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EDITORIAL

The final issue of the *APCEA Journal* for 2008 presents two *feature articles*, both related to the GRI. The *first feature article* is a study of Indonesian stakeholders viewpoints on environmental reporting by Djoko Suhardjanto, Greg Tower and Alistair Brown. Based on an Indonesian Environmental Reporting Index the study finds economically focused disclosures to dominate social items. In the second feature article Asit Bhattacharyya examines adherence to the GRI Guidelines by a set of Indian companies. Poor quantity and quality of disclosures is discovered.

We then follow our regular **Environment Extra!** with recent **Calls for Papers**.

Instructions for contributors

Articles should be submitted in a word document, *Times New Roman*, 12 point, single spaced, two columns, attached to an email. References should be in the UniSA Harvard author-date referencing style, available from the following link:

http://www.unisanet.unisa.edu.au/learningconnection/student/learningAdvisors/documents/harvard-referencing.pdf

As a guide to authors articles should have no more than 6,000 words. However, the submission of short articles is particularly welcomed. Feature articles are independently reviewed by members of the Editorial Board in accordance with the following requirements for classification as a C1 journal article in Australia: 'For the purposes of the HERDC, an acceptable peer review process is one that involves an assessment or review of the research publication in its entirety before publication by independent, qualified experts. Independent in this context means independent of the author.'

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INDONESIAN STAKEHOLDERS' PERCEPTIONS ON ENVIRONMENTAL INFORMATION

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Abstract

This study analyses Indonesian stakeholders' viewpoints on environmental reporting items using the well known Global Reporting Initiative template. Respondents' ratings showed high average scores of 5.46/7 with all items statistically far above the neutral position. These scores indicate that there is clear expectation of stakeholders for Indonesian companies to disclose all of these items. The evidence reveals that stakeholders weigh economically-focused topics higher than items relating to broader social issues. The weighted Indonesian Environmental Reporting Index (IER_{ST}) is developed based on the insights of survey respondents which better reflect the importance of key stakeholders' demands for corporate environmental reporting in Indonesia.

Key words

Environmental reporting, stakeholder theory, Indonesia

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Introduction

This paper is an empirical study of the Indonesian stakeholder viewpoints about the Global Reporting Initiative's (GRI's) environmental reporting items. While prior research on stakeholders' viewpoints of these items has been conducted in an Indonesian context (Cahaya, Porter and Brown, 2006), limited research has been undertaken on the key stakeholders' views on environmental issues. This is surprising given the large environmental issues facing Indonesia (Walhi, 2007; Greenpeace, 2006).

Despite Indonesia's environmental problems, there are no specific mandatory reporting guidelines for Indonesian companies on generating environmental information for their stakeholders. The *Indonesian Accountant Association* (Ikatan Akuntan Indonesia), which governs the accounting system in Indonesia, adopts International Financial Reporting Standards (IFRS) as the base for national standards (Pernyataan Standar Akuntansi Keuangan, PSAK) (Saudagaran and Diga, 1997). However, none of the IFRS or PSAK require substantial disclosure of environmental data (see Porter, Brown, Purushothaman, and Scharl, 2006, for an environmental accounting critique of IFRS).

Accordingly, this paper considers key environmental reporting issues, as explicated by the GRI (2002), from the viewpoint of Indonesian stakeholders. The GRI is globally considered a sophisticated environmental reporting guideline for entities and their stakeholders in articulating and understanding the contribution of companies to sustainable development (GRI, 2002). The GRI environmental items are often referred to as Environmental Performance Indicators (EnPIs). This template is used in lieu of the more recent GRI (2006) document for several reasons: it is better known but similar to the 2006 variant - the GRI (2006) version has 30 environmental items that address all the same key issues as its earlier 2002

counterpart. Moreover, the GRI (2002) benchmark list better fits with the evidence phase time period. Overall, the GRI (2002) EnPIs provide an extensive list of 35 environmental reporting items and thus a useful context for assessing the key environmental issues rated by Indonesian stakeholders.

This paper is structured as follows. The following section examines stakeholder theory;. It considers the role of stakeholders from both ethical and financial viewpoints and their influence in the affairs of Indonesian society. The next section describes the research methods used. The empirical results of the study are then followed by implications and conclusions.

Literature Review

Indonesian respondents' perceptions are gathered from a face-to-face survey incorporating both restricted (narrow) and unrestricted (broader) stakeholder groups. The restricted and unrestricted variants of stakeholder theory are explicated in depth. As detailed below, this paper offers unique insights of actual demand by a broad and eclectic group of stakeholders encompassing both financial/economic and broader societal viewpoints. Herbohn (2005) argues the importance of applying stakeholder theory as a lens to better understand the dynamic interaction of stakeholders and managers and the use of accounting as a basis for dialogue and negotiation.

There are arguably two main branches of stakeholder classification: strategic management and moral-based (Harrison and Freeman, 1999; Frooman, 1999). The focus of the former branch is on managing the 'financial' stakeholders of the company for the benefit of the company's agenda and, thus, reflects an economic perspective where strategic management of important stakeholders is given primacy. The focus of the latter branch emphasises the interests of all stakeholders in order to fulfill the broader perspective of satisfying as many stakeholders as possible, regardless of the strength of their economic relationship with the company (Frooman, 1999).

From a strategic management perspective, there are two very different stakeholder groups that can, in varying degrees, influence or affect the existence of the company (Clarkson, 1995; Mellahi and Wood, 2003). They are primary and secondary stakeholder groups. A primary stakeholder group is "one without whose continuing participation the corporation cannot survive as a going concern" (Clarkson, 1995, p. 106). Shareholders and creditors (debt holders) are examples in the primary stakeholder group. Between the company and its primary stakeholder group there is a very high level of interdependence.

The primary stakeholders tend to be powerful 'financial' stakeholders (Eesley and Lenox, 2006). A company can suffer or collapse as a going concern without sufficient and satisfactory relationships with these groups; thus, there is a constant need to monitor and manage a restricted and primary stakeholder groups to further the interests of the company (Clarkson, 1995; Mellahi and Wood, 2003). Business people and regulators are considered to have such prime direct roles, whereas, secondary stakeholder groups are defined as "those who influence or affect, or are influenced or affected by, the corporation, but they are not engaged in transactions with the corporation and are not essential for its survival" (Clarkson, 1995, p. 107). They have little or no direct power upon the corporation. Unlike the primary stakeholder groups, a company does not directly depend upon secondary stakeholder groups for its ongoing survival. Non-financial groups such as press, academics and environmentalists are commonly classified as secondary stakeholders (Eesley and Lenox, 2006). This unrestricted stakeholder approach proposes that the company needs to consider the interests of all stakeholders affected by the firm including both primary and secondary stakeholders (Mellahi and Wood, 2003).

In contrast, the moral-based (broader focus) stakeholder group posits that companies have moral commitment to advance stakeholder interests (Harrison and Freeman, 1999). Werhane and Freeman (1997, p. 53) define the moral view as "a mental and emotional standpoint from which all persons are seen as having a special dignity or worth, from which the Golden Rule gets its force…". This viewpoint envelops both the mental and emotional perspectives of individuals or institutions. Herbohn (2005) cites the example of moving beyond the economic rationalist reformation when looking at full cost environmental accounting in the Australian forest sector.

Based on Werhane and Freeman's moral perspective, Brown, Tower and Taplin (2004) develop an empirical reporting classification model in the context of developing countries, where primary 'financial' stakeholders (Ullmann, 1985; Mellahi and Wood, 2003) are contained within a Western-narrow model and secondary 'non-financial' stakeholders fall under either a Western-broad or Traditional reporting model (Brown *et al.*, 2004). This paper considers the viewpoints of business people (investors, lenders, management and directors) that represent the interest-based and Western-narrow stakeholder viewpoint; regulators that represent the rights-based and Western-broad stakeholder viewpoint; and academics that represent the virtues-based and Western-broad stakeholder viewpoint.

The purpose of this paper is to evolve a unique Indonesian Environmental Reporting Index (IER_{ST}) from the viewpoint of survey respondents. The Indonesian respondents to a face-to-face survey comprise restricted (narrow) and unrestricted (broader) stakeholder groups. Their perceptions are utilized to create the IER_{ST} index which better reflects the importance of the survey respondents' demand for corporate environmental reporting in Indonesia.

The evolution of the initial IER uses the GRI (2002) EnPIs as a template. Benchmarking of the Guidelines has clear advantages. For example, the GRI is widely considered the most sophisticated environmental reporting guideline and it is easier for preparers to generate environmental information because the GRI EnPIs Guidelines provide applicable indicators that are comparable with other firms (Dixon, Mousa and Woodhead, 2005). This is in line with the objective of the Guidelines, which is to help reporting companies and their stakeholders in articulating and understanding the contribution of companies to sustainable development (GRI, 2002). The GRI is also supposedly designed to be applicable to all sizes and types of companies in any location (GRI, 2002). Here analysis is made of the extent the GRI EnPIs Guidelines are appropriate in an Indonesian context.

Insights from Indonesian stakeholders, including narrow and broader groups, will enable differential weighting of GRI to include unique Indonesian insights. Many past studies (such as Jenkins and Yakovleva, 2006; Hedberg and Malmborg, 2003) have used the GRI as the benchmark for analysis although most past studies have weighted the indicators equally — without due consideration of the appropriateness of such an approach.

The GRI provides a generic list that, theoretically, could apply to all countries. However, it is argued that a country-specific index is better in that it could take into account specific differences that may result in terms of unique country business practices, culture, laws, funding sources and national expectations (Ahmad and Sulaiman, 2004; Buhr and Freedman, 2001; Adhikari and Tondkar, 1992). It is posited that a focused country-specific index is especially important for a developing country such as Indonesia.

Research Approach

To obtain Indonesian insights on environmental items, the importance of the GRI is directly rated by key Indonesian stakeholders (IER_{ST}). A direct face-to-face survey conducted in Indonesia in 2005 with

69 Indonesian stakeholders resulted in the production of a rich and valid data set.

Respondents were asked to evaluate the relevance of all the 35 GRI EnPIs items by providing a rating of the importance of each of the items on a 1-7 Likert-scale. A score of (1) reflects the most unfavorable attitude- very strong disagreement with the importance of the individual item, whilst a score of (7) points out the most favorable ranking- very strong agreement. Such scaling helps "to compare one person's score with a distribution of scores from a well-defined sample group" (Cooper and Schindler, 2003: 253).

These important stakeholders are selected from a diverse sample of Indonesian professional backgrounds in order to obtain heterogenic viewpoints. This generates richer insights into the IER items. With the aim of achieving widely acceptable results, face to face survey components are not solely directed to any specific user groups (Marston and Shrives, 1991; Cooke, 1989). Therefore, diversity of outcomes rather than less insightful homogeneity can be achieved (Marginson, 2004). The purpose of this evidentiary phase is to achieve valid insights of Indonesian stakeholders' perspective.

The survey evidence is derived from 69 different Indonesian stakeholders; arguably each has expertise or at least a good level of knowledge of the importance of relevant factors. The respondents are classified into two groups.

The narrow 'financial' stakeholder category consists of businesspeople and regulators. A diverse group of businesspeople are selected from directors, managers, and owners of national and local firms, from large to medium sized firms. They are from a variety of financial, services and manufacturing industries in Indonesia. Businesspeople are included in the sample because they are involved in planning and preparing company environmental reporting (see Herbohn, 2005). Regulators are selected because they traditionally focus on financial aspects of financial markets and play a key authoritative role in the regulation of environmental data. Regulators are chosen from the authorized Indonesian bodies (which monitor and control the environment) for example from the *Environmental Impact Management Agency* (BAPEDAL, Badan Pengendali Dampak Lingkungan), and *Regional Development Planning Board* (BAPPEDA, Badan Perencanaan dan Pembangunan Daerah).

In the broader stakeholder category, environmentalists are included from various Non Governmental Organizations (NGOs) such as *Indonesia Forum for the Environment* (Wahana Lingkungan Hidup Indonesia, WALHI) and *Yayasan Lingkungan Hidup Indonesia* (YLHI). These are peak environmental bodies in Indonesia. Since senior management is trained mainly at education centers such as university and especially from business schools, academics play an important role in the success of Indonesian firms. Academics are selected from representative Indonesian business schools in areas such as management, accounting, finance and also from business education programs. Overall, obtaining a heterogeneous and extensive range of stakeholders is important to enrich the data set and increase the likely applicability of the IER to the Indonesian context. The sample set obtained is well balanced between narrow (48%) and broad (52%) stakeholder groups.

Evidence is obtained in face-to-face meetings held in Indonesia over several months in 2005. Each meeting started with a predetermined list of questions which were based on the 35 GRI (2002) EnPIs items. Stakeholders were allowed to explain their views and importance ratings of all items. They were initially given a written list of the EnPI items and verbally walked through their rating of each. This approach highlights areas of specific interest, as well as enables responses to be questioned in greater depth, and in particular to bring out and resolve apparent contradictions (Bryman and Bell, 2003; Horton, Macve and Struyven, 2004; McNamara, 2006). This technique enriches and offers a better understanding of the

reasoning behind the given scores (McNamara, 2006). This series of procedures better ensures that the stakeholders are comfortable in stating their opinions (Cooper and Schindler, 2003) about the importance of various facets of environmental reporting in Indonesia. A more relevant and reliable database is thus obtained.

Results

There are four key groups of career classifications in the sample - businesspeople (41%), environmentalists (25%), regulators (7%) and academics (27%). The average age of the survey respondents was 42 years (with the oldest 56 years and youngest 24 years). Distribution of age indicated that 11 respondents (16%) were less than 35 years old, 8 people (12%) were fifty years or older, and the remaining 50 stakeholders (73%) had an age between 35 and 50 years; the median figure was 42 years old.

Thirty eight percent of respondents had international experiences with the remaining having only domestic experience. The classification of 'international focus' is measured by whether the respondent has had experience in overseas business and/or universities. It was posited that respondents with an international focus had a broader environmental perspective.

As expected, the sample had a gender imbalance. There were 61 males (88%) and 8 females (12%). This is consistent with Indonesian business work practices for white collar workers (Zein, 2005). By nature, the structure of management or strategic positions in Indonesian business institutions is dominated by males with only 1% of total numbers holding a position as a decision maker in Indonesia being female (Kompas, 2003). Consequently, it is difficult to obtain a greater balance in gender representation. There is also an urban/rural dichotomy, with over 75% of the respondents being urban dwellers. This is somewhat inconsistent with living patterns in Indonesia in that more than 55% of the population lives in rural areas (Baird and Versegi, 2005). However, the key point is that the vast majority of businesses in Indonesia have an urban focus. Thus, the composition of respondents is a reflection of the real Indonesian business orientation. Overall, the structure of respondents represented a broad cross section of Indonesian stakeholders with a business orientation. This breadth of data provided a better base from which to generalize to the Indonesian stakeholder population.

This paper compares and contrasts both restricted and unrestricted variants of stakeholder theory in the evolution of the IER_{ST} index. The IER_{SN} and IER_{SB} indices are weighted equally and then averaged to create the IER_{ST} which represents the perceptions of both the narrow and broader survey respondent groups in Indonesia.

Survey results from the restricted stakeholder groups including businesspeople and regulators are presented in Table 1 (middle column); respondents give all 35 GRI items high ratings (mean = 5.02 with 4.00 = neutral position). The IER_{SN} column shows a homogeneous index spreading from the highest rating (5.55) to the lowest score (4.55), yet the top eight items are all economically-oriented with direct financial implications. Whereas, broader groups clearly demand more holistic environmental economic data with higher ratings (mean = 5.85). Their range is wider with the highest score of 6.47 and the lowest of 5.19.

Table 1 reveals the range of scores spread from a maximum point of 6.03 (*Hazardous Wastes*) to a minimum of 4.96 (*Other Indirect Energy*) with an overall mean of 5.46. The spread value of 1.07 highlights that there is no extreme gap between the highest and the lowest score. Given these uniformly high scores, the survey respondents 'agree' or 'strongly agree' that all of the GRI EnPI items are expected to be disclosed by Indonesian companies.

The far right column of Table 1 shows the 35 survey weighted IER items based on the perceived importance by Indonesian survey respondents. The higher the score given by the interviewee, the greater is accorded the importance of disclosing this item. The

Table 1: Aggregate Rating of Importance on environmental Items (IER_{ST}): Evidence Derived from Indonesian Survey Respondents

EnPI#	IER Items	IER_{SN}	IER_{SB}	IER_{ST}	IER_{ST} Index
EN31	Hazardous Waste	5.55	6.47	6.03	1.10
EN20	Water Sources and Habitat	5.24	6.33	5.81	1.06
EN13	Spills of Chemicals	5.27	6.25	5.78	1.06
EN1	Materials by Type	5.48	5.97	5.74	1.05
EN13	Business Units Impact on Protected Areas	5.21	6.17	5.71	1.05
EN14	Impact of Products	5.24	6.08	5.68	1.04
EN25	Operations in Protected Areas	5.15	6.08	5.64	1.03
EN11	Waste by Type	5.30	5.92	5.62	1.03
EN35	Environmental Expense	5.52	5.72	5.62	1.03
EN17	Renewable Initiatives	5.39	5.78	5.59	1.02
EN27	Ecosystem Protection Programs	5.00	6.06	5.55	1.02
EN5	Volume of Water Use	5.00	6.03	5.54	1.01
EN18	Energy Consumption	5.33	5.67	5.51	1.01
EN21	Withdrawals of Ground Water	5.00	5.97	5.51	1.01
EN9	Emissions of Ozone-Depleting Substances	5.03	5.94	5.51	1.01
EN16	Incidents and Fines	5.24	5.75	5.51	1.01
EN15	Recycling Materials	5.03	5.89	5.48	1.00
EN28	Affected Red List Species	4.76	6.11	5.46	1.00
EN10	Other Air Emissions	4.94	5.89	5.43	1.00
EN32	Water Discharge Effect on Ecosystem	4.97	5.83	5.42	0.99
EN3	Direct Energy	5.00	5.75	5.39	0.99
EN22	Recycling Water	4.70	6.00	5.38	0.98
EN23	Land for Extraction	4.91	5.81	5.38	0.98
EN24	Impermeable Surface	4.91	5.81	5.38	0.98
EN8	Greenhouse Gas Emissions (GGEs)	4.67	6.03	5.38	0.98
EN2	Material Wastes	5.42	5.31	5.36	0.98
EN7	Impact on Biodiversity	4.76	5.86	5.33	0.98
EN4	Indirect Energy	5.00	5.58	5.30	0.97
EN12	Discharges Water	4.97	5.61	5.30	0.97
EN26	Habitat Changes	4.55	5.83	5.22	0.96
EN34	Impact of Transportation	4.70	5.64	5.19	0.95
EN33	Performance of Supplier	4.67	5.53	5.12	0.94
EN6	Land Information	4.61	5.56	5.10	0.93
EN30	Other Indirect GGEs	4.64	5.47	5.07	0.93
EN19	Other Indirect Energy	4.70	5.19	4.96	0.91
Mean (standard deviation)		5.02 (0.29)	5.85 (0.27)	5.46 (0.23)	1.00 (0.23)
Mean Economic (EV) Items (standard deviation)		5.19 (0.24)	5.86 (0.27)	5.54 (0.20)	1.02 (0.20)
Mean Broader (BV) Items (standard deviation)		4.83 (0.21)	5.85 (0.29)	5.36 (0.23)	0.98 (0.23)

Legend: IER_{SN} are the ratings from the narrow stakeholder groups (businesspeople and regulators). IER_{SB} are the ratings from the broader stakeholder groups (environmentalists and academics). IER_{ST} is the overall average of all stakeholders. The IER_{ST} index in the far right column shows the weighting on environmental items in cascading order from more to less important. For example, the *Hazardous Waste* score (originally achieved 6.03) is divided by the overall mean (5.46) resulting in a weighting value of 1.10.

relative important of an item reflects the survey groups' demand for the item. For example, the importance of *Hazardousm Waste* is 1.10 times more higher rated than the average (1.00).

Whilst both groups have positions, far higher than neutral, seeking environmental data, independent sample t-tests indicate that there is a different view about IER between restricted (narrow) financial and broader stakeholder groups at the 1% significance level (t = - 4.622, p-value = 0.000). This evidence highlights that the broader stakeholder group (mean = 5.85) has statistically significantly higher demand for environmental economic information than the more business-focused group (mean = 5.02). Table 1 reveals that except for 'hazardous waste', the top ranked IER_{SB} items differ from those highly ranked by IER_{SN}. For instance, the narrow stakeholders greatly valued information on 'material waste' whereas the broader stakeholders far preferred data on items such as 'impact on biodiversity'.

The statistical results of overall stakeholders' perspective of the importance of environmental items, whether they are economic (financially-oriented) or broader (socially-oriented), reveal that stakeholders weigh economic items higher (mean = 5.54) than broader items (mean = 5.36). Independent sample t-tests show that there is a significant mean difference between economic items and broader items (t = 2.363 and p-value = 0.024). This finding highlights heightened expectation for higher disclosure of economic items in companies' annual reports. The above findings give support to the narrower restricted economic variant of stakeholder theory.

Consistent with the primary stakeholder theory (Ullmann, 1985), narrow stakeholders weigh economic items higher than broader items. Independent sample t-tests show that there is significant difference of means between economic items and broader items at the 1% level of significance (t = 4.571 and p-value = 0.000). This empirical finding is consistent with the position advocated by Brown, Tower and Taplin (2004). Narrow financial stakeholder groups place more weight on economic items than broader items. Economic items are more highly rated (5.19) than broader items (4.83).

The broader concept of stakeholder theory (Herbohn, 2005; BTT, 2004) holds that not only financial aspects but also other aspects are critically important for the success of a firm. Independent sample t-tests reveal an insignificant difference between the means for economic items and broader items (t = 0.066 and p-value = 0.948). This evidence highlights that broader groups weight equally economic items (mean = 5.86) as well as environmental economic items (mean 5.85). They uniformly rate both sets of information disclosures as important.

Further regression analysis finds that *Stakeholder Group* is a significant predictor for environmental disclosure ratings with narrow stakeholders having fundamentally different views from those of broader stakeholders, whereas, the other categories, of education, age, gender, international focus and location of respondents, have a statistically insignificant relationship with the ratings. Regardless of the age, gender, educational level or international focus of the stakeholder, perceptions of the importance of the GRI (2002) list of items are consistent. Consequently, the results show overall a uniformity of views across respondent characteristics. This uniformity further strengthens the use of stakeholder weighting to evolve the IER_{ST}.

Implications and Conclusions

The IER_{ST} contains powerful evidentiary data from a survey of senior experts, with 33 narrow financial stakeholders and 36 broader stakeholders. There are significantly different environmental views between narrow financial based and broader stakeholder groups. Narrow groups focus more highly on economic items in comparison with broader items as suggeseted by Ullmann (1995). In contrast, Indonesian broader stakeholders place equal weight on

both economic and broader items (consistent with Brown *et al's* 2004 theory variant). Overall, Indonesian stakeholders have a high expectation that 35 items are disclosed in annual reports (all items are far higher than the neutral position) even though economic data are more highly weighted than broader disclosures.

Evidence in this research is consistent with the themes of previous studies such as Herbohn (2005). She uses a holistic framework of broader stakeholder theory to examine a full cost environmental reporting system in Australia. Herbohn (2005) surveys key *economic valuation* stakeholders (narrow financial based), including managers and government administration, and *environmental economic valuation groups* (broader stakeholder groups) such as conservationists. Her study found that full cost environment reporting was supported by broader groups however the reporting system was intended for the narrow group as part of a strategy to manage the powerful stakeholders. The results fit with holistic stakeholder theory.

The 35 IER indicators are 'expected' disclosures in Indonesian company annual reports, although the level of demand varies, albeit from high demand to even higher demand. Statistical procedures show an overall high demand for the GRI (2002) items especially the economic-orientated items.

Finally, an important end product of this research paper is the evolution of a weighted Indonesian Environmental Reporting Index (IER_{ST}) based on the insights of survey respondents. This new index better reflects the importance of key stakeholders' demand for corporate environmental reporting in Indonesia. However, caution should be taken with this new index as it is an initial measure based on only 69 stakeholder viewpoints. Further research is recommended to develop additional insights on the importance of a comprehensive range of environmental issues.

References

Adhikari, A & Tondkar, R.H. (1992). Environmental Factors Influencing Accounting Disclosure Requirements of Global Stock Exchanges. Journal of International Financial Management and Accounting, 4 (2), 75-105.

Ahmad, N.N.N. & Sulaiman, M. (2004). Environmental Disclosures in Malaysian Annual Reports: a Legitimacy Theory Perspective. International Journal of Commerce & Management, 14 (1), 44-58.

Baird, M. & Versegi, P. (2005). Indonesia: Analytical Report for the White Paper on Australia's Aid Program'. Retrieved: 20 June 2006, from http://www.ausaid.gov.au/publications/pdf/indonesia_report.pdf.

Biro Pusat Statistik (BPS) (2006). Selected Indicators of Indonesia. Retrieved: 20 June 2006, from http://www.bps.go.id/leaflet-mei-06-eng.pdf.

Brown, A.M, Tower, G. & Taplin, R. (2004). Relationships between Type of User-Respondent and Stakeholder Groups in the Context of Pacific Island Countries. Research in Accounting in Emerging Economies, Supplement 2: Accounting and Accountability in Emerging and Transition Economies, 469-502.

Bryman, A. & Bell, E. (2003). Business Research Methods, Oxford University Press, New York.

Buhr, N. & Freedman, M. (2001). Culture, Institutional Factors and Differences in Environmental Disclosure between Canada and the United State. Critical Perspectives on Accounting, 12 (3), 293-322.

Cahaya F.R, Porter S.A & Brown, A.M. (2006). Nothing to Report? Motivations for Non-Disclosure of Social Issues by Indonesian Listed Companies. Journal of Contemporary Issues in Business & Government, 12 (1), 43-61.

Clarkson, M.B.E. (1995). A stakeholder Framework for Analyzing and Evaluating Corporate Social Performance. Academy of Management Review, 20 (1), 92-117.

Cooke, T.E. (1989). Disclosure in the Corporate Annual Reports of Swedish Companies. Accounting and Business Research, 19 (74), 113-124.

Cooper, D.R & Schindler, P.S (2003). Business Research Methods, McGraw-Hill / Irwin, New York.

Coy, D. & Dixon, K. (2004). The Public Accountability Index: Crafting a Parametric Disclosure Index for Annual Reports', British Accounting Review, 36 (1), 79-106.

Dixon, R, Mousa, G.A. & Woodhead, A. (2005). The Role of Environmental Initiatives in Encouraging Companies to Engage in Environmental Reporting. *European* Management Journal, 23 (6), 702-716.

Eesley, C. & Lenox, M.J (2006). Firm Responses to Secondary Stakeholder Action. Strategic Management Journal, 27 (8), 765-781.

Energy Information Administration (EIA) (2007). Indonesia: Environmental Issues. Retrieved: 27 February 2007, from http://www.eia.doe.gov/emeu/cabs/indoe.html

Firer, C. & Meth, G. (1986). Information Disclosure in Annual Reports in South Africa. International Journal of Management Science, 14 (5), 373-382.

Frooman, J. (1999). Stakeholder Influence Strategies. The Academy of Management Review, 24 (2), 191-205.

Global Reporting Initiative (2002). Sustainability Reporting Guidelines', GRI, Boston. Retrieved: 23 September 2004, from www.global-reporting.org

Greenpeace (2006). Chains of Destruction: Global Trade in Illegal Timber and Why Asia-Pacific Governments Must Act Now, Greenpeace International, Amsterdam.

Harrison, J.S. & Freeman, R.E. (1999). Stakeholders, Social Responsibility, and Performance: Empirical Evidence and Theoretical Perspectives. The Academy of Management Journal, 42 (5), 479-485.

Hedberg, C.J. & Malmborg, F.V. (2003). The Global Reporting Initiative and Corporate Sustainability Reporting in Swedish Companies. Corporate Social Responsibility and Environmental Management, 10 (3), 153-164.

Herbohn, K. (2005). A Full Cost Environmental Accounting Experiment. Accounting, Organizations and Society, 30 (6), 519-536.

Horton, J, Macve, R & Struyven, G. (2004). Qualitative Research: Experiences in Using Semi-Structured Interviews', In Humphrey, C & Lee, B. (Ed.), The Real Life Guidance to Accounting Research: a Behind the Scenes View of Using Qualitative Research Methods. Elsevier, Oxford, UK.

Ikatan Akuntan Indonesia (2002). Standar Akuntansi Keuangan per 1 April 2002, Penerbit Salemba Empat, Jakarta.

Jenkins, H. & Yakovleva, N. (2006). Corporate Social Responsibility in the Mining Industry: Exploring Trends in Social and Environmental Disclosure. Journal of Cleaner Production, 14 (3-4), 271-284.

Khomsiyah (2005). Analisis Hubungan Struktur dan Indeks Corporate Governance dengan Kualitas Pengungkapan. Unpublished PhD Dissertation, Gadjah Mada University, Indonesia.

Kompas (13 October 2003). Membaca Filsafat yang "Bertubuh" dan "Berjender". Retrieved: 1 September 2006, from www.kompas.com/kompas-cetak/0310/13/swara/621065.htm .

Krajnc, D. & Glavic, P. (2005). How to Compare on Relevant Dimensions of Sustainability. Ecological Economics, 55 (4), 551-563.

Lamberton, G. (2005). Sustainability Accounting - a Brief History and Conceptual Framework. Accounting Forum, 29 (1), 7-26.

Marginson, D.E.W. (2004). The Case Study, the Interview and the Issues. In Humphrey, C & Lee, B (Ed.), The Real Life Guidance to Accounting Research: A behind the Scenes View of Using Qualitative Research Methods, Elsevier, Oxford, UK.

Marston, C.L. & Shrives, P.J. (1991). The Use of Disclosure Indices in Accounting Research: a Review Article. British Accounting Review, 23 (3), 195-210.

McNamara, C. (2006). General Guidelines for Conducting Interview. Retrieved: 21 April 2006, from http://www.managementhelp.org/evaluatn/intrview.htm

Mellahi, K. & Wood, G. (2003). The Role and Potential of Stakeholders in "Hollow participation": Conventional Stakeholder Theory and Institutionalist Alternatives. Business and Society Review, 108 (2), 183-202.

Ministry of Environment (2004). State of the Environment in Indonesia 2003, Ministry of Environment, Jakarta.

Monbiot, G. (2000). The Captive State: The Corporate Takeover of Britain, Pan Books.

Morhardt, J.E, Baird, S. & Freeman, K. (2003). Scoring Corporate Environmental and Sustainability Reports Using GRI 2000, ISO 14031 and Other Criteria, Corporate Social Responsibility and Environmental Management, 9 (4), 215-233.

Porter, S.A. (2005). Stakeholders' Perspectives of Ecological Tourist Site Valuations: West Australian Evidence. PhD Thesis (unpublished), School of Accounting, Curtin University of Technology, Perth, Australia.

Porter, S., Brown, A.M., Purushothaman, M. & Scharl, A. (2006). The Strategies of the IASB and its Funders. Journal of Strategic Change, 15 (6), 305-317.

Sahay, A. (2004). Environmental Reporting by Indian Corporations. Corporate Social Responsibility and Environmental Management, 11 (1), 12-22.

Saudagaran, S.M. & Diga, J.G. (1997). Accounting Regulation in ASEAN: a Choice between the Global and Regional Paradigms of Harmonization. Journal of International Financial Management and Accounting, 8 (1), 1-32.

Stiglitz, J. (2002). Globalisation and its Discontent. Allen Lane, The Penguin Press, Camberwell, Victoria.

Tangkilisan, H.N.S. (2004). Kebijakan dan Manajemen Lingkungan Hidup. Yayasan Pembaruan Administrasi Publik Indonesia, Yogyakarta.

Ullmann, A.A. (1985). Data in Search of a Theory: a Critical Examination of the Relationships among Social Performance, Social Disclosure, and Economics Performance of U.S Firms. Academy of Management Review, 10 (3), 540-557.

Walhi (Indonesian Forum for Environment) (2007). Ecological Disaster and Indonesian's Sustainability. Retrieved: 19 March 2007, from http://www.eng.walhi.or.id/kampanye/psda/070125_disaster_cu/?&printer_friendly=true

Werhane, P.H. & Freeman, R.E. (1997). The Blackwell Encyclopedic Dictionary of Business Ethics, Blackwell Publishers Ltd, Massachusetts, USA.

World Bank (2007). Spending for Development: Making the Most of Indonesia's New Opportunities, Indonesia Public Expenditure Review 2007. Retrieved: 14 February 2007, from http://siteresources.worldbank.org/INTINDONESIA/Resources/Publication/280016-1168483675167/PEReport.pdf

World Bank Group (2004). Indonesia: Environment and Development, Executive Summary. Retrieved: 27 October 2004, from www.worldbank.org/html/extdr/offrep/eap/inenvdev.htm

Zein, S.W. (2005). Parliamentary Representation of Women in Indonesia: the Struggle for a Quota. Asian Journal of Women's Studies, 11 (3), 36-61.

ADHERENCE TO THE GLOBAL REPORTING INITIATIVE'S (GRI) SOCIAL AND ENVIRONMENTAL DISCLOSURE REQUIREMENTS BY INDIAN ORGANISATIONS

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Abstract

The guidelines of the Global Reporting Initiative (GRI) framework have increasingly become the international benchmark for organisational transparency and accountability across the world. Adherents to the GRI's social and environmental disclosure guidelines have the potential to increase organizational competitiveness and profitability and thereby the share prices of the organisations. Few studies have been undertaken in developing countries like India on social and environmental disclosure based on the GRI Guidelines. This paper investigates the corporate social and environmental disclosures of 50 small and large Indian organizations drawn from five industries. Using seventeen social and eighteen environmental disclosure criteria, the study evaluates disclosure information as presented in annual reports and related website reports.

Key Words:

Social disclosure; environmental disclosure, GRI

Introduction

Corporations in emerging nations are required to improve the quality of corporate financial reporting and the quantity and quality of corporate social and environmental reporting to attract competitive overseas finance. Organisations in emerging nations need to have greater transparency and more social and environmentally responsibility if they are to be successful in the future competition for funding.

It cannot be assumed that corporate social disclosure is consistent across the Asia-Pacific region. Environmental reporting by Indian corporations lags significantly behind that found in developed countries. The reporting, in general, is unsystematic, piecemeal and inadequate (Sahay, 2004).There are three main reasons for environmental non-performance in Asian countries: (i) lack of government pressure; (ii) lack of perceived benefit, either in terms of status with respect to consumers or within the business community; and (iii) a perception that their organisation does not have any environmental impact (Perry and Sheng, 1999). Thompson and Zakaria (2004) mention that irrespective of nationality, lack of recognised reporting framework, the cost of reporting and fear of how readers will react could be general reasons for non-disclosure. The paucity of social and environmental reporting is largely due to the lack of governmental pressure to report (Thompson and Zakaria, 2004).

Thompson and Zakaria found that the slow take-up of social and environmental reporting among Asian countries (except Japan, China and South Korea) may be a result of the fear by the laggards that social and environmental reporting initiatives may be seen as a way of exposing and punishing. Inadequate social and environmental disclosure in India is probably caused by less pressure from stakeholders, environmental groups, the general public and the government (Sahay, 2004). India, being an Asian country, has a distinct cultural base, different social and environmental laws, different degree of pressure on government by green and social NGOs, different level of government responsiveness and different level of public support for NGOs from that of developed countries. Sahay (2004) mentions that

environmental legislation is adequate in India. What is needed is enforcement and associated market rewards. To date very little research on environmental disclosure has been undertaken in India other than Dasgupta *et. al.*, (2001); Priyadarshini and Gupta, (2003); Sahay, (2004); Arora and Puranik, (2004) and Raman, (2006) so this research will contribute to the related literature on other developing countries.

Environmental disclosure increases transparency which improves public image and relations with stakeholders (Robbins, 2003). It also increases relationships with customers and employees (Baker, 2001) who increase the value of intangible assets of the company (Ernst and Young, 2002). Increased transparency pushes a company towards more effective and efficient allocation of resources. Increased disclosure reduces regulatory cost, decreases legal liability and increases government's impact on the firm (Robbins, 2003). Thus, it will improve the competitiveness, profitability and share price of the organisation (CERES, 2002). To our knowledge, no substantive research has been undertaken in India to examine the level of environmental and social disclosure based on the environmental and social performance indicators suggested by GRI. As a result both domestic and overseas investors are not fully aware of the quality of the social and environmental reporting by listed companies in India. The study will highlight the quantity and quality of Indian social and corporate environmental reporting practice by examining the level of disclosure compliance based on selected environmental and social performance indicators suggested by Global Reporting Initiative (2002) using a sample of 50 listed companies in India.

Examining level of disclosure based on GRI indicators

Even though environmental disclosures have increased, there is considerable variety in the substance of what is reported (Burritt, 2002). There is a clear need for standardisation of environmental reporting practice because improved comparability will increase the value of reported information (Schaltegger and Burritt, 2000).

Schaltegger and Burritt (2000) mention that the main global social and environmental reporting standard is the Global Reporting Initiative (GRI, 2000). The GRI Reporting Framework facilitates transparency and accountability by organizations such as companies, public agencies, non-profits of all sizes and sectors across the world. GRI is a worldwide, multi-stakeholder network. A multi-stakeholder approach (470 stakeholders at 31.12.07) ensures the credibility and trust required for a global disclosure framework. To date, 957 organisations in over 60 countries have used the GRI framework as the basis for their reporting and approximately over 850 organisations release sustainability reports based on GRI reporting guidelines.[1] GRI reporting guidelines have also gained recognition and endorsement from all kinds of stakeholders, especially governmental agencies, such as the European Union, United Nations, Organisation for Economic Co-operation and Development and World Economic Forum (Ho and Taylor, 2007). Although authors (Rezaee *et al.*, 1995; Burritt, 2002; Schaltegger and Burritt, 2000; Sahay, 2004) have mentioned the clear need for standardisation of environmental reporting practice to our knowledge, there is no published work on social and environmental disclosures based on GRI guidelines in India.

The primary focus of this study is to examine the level of quantity and quality of the social and environmental disclosures adopted by the listed companies in India based on the guidelines suggested by Global Reporting Initiative, 2002.

Motivation and Literature Review

Relevant literature reveals that corporate social and environmental reporting has received considerable attention from researchers. Through various empirical studies, research has identified incentives for

[1] http://www.globalreporting.org/AboutGRI/OurReports, 30.12.07).

corporate social and environmental disclosure. Gray *et. al.* (1996) provided an extensive list of incentives for corporate social reporting. The list includes ethics, individual commitment, accountability, legal code of practice, anticipated regulation, marketing, public image, defence to distract attention, influence perceptions, response to pressure, go ahead of /stay with competitors, experimentation, prior commitment, ethical investors, to overcome fears of secrecy and to maintain a position of power and legitimization. Solomon and Lewis (2002) stated that all of these fall loosely within four theoretical perspectives (market, social, political and accountability) presenting incentives for voluntary corporate environmental disclosure. The overall practical benefits of studying disclosure levels of corporations for the community, government and organisations themselves are: i) Improved public image and relations with stakeholders (Robbins, 2003; Adams, 2002). ii) Increased value of intangible assets (Ernst and Young, 2002:5). iii) Improved relationship with customers (Baker, 2001). iv) Better recruitment and retention of employees (Adams, 2002, 2004). iv) Increase government impact (Robbins, 2003), v) Improved competitiveness, profitability, and share price (CERES, 2002). vi) Improved internal decision making and cost savings (Adams, 2002).

Literature Review

Relevant literature reveals that, studies providing empirical evidence regarding corporate social and environmental reporting practice are mainly undertaken for USA, UK, Australian and other developed countries. Their focus is on annual report or other sources based on either longitudinal or cross-sectional analysis. Research findings from some representative studies are discussed below.

Guthrie and Parker (1990) compared social reporting practices of the United States, United Kingdom, and Australia. Their results indicated that the incidence of social reporting appeared to be much higher in the United States, and in the United Kingdom, than in Australia. However, in terms of amount of space devoted to social disclosures in annual reports (i.e., number of pages in annual reports); they did not find a significant difference among the three countries.

Gamble et al. (1996) examined the annual report environmental disclosures for a sample of firms representing nine industries and 27 countries for the years 1989 through 1991. Their results indicated that extremely diverse practices were observed among and within the sample countries and these practices were not consistently applied over time. Overall, companies operating in countries with a high social conscience and/or developed capital markets voluntarily disclosed more environmental information. In particular, the United States, Canada, and the United Kingdom had the highest disclosure level.

Deegan and Gordon (1996) undertook a survey of the environmental reporting practices within the 1991 annual accounts of a random sample of 197 companies from 50 industries. They found that 36 per cent of the sample was identified as producing environmental disclosures voluntarily. Using word counts, the mean amount of positive environmental disclosures significantly outweighed the mean amount of negative disclosures. Only 14 companies out of the entire sample provided any negative environmental disclosures.

Adams et al. (1998) examined corporate social reporting practices for a sample of 150 annual reports from six European countries. They split social disclosures into three categories: environmental reporting, reporting on employee issues, and ethical reporting. The findings indicate that the amount and nature of social disclosure varied significantly across Europe. In particular, the German firms disclosed the most information across all three categories. The UK firms were ranked either second or third behind the Swedish companies with respect to environmental or employee disclosures.

Finally, the results showed that firm size and industry membership are important determinants of the level of social disclosures in all six European countries.

Hackston and Milne (1996) investigated the social and environmental disclosure practices of a sample of New Zealand firms. Their findings indicated that, the majority of the disclosure was declarative and good news in nature. The results also showed that both firm size and industry membership are significantly associated with the amount of disclosure, while profitability is not.

Craig and Diga (1998) analyzed annual report disclosure practices in five Association of South East Asian Nations (ASEAN) countries: Singapore, Malaysia, the Philippines, Indonesia, and Thailand. Results indicate that, overall, ASEAN companies appeared reluctant to disclose information that was perceived to be politically or socially sensitive such as information regarding labour and employment activities, environmental programs, and government subsidies. They concluded that corporate reporting in ASEAN was "oriented strongly towards the information needs of capital providers, rather than the needs of a broader set of stakeholders (including employees, government agencies, and the general community)" (p. 257).

Perry and Sheng (1999) compared Western experience with environmental disclosure to that in Singapore. The survey revealed a low commitment to environmental disclosure amongst Singaporean organisations. They commented that the low level of environmental disclosure in Singapore is symptomatic of the gap between the developing environmental responsibility accepted in Western countries and that in this newly industrialised economy. They commented that raising interest in environmental reporting will depend on greater environmental consciousness amongst shareholders and consumers.

Vanstraelen *et al.* (2003) examined forward-looking and historical non-financial disclosures for three European countries (Belgium, Germany, and the Netherlands). Results showed that the Dutch companies had the highest total level of forward-looking non-financial disclosures. Belgium and the Netherlands had a similar level of total historical disclosures, followed by Germany. They also found that firms with voluntary disclosure of forward-looking non-financial information tend to have more accurate and less dispersed analysts' earnings forecasts.

Priyadarshini and Gupta, (2003) indicated low level of compliance to environmental regulations in India while trying to identify the main causes. They found though environmental laws are in place, firms display a very low level of compliance. They reported that three scenarios emerge in the context of a developing country like India. The absence of economic incentives also dissuades firms from complying.

Sahay (2004) indicated that environmental reporting, in general, is unsystematic, piecemeal and inadequate and non-comparable in India. He commented that environmental reporting in India is still in its infancy and appears to be more of a public relations activity. It does not provide relevant information to the stakeholders or a database for continual improvement. The study pointed out that the reason for inadequate environmental disclosure is probably that less pressure is applied on Indian companies by stakeholders, environmental groups, the general public and importantly the government. He further commented that as environmental reporting is unregulated and companies are free to use it to publicize their good environmental performance without giving factual data and environmental trends the reports do not lend themselves to comparison between companies and between sectors. Finally he commented that environmental legislation, perhaps, is adequate. What is needed is its enforcement.

Raman (2006) conducted an exploratory study on how top management perceives and reports CSR in India. Using the technique of content analysis the study looked at the chairman's message section in the annual

reports of the top 50 companies in India to identify the extent and nature of social reporting. His analysis revealed that 95 per cent of the sample made at least a mention of practices related to social responsibility. 80 per cent of the sample size made a disclosure related to product/service improvement followed by human resources disclosure. More than 75 per cent of the companies in their chairman's message had some mention about human resources. Not more than 52 per cent of the companies mentioned their involvement in community activities or other activities like education and health services. He found that environmental protection and energy conservation measures were least disclosed. The study found that the nature and the extent of disclosures are varied with a large emphasis being placed on product/service improvement and development of human resources. He commented that reporting practices could be strengthen by adopting GRI (2000) guidelines on a vision and strategy statement on social issues or presenting a summary of the key elements of sustainability practices in the organizations.

Ho and Taylor (2007) investigated triple bottom-line (TBL) disclosures of 50 of the largest US and Japanese companies. Twenty disclosure criteria were developed for each of the TBL disclosure areas: economic, social, and environmental. Disclosure information was examined in annual reports, stand-alone reports, and special website reports. The authors used regression analysis to examine empirically the determinants of TBL disclosure practice. Results indicated that the extent of reporting is higher for firms with larger size, lower profitability, lower liquidity, and for firms with membership in the manufacturing industry for total TBL disclosure. They also found that the extent of overall TBL reporting was higher for Japanese firms and total TBL disclosures were primarily driven by non-economic reasons with environmental disclosure as the key driver. The results do not support the prior findings with regards to environmental disclosures that common law countries such as USA tend to disclose more public information about firms' activities.

In summary, most of the empirical research on corporate social and environmental reporting has focused on the USA, UK, Canada, European countries, Australia and New Zealand. Only a few studies investigated issues of south and south-east Asia although authors have mentioned the clear need for standardisation of environmental reporting practice and use of the GRI framework (Rezaee *et al.,*1995; Burritt, 2002; Schaltegger and Burritt, 2000; Holand and Foo, 2003; Sahay, 2004; Raman, 2006 and Ho and Taylor, 2007).

This study is different from other social and environmental disclosure studies undertaken by various researcher such as Gray *et al.,* (1995b); Deegan and Gordon, (1996); Burritt, (1997); Belal (2000); Sahay, (2004); Arora and Puranik, (2004); Ali *et al*., (2004); and Raman, (2006) since GRI social and environmental framework has been used. GRI framework will improve the comparability and thus increase the value of reported information (Burritt, 2002; Schaltegger & Burritt, 2000). Probably this is the first empirical study of this nature on India.

Research Design

Development of Measurement Criteria

GRI environmental and social performance indicators have been used to examine the level of social and environmental disclosures of the selected Indian organisations. Thirty five (seventeen social and eighteen environmental) disclosure items are selected in order to determine the extent of social and environmental reporting of the corporations in India. An extensive review of prior academic literature and business surveys was undertaken in developing these disclosure items. The thirty five disclosure items are mainly selected from 2002 Global Reporting Initiative (GRI) guidelines. We have chosen the social and environmental indicators which are relevant to the organisations

involved and are of major concern to the organisations in India. These indicators were also used in other studies such as KPMG (2002); Holand and Foo (2003) and Ho and Taylor (2007).

The social indicators are primarily adopted from the GRI (2002) Guidelines. In developing the social criteria, indicators from other studies Ho and Taylor (2007); KPMG (2002, 2005); and Deloitte and Touche (2002) are also incorporated. We have included seventeen social indicators, which are divided into four groups- (a) Employee, (b) Diversity, Opportunity and Human Rights, (c) Customer and Communities and (d) Integrity and Ethics similar to Ho and Taylor (2007). Indicators used for evaluating the extent of corporate social disclosure are included in Appendix 1.

The environmental indicators are also selected from GRI (2002) Guidelines; KPMG (2002, 2005); and Deloitte and Touche (2002). We have used environmental indicators of prior studies (such as Holand and Foo, 2003; and Ho and Taylor, 2007). Eighteen indicators have been selected and grouped into four categories- (a) General, (b) Energy, Water and Materials, (c) Pollution and Waste Management and (d) Others as used by Ho and Taylor (2007). The indicators cover the five common environmental problems identified by the United Nation's ISAR (The Working Group of Experts on International Standards of Accounting and Reporting): depletion of non-renewable energy resources, depletion of freshwater resources, global warming, depletion of the ozone layer, and waste disposal. Indicators used for evaluating the extent of environmental disclosure are also included in Appendix 1.

Data collection

This study covered social and environmental information provided by the selected publicly listed Indian companies within the chosen industries of the accounting year 2006-2007. The industries were selected on the basis of evidence that social perceptions suggested that companies operating in these industries were more likely to be considered 'dirty' or environmentally damaging. (Elkington, 1994).

The chosen industries are (i) Chemical, (ii) Forestry and Paper, (iii) Industrial Engineering, (iv) Industrial Transport, and (v) Mining. A list of Indian companies according to their net total assets (NTA) is included in Appendix 2. In order to allow sufficient time for adoption of the GRIs Guidelines (2002) the accounting year 2006-2007 is chosen. The GRI issued its first guidelines in 2002 and released its revised 3G reporting guidelines and performance indicators in 2006. The study involves collection of annual reports of 50 top and bottom (based on net total assets) publicly listed Indian companies for the accounting year 2006- 2007. Annual reports and information are collected from company's websites and other related internet sites.

Measuring of Compliance with Social and Environmental Disclosure Indicators

A quantitative approach is adopted to measure the extent of disclosure. A score for each company has been assigned to determine the level of compliance.

Table 1: Distribution of Sample According to Industry and Size of the Organization

Industry	Big	Small	Total No. of companies	Percentage
Chemicals	6	4	10	21.739
Forestry and Paper	6	4	10	21.739
Industrial Engineering	6	4	10	21.739
Industrial Transport	6	4	10	21.739
Mining	4	2	6	13.044
Grand Total	28	18	46	100.00

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One problem with this type of scoring system is that some companies might be penalised by being assigned a score of zero when the company is not expected to disclose that item because it is irrelevant due to the nature of operations or for some other reason (Ali, *et al,* 2004). In order to avoid this problem, an indicator has been assigned as (a) a value of two if it discloses tables of data (quantitative, to measure disclosure quality), (b) one, if it discloses through a brief mention of the topic (qualitative) and (c) zero if it has not disclosed (as adopted by Cooke, 1989a, Ali, *et al.* 2004).

Results

Out of 46 investigated companies 43 (93.47%) have made some form of social and environmental disclosure. The results of the descriptive analysis of the social and environmental disclosure measures are presented in Table 2, 3 and 4. Table 2 reports the results of social disclosures by dividing the total disclosure scores of four categories, (a) Employee, (b) Diversity, opportunity and human rights, (c) Customers and communities and (d) Integrity and ethics, by assigning a score of zero, one or two. Of the 46 investigated companies 36 (82.61%) provided some form of social disclosure. Consistent with the findings of Hackston and Milne (1996) and Thompson and Zakaria (2004), Indian companies make disclosures mainly about employees then customers and communities followed by integrity and ethics. Companies only disclosed 'provision of business code' under the integrity and ethics category. There is no disclosure by any company about 'diversity, opportunity and human rights'. Table 3 reports the results of environmental disclosure scores into four categories, (a) General, (b) Energy, water, and materials, (c) Pollution and waste management and (d) Others. Out of 46 investigated companies 43 (93.47%) have made some form of environmental disclosure. The findings are inconsistent with the findings of the similar study by Thompson and Zakaria, 2004, (16%). Most of the environmental disclosures made by Indian companies are about 'energy, water, and materials' followed by the 'general' category. Very few companies disclose information under the categories of 'pollution and waste management' and 'others'. None of the companies disclose information on indicators such as strategies for the use of recycling product, environmental impacts of principal products and services, environmental accounting policies, environmental expenditures and fines/ lawsuits/ non-compliance incidents.

Although Table 5 indicates that out of 46 companies 43 disclose some environmental disclosure and 36 disclose some social disclosure, it is evident from Table 3 that environmental disclosures are mainly about general policy together with some declarative statements. Apart from energy usage and water usage information, almost all other disclosures were qualitative in nature. It is evident from Table 2 that except fpr disclosures under the 'employee' category, other disclosures are qualitative in nature. Evidence about the level of social and environmental disclosures by the sample of Indian corporations reveals that it is low in quantity and poor in quality. The total disclosure scores (social and environmental combined) of the Indian companies are included in Appendix 3.

Table 2: Distribution of Social Disclosure Indicators in Indian Companies

Disclosure Indicators	Score	Frequency	%
Employee			
1) Company's statement of a corporate commitment to its shareholders and for society as a whole	0 1	20 26	43.5 56.5
2) Number of employees and their geographic distribution	0 1 2	39 2 5	84.8 4.3 10.9
3) Turnover of workforce	0 1 2	43 1 2	93.5 2.2 4.3
4) Levels of employee education	0 2	36 10	78.3 21.7
5) Employee benefits concerning health care, disability, or retirement	0 1 2	26 1 19	56.5 2.2 41.3
6) Employee health and safety information such as number of lost workdays, accidents or deaths	0 1 2	37 4 5	80.4 8.7 10.9
7) Employee training and education	0 1 2	33 3 10	71.7 6.5 21.7
Diversity, opportunity and human rights			
8) Any mention of policies or programs addressing workplace harassment and discrimination	0	46	100.0
9) Number or percentage of women and minorities in the organization	0	46	100.0
10) Policies or procedures dealing with human rights issues	0	46	100.0
Customers and communities			
11) Any mention of policies for preserving customer health and safety	0 1 2	38 5 3	82.6 10.9 6.5
12) Company's involvement in community activities	0 1	45 1	97.8 2.2
13) Policies for prioritizing local employment	0	46	100.0
Integrity and ethics			
14) Policies for compliance mechanisms for bribery and corruption	0	46	100.0
15) Policies for preventing anti-competitive behaviour	0	46	100.0
16) Policies for consumer privacy	0	46	100.0
17) Provision of business code	0 1 2	39 2 5	84.8 4.3 10.9

Table 3: Distribution of Environmental Disclosure Indicators in Indian Companies

Disclosure Indicators	Score	Frequency	%
General			
1. Company's statement of a corporate commitment to environmental protection	0 1	7 39	15.2 84.8
2. Environmental audit	0 1	45 1	97.8 2.2
3. Environmental awards	0 1 2	43 2 1	93.5 4.3 2.2
4. Incorporation of environmental concerns into business decisions (e.g., green purchasing)	0 2	45 1	97.8 2.2
5. Identification of a contact person for providing additional information	0	46	100.0

Energy, water, and materials			
6. Energy usage information	0 1 2	5 10 31	10.9 21.7 67.4
7. Encouragement of renewable energy consumption	0 1 2	43 1 2	93.5 2.2 4.3
8. Water usage information	0 1 2	15 9 22	32.6 19.6 47.8
9. Information concerning the materials that are re-cycled or re-used	0 1 2	44 1 1	95.7 2.2 2.2
10. Any mention of strategies for the use of recycling product	0	46	100.0
Pollution and waste management			
11. Information about the sources, types and remedy procedures of emissions	0 1 2	41 3 2	89.1 6.5 4.3
12. Pollution impacts of transportation equipment used for logistical purposes	0 1 2	41 3 2	89.1 6.5 4.3
13. Environmental impacts of principal products and services	0	46	100.0
14. Discussion on the amount, types of wastes and methods of waste management	0 1	38 8	82.6 17.4
Others			
15. Any mention of environmental accounting policies	0	46	100.0
16. Environnemental expenditures	0	46	100.0
17. Fines/lawsuits/non-compliance incidents	0 1	44 2	95.7 4.3
18. Environmental contingent liabilities	0 2	34 12	73.9 26.1

Table 4: Descriptive Statistics of Social, Environmental and Total (Social and Environmental Combined) Disclosure Scores of Indian Companies

	N	Minimum	Maximum	Mean	Std. Deviation
Disclosure Score (Social)	46	0	11	3.39	2.985
Disclosure Score (Environmental)	46	0	11	4.93	2.808
Disclosure Score (Total)	46	0	21	8.46	5.488

Table 5: Social and Environmental Disclosure Scores of Indian Companies

Scores	Social. Frequency	%	Environm-ental. Frequency	%
0	8	17.4	3	6.5
1	10	21.7	1	2.2
2	4	8.7	4	8.7
3	2	4.3	11	23.9
4	7	15.2	1	2.2
5	2	4.3	9	19.6
6	8	17.4	5	10.9
7	1	2.2	2	4.3
8	1	2.2	4	8.7
9	1	2.2	3	6.5
11	2	4.3	2	4.3
Total	46	100.0	46	100.0

Conclusion

This study, though preliminary, suggests that most of the Indian corporations in the sample do disclose some aspects of social and environmental responsibility of their organisations. However, the quality and the extent of such disclosures vary substantially. Strong emphasis is being placed on human resources development, product /service improvement and usage of energy and water. Most of the companies totally ignored the important indicators under the categories of diversity, opportunity and human rights, integrity and ethics, and pollution and waste management. Indicators such as environmental accounting policies, environmental expenditures and fines/ lawsuits/ non-compliance incidents are also ignored.

This paper provides evidence that, quantity as well as quality of social and environmental disclosures of Indian corporations lags behind that found in many developed countries. It is also found that most of the social and environmental disclosures are declarative and non-quantitative. Inadequate social and environmental disclosures may result from weak governmental and societal pressures to report on social and environmental issues. In contrast countries such as France, the Netherlands and the UK have requirements and also give incentives to organisations for including non-financial disclosures as a part of regular disclosures (GRI 2002: KPMG 2005). Such pressures may increase the quality and quantity of social and environmental disclosures in country like India.

References

Adams, C. and A. Zutshi (2004). Corporate Social Responsibility: Why Business Should Act Responsibly and be Accountable, Australian Accounting Review 14 (3): 31-39.

Adams, C.A. (2002). Internal organisational factors influencing corporate social and ethical reporting: beyond current theorising, Accounting, Auditing & Accountability Journal, 15 (2): 223-50.

Adams, C., W. Y. Hill and C. Roberts, (1998). Corporate Social Reporting Practices in Western Europe: Legitimating Corporate Behaviour?, British Accounting Review 30: 1-21.

Ali, M. J, Ahmed, K and Henry, D. (2004). Disclosure compliance with national accounting standards by listed companies in South Asia, Accounting and Business Research 34 (3): 183-199

Arora, B. and R. Puranik (2004). A Review of Corporate Social Responsibility in India, Development 47 (3): 93-100.

Balasubramanian, N. K. D. Kimber and F. Siemensma, (2005), Emerging opportunities or Traditions Reinforced? An Analysis of the Attitudes towards CSR, and trends of Thinking about CSR, in India, Journal of Corporate Citizenship, 17: 79 -92.

Baker, J. (2001). OECD Conference on Corporate Social Responsibility, 'Freedom of Association and CSR', http://www.oecd.org/dataoecd/57/62/1898226.pdf (accessed 18 December 2008).

Belal, A. R. (2000). Environmental Reporting in Developing Countries: Empirical Evidence from Bangladesh, Eco-Management and Audit 7: 114-121.

Burritt, R. L. (2002). Environmental reporting in Australia: current practices and issues for the future, Business Strategy and the Environment 11 (6): 391-406.

Coalition for Environmentally Responsible Economies (CERES) (2002). Conference held on April 17-19, 2002, Washington, DC, U.S.

Cooke, T. E. (1989a). Disclosure in the corporate annual reports of Swedish companies, Accounting and Business Research, 19: 113 -124.

Craig, R and J. Diga (1998). Corporate Accounting Disclosure in ASEAN, Journal of International Financial

Management and Accounting 9 (3):246-274

Dasgupta, S., Mody, A. et. al. (2001). Environmental Regulation and Development: A Cross-country Empirical Analysis, Oxford Development Studies 29 (2): 173-187.

Deegan, C. (2002). The legitimising effect of social and environmental disclosures– a theoretical foundation, Accounting, Auditing & Accountability Journal 15 (3): 282-311.

Deegan, C. and B. Gordan (1996). A study of the Environmental Disclosure Policies of Australian Corporations, Accounting and Business Research 26 (3): 187-199.

Deegan, C. and M. Rankin (1996). Do Australian companies report environmental news objectively? An analysis of environmental disclosures by firms prosecuted successfully by the Environmental Protection Authority, Accounting, Auditing and Accountability Journal 9 (2): 50-67.

Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainability, California Management Review; Winter 1994; 36(2): 90

Ernst & Young (2002). http://www.ey.com/global/Content.nsf/Australia, (accessed on 18 December 2008)

Gamble, G., K. Hsu, C. Jackson et al. (1996). Environmental Disclosure in Annual Reports: An International Perspective, International Journal of Accounting 31 (3): 293-331

Global Reporting Initiative, (GRI 2002). Sustainability Reporting Guidelines. http//www.globalreporting.org/guidelines/2002.asp. ,[27th November, 07]

Gray, R. (2006). Social, environmental and sustainability reporting and organisational value creation? Whose value? Whose Creation?, Accounting, Auditing & Accountability Journal, 19 (6): 793-819.

Gray, R., Owen, D. et al. (1996). Accounting and Accountability, Prentice- Hall: London

Gray, R., R. Kouhy, et al. (1995a). Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure, Accounting, Auditing and Accountability Journal 8 (2): 47-77.

Gray, R., R. Kouhