematic and exhaustive possible use of the GRI guidelines and, in particular, sector indicators. As required at this application level, all company studies were supposed to report on all core indicators of the G3 grid (Global Reporting Initiative, 2006).

A total of 12 sustainable development reports corresponding to selection criteria were studied (See Table 1).

Table 1: Sustainable Development Reports Analyzed

Company*	Nationality	Report Title**	Year of Publication***	Number of Pages in Report****	GRI Application Level*****
Anglo American	UK	Report to Society 2007: Focusing on a sustainable future	2008	73	A+
Anglogold	South Africa	Report to Society 2007	2008	218	A+
Avon Metals	UK	“Our 20/20 Vision” Sustainability Report 2008	2008	30	A
BHP Billiton	Australia	It's our..BHP Biliton Sustainability Report Full Report 2007	2007	309	A+
Codelco	Chile	Codelco Sustainability Report 2007	2008	147	A+
Illawara Coal	Australia	Illawarra Coal, Pride, Passion, Performance Sustainability Report 2007	2007	48	A
Newmont Mining	U.S.A.	Beyond the Mine Newmont Sustainability Report 2007	2008	332	A+
Penoles Industries	Mexico	Our stakeholders: the core of our sustainable development strategy 2007 Sustainability Report	2008	120	A+
PT Kaltim Prima Coal	Indonesia	More than Mining: Sustainable Development Report 2007	2008	74	A+
Rio Tinto	UK	Rio Tinto 2007 Annual Report - Sustainable development review	2008	12	A+
Teck Cominco	Canada	Our Commitment: Teck Sustainability Report 2008	2008	54	A+

Usiminas	Brazil	Sustainability Report 2007	2008	184	A
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* The list of companies was established at the time of the study (Spring 2009). Additions or minor changes may eventually be made to this list with the updating of reports recorded by the GRI.

** Quotes in this paper originate from these reports, most of which are available in PDF format. In the case of Rio Tinto, information on the GRI indicators may be found in a separate document published on the company's website. For Avon Metals, information on GRI indicators GRI is found in a distinct document (GRI Index).

*** The reference year for all reports was 2007, except for Avon Metals (2006-2008).

**** The number of pages corresponds to numbered pages. Some reports contain unnumbered pages.

***** Based on indications published on the GRI website.

Data Analysis

The comparison between companies comprised most of the analytical work on data. The comparison was made using an Excel spreadsheet grouping together information disclosed on each CRI criterion, including the mining sector supplement of each of the 12 companies. The analysis grid was organized on the basis of classification criteria and performance indicators proposed by the GRI (See Table 2).

Table 2: Sustainable Development Indicators Analyzed

Aspects of sustainable development	GRI grid indicators*	Mining sector supplement indicators	Number of indicators analyzed
Economy	9 (EC1 to EC9)	2 (MM1 and MM2)	11
Environment	30 (EN1 to EN30)	4 (MM3 to MM6)	34
Work	14 (LA1 to LA14)	2 (MM12 and MM13)	16
Human rights	9 (HR1 to HR9)	1 (MM11)	10
Society	8 (SO1 to SO8)	4 (MM7 to MM10)	12
Product responsibility	9 (PR1 to PR9)	No sector indicator	9
Total	79	13	92

* Names and number of indicators corresponding to core (48) and additional (31) indicators of the 2006 (G3) version of the GRI (Global Reporting Initiative, 2006) grid.

** Names and number of indicators of the sector supplement corresponding to those indicated in the 2005 version of this supplement (Global Reporting Initiative, 2005).

All told, the data grid categorization grouped together 92 indicators, including 13 specific to the mining sector.

In addition to the classification and grouping together of information in the table, for each of the 92 indicators, each of the two coders had to answer three main questions in a specific column of the Excel file:

- Is information compiled on performance in the 12 reports comparable?
- For what reasons was this indicator comparable or not?
- At first glance, which companies seem to perform best in relation to this indicator?

Result Analysis

From the onset, it was surmised that the comparative analysis of performance indicators disclosed in sustainable development reports would be facilitated by many convergence factors: uniform sample, use of similarly structured reports, similar and standardized performance criteria, similar application levels (A and A+) of the GRI grid, etc. Despite these convergence factors, the comparative analysis of performance indicators was much more difficult than originally anticipated. Attempts to establish a global classification of the companies based on their performance in sustainable development substantiate the difficulties encountered. Despite the important volume of available data and a systematic analysis of each report, classification was impossible to achieve in a serious, thorough and valid manner. The causes of this unexpected development emerged progressively during the report comparison process for each of the 92 indicators analyzed. Most indicators were not comparable on an individual basis, nor were the overall situations of the companies. Reasons for this were grouped into three main problems illustrating differences between the rigorous appearance of the GRI reports and the concrete use that may be made of the GRI in terms of measurement and comparison of sustainable development performance:

- Measuring unmeasurable and unspecific issues;
- Comparing incomparable measurements;
- Interpreting incomplete and ambiguous information;

Measuring Unmeasurable and Unspecific Issues

The most obvious barrier to the comparison of sustainable development performance was the unmeasurable and unspecific nature of many GRI indicators. From the very onset, the indicators could not be clearly quantified, measured or compared. This measurement problem concerned the six main criteria groups of the GRI: economy, environment, work practices, human rights, society and product responsibility. For example, in environmental performance, the EN7 (initiatives to reduce indirect energy consumption and reductions achieved), EN14 (strategies, current actions, and future plans for managing impacts on biodiversity) and EN26 indicators (initiatives to mitigate environmental impacts of products and services and extent of impact mitigation) were hard to measure and even harder to compare. For societal performance, the same remark applies to SO1 (nature, scope and effectiveness of any programs and practices serving to assess and manage operational impacts on communities, including entering, operating, and exiting) and SO4 indicators (action taken in response to incidents of corruption). In most cases, the interest and pertinence of these indicators should not be questioned. Indeed, sustainable development is a multidimensional, pluri-disciplinary concept. If measuring the concept were possible, measurements could not be restricted to a few quantitative variables. However, the qualitative, unmeasurable and general nature of many indicators made comparison between companies difficult, if not unfeasible. Likewise, the often all-inclusive formulation of the indicators affords companies a great deal of leeway in their interpretation and responses. In this context, reports were often limited to general statements highlighting corporate support of virtuous principles rather than clearly identifiable, measurable and comparable actions. For example, in most cases, the HR5 indicator (operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to the

support of these rights) gave rise to rather evasive discourse. The following excerpts from reports analyzed concerning HR5 indicator are representative of the type of information provided:

- “We fully recognize the right of our employees to freely associate and join trade unions” (BHP Billiton, p. 275);
- “Freedom of association, in particular, is recognized as a fundamental right within the group, and collective bargaining is encouraged in those countries where the relevant structures exist” (Anglogold, p. 94);

Comparing Incomparable Measurements

Despite the “background noise” arising primarily from the general and unmeasurable information disclosed, a great deal of numbered data was also presented. In theory, most GRI indicators are supposed to result in numbered information. Generally speaking, it is clear that designers of the G3 guideline were seeking to define measurable criteria that might eventually invite comparison in spite of the global and elusive nature of sustainability. This desire for measurement possibly explains why seemingly less measurable dimensions of sustainable development such as human rights, product responsibility and work practices are the subject of many quantitative indicators. On the other hand, the economic dimension which seems at first glance relatively measurable is presented using more qualitative criteria. Ironically, however, quantitative indicators are not necessarily the most comparable. One of the reasons explaining this paradoxical situation is related to different measurement scales was totally unanticipated, given the GRI goal of standardization and the many instructions on how to measure and present performance indicators. Yet, the measurement scales used in the reports are very mixed. For example, monetary values are presented in different currencies (Mexican pesos for Penoles Industries, pound sterling for Avon Metals, etc.). Units of mass and volume to measure indicators such as EN1 (materials used by weight or volume) are also variable (kg, metric tons, kL, ML, m³, billions of litres, thousands of kL, mega-litres, thousands of cubic metres, etc.). The following excerpts concerning the EN8 indicator (total water withdrawal by source) illustrate the problem:

“Total Water Withdrawn Thousands kL 545,295.2” (Newmont, p. 206)

“Total high-quality water use amounted to 161,670 mega-litres (ML)” (BHP Billiton, p. 36);

“Anglo American Group operations consumed a total of 251 million m³ of water in 2007” (Anglo American, p. 48);

“Fresh water usage: total of 60 231 616 m³” (AngloGold, p. 175);

“We withdrew 785 billion litres of water” (Rio Tinto, Website).

Converting these measurement units to standardize the measurement of a particular indicator is obviously possible. However, in practice, this approach is rather unrealistic. The sheer amount of data presented using mixed measurement scales in these very voluminous reports would make the comparison tedious. And even when the same unit of measure is used, some information is presented in absolute values, while other information is presented in percentages. Such was the case with materials used from recycled matter (EN2). More importantly, the indicators are used to measure very different activities. For example, the EC6 indicator (policy, practices and proportion of

spending on locally-based suppliers at significant locations of operation) may be measured in percentage of goods and services purchased locally (Newmont), in volume of local purchases in billions of dollars for an affiliate (Anglo American), in total purchase volume and number of suppliers worldwide (Rio Tinto), etc.

Interpreting Incomplete and Ambiguous Information

An evaluation and comparison of sustainability performance indicators assumes that information is available, clear, pertinent and interpretable. In practice, these conditions are rarely met satisfactorily for several reasons: lack of data on many performance indicators, disclosure of ambiguous or incomplete information and difficulty giving meaning to, or interpreting, certain indicators. Despite the volume of information found in the reports, various examples presented, pertinence of many sustainable development initiatives highlighted by the companies, etc., an in-depth analysis of the documents revealed that information disclosed was often incomplete or absent. From the start, this situation limits any possibility of comparison. For example, only six of the 12 companies studied (Newmont, BHP Billiton, Avon metals, Illawarra Coal, PT Kaltim Prima Coal, Usinas) offered information on the EN24 criterion (weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally). Companies that did provide information limited their answers to stating that basically, they did not contribute to the transportation of hazardous waste. Likewise, the MM9 indicator (describe resettlement policies and activities) was considered by only four companies (Teck Cominco, Illawara Coal, Penoles Industries and PT Kaltim Prima Coal). Responses to this criterion were also rather brief. In some cases, the companies explicitly acknowledged that the data was not available, but that it would become available in the future. For example, such is the case of Newmont concerning the EN30 criterion (total environmental protection expenditures and investments by type): “Currently we do not have a system in place to collect this information. We will evaluate our capacity to capture this in our 2008 report.” (p. 316). However, more often than not, the reports do not explain why measurements for certain GRI indicators were omitted. These omissions are clearly in contradiction with application levels A and A+ of the GRI, where it is assumed that all core indicators are addressed or, where applicable, an explanation is provided as to why the company failed to address the issue (Global Reporting Initiative, 2006a, b).

Conclusion

Contrary to the initial expectations and basic assumptions associated with most research on the subject, the results clearly show that it is not possible to credibly compare and classify company reports in the mining sector on the basis of their GRI sustainable development reports. A systematic analysis of indicators highlighted three main reasons: the unmeasurable nature of many aspects of sustainable development; the incomparability of data on indicators that are supposedly measurable; incomplete and ambiguous information. These different reasons are not mutually exclusive and, when combined, seem to have a multiplying effect. Indeed, information presented for the same indicator was often hard to measure, evaluated rather loosely by the companies, presented vaguely and based on optimistic, yet unclear discourse. Such weaknesses are not glaringly evident

at first glance, because the reports are generally rather convincing, well presented and well-structured to demonstrate the seriousness of corporate commitment to sustainable development. Moreover, the criterion-by-criterion comparison undertaken in this study is very unusual and perhaps has never before been performed systematically. Generally, reports are read and analyzed on an individual basis and not transversally, analytically and comparatively, so that many of the inconsistencies highlighted in this study are not necessarily apparent.

The main contribution of this paper is to deconstruct the hypothesis of measurability, comparability and transparency of sustainability performance based on a systematic analysis of theoretically comparable company reports. The results of the study shed new light on the very loose manner in which sustainable development may be interpreted and measured by companies, despite recourse to an identical and recognized standard. These results contribute to revisiting the meaning of sustainable development and questioning several basic premises underlying dominant discourse and research on the question. Despite the many questions and issues raised in this study, the creation of the GRI has clearly served to address issues central to the measurement of sustainable development. The complexity of these issues is overshadowed by the predominance of rather simplistic discourses assuming that sustainability performance is easily measurable. Paradoxically, it would have been difficult to complete this study on the comparability of sustainability performance without the pre-existence of these discourses and the ensuing GRI framework that contributed to structure information in this field. Not only this structuring appears necessary for the readability of sustainable development reports by stakeholders, it is also necessary for the companies. Through the application of GRI guidelines, companies can adopt a more structured approach to collecting and reporting information on questions that are not necessarily core management concerns. Although it is difficult to assess the benefits of this structuring approach on the internalization of different aspects of sustainable development, they could represent one of the main indirect contributions of the GRI and a promising avenue of research to explore.

References

- Ambec, S. and P. Lanoie: 2008, 'Does it Pay to be Green? A Systematic Overview', *Academy of Management Perspectives* **22**(4), 45-62.
- Aragón-Correa, J. A. and E. Rubio-López: 2007, 'Proactive Corporate Environmental Strategies: Myths and Misunderstandings', *Long Range Planning* **40**(3), 357-381.
- Boiral, O.: 2003, 'The Certification of Corporate Conduct: Issues and Prospects', *International Labour Review* **142**(3), 317-340.
- Christmann, P. and G. Taylor: 2006, 'Firm Self-Regulation through International Certifiable Standards: Determinants of Symbolic Versus Substantive Implementation', *Journal of International Business Studies* **37**, 863-878.
- Clarkson, P. M., Y. Li, G. Richardson and F. Vasvari: 2008, 'Revisiting the Relation between Environmental Performance and Environmental Disclosure: An Empirical Analysis', *Accounting, Organisations, and Society* **33**(4/5), 303-327.
- Cooper, R. and G. Burell: 1988, 'Modernism, Postmodernism and Organizational Analysis: An Introduction', *Organization Studies* **9**(1), 91-112.

- Dando, N. and T. Swift: 2003, 'Transparency and Assurance: Minding the Credibility Gap', *Journal of Business Ethics* **44**(2/3), 195-200.
- Davis-Walling, P. and S. A. Batterman: 1997, 'Environmental Reporting by the Fortune 50 Firms', *Environmental Management* **21**(6), 865-875.
- Deegan, C., B. J. Cooper and M. Shelly: 2006, 'An Investigation of TBL Report Assurance Statements: UK and European Evidence', *Managerial Auditing Journal* **21**(4), 329-371.
- Deegan, C.: 2002, 'The Legitimizing Effect of Social and Environmental Disclosures: A Theoretical Foundation', *Accounting, Auditing & Accountability Journal* **15**(3), 282-311.
- Déjean, F., J.-P. Gond and B. Leca: 2004, 'Measuring the Unmeasured: An Institutional Entrepreneur Strategy in an Emerging Industry', *Human Relations* **57**(6), 741-764.
- Devinney, T. M.: 2009, 'Is the Socially Responsible Corporation a Myth? The Good, the Bad, and the Ugly of Corporate Social Responsibility', *Academy of Management Perspectives* **23**(2), 44-56.
- Global Reporting Initiative (GRI): 2006, *Sustainability Reporting Guidelines*, (GRI, Amsterdam).
- Hopwood, A. G.: 2009, "Accounting and the environment". *Accounting, Organizations and Society*, **34**, 433-439
- Igalens, J. and J.-P. Gond: 2005, 'Measuring Corporate Social Performance in France: A Critical and Empirical Analysis of ARESE Data', *Journal of Business Ethics* **56**(2), 131-148.
- Jiang, R. J. and P. Bansal: 2003, 'Seeing the Need for ISO 14001', *Journal of Management Studies* **40**(4), 1047-1067.
- Keeble, J. J., S. Topicol and S. Berkeley: 2002, 'Using Indicators to Measure Sustainability Performance at a Corporate and Project Level', *Journal of Business Ethics* **44**(2), 149-158.
- King, A. A. and M. J. Lenox: 2000, 'Industry Self-Regulation without Sanctions: The Chemical Industry's Responsible Care Program', *Academy of Management Journal* **43**(4), 698-716.
- Korhonen, J.: 2003, 'Should We Measure Corporate Social Responsibility?', *Corporate Social Responsibility and Environmental Management* **10**(1), 25-39.
- KPMG: 2008, *International Survey of Corporate Responsibility Reporting 2008*, (KPMG Internationa, Zurich).
- Krajnc, D. and P. Glavic: 2005, 'How to Compare Companies on Relevant Dimensions of Sustainability', *Ecological Economics* **55**(4), 551-563.
- Laufer, W. S.: 2003, 'Social Accountability and Corporate Greenwashing', *Journal of Business Ethics* **43**(3), 253-261.
- Livesey, S. M. and K. Kearins: 2002, 'Transparent and Caring Corporations? A Study of Sustainability Reports by The Body Shop and Royal Dutch/Shell', *Organization & Environment* **15**(3), 233-258.
- Lober, D.: 1996, 'Evaluating the Environmental Performance of Corporations', *Journal of Managerial Issues* **8**(2), 184-205.

- KPMG: 2008, *International Survey of Corporate Responsibility Reporting 2008*, (KPMG Internationa, Zurich).
- López, M. V., A. Garcia and L. Rodriguez: 2007, 'Sustainable Development and Corporate Performance: A Study Based on the Dow Jones Sustainability Index', *Journal of Business Ethics* **75**(3), 285-300.
- Moneva, J. M., P. Archel and C. Correa: 2006, 'GRI and the Camouflaging of Corporate Unsustainability', *Accounting Forum* **30**(2), 121-137.
- Reynolds, M. A. and K. Yuthas: 2008, 'Moral Discourse and Corporate Social Responsibility Reporting', *Journal of Business Ethics* **78**(1/2), 47-64.
- Waddock, S.: 2008, 'Building a New Institutional Infrastructure for Corporate Responsibility', *Academy of Management Perspectives* **22**(3), 87-108.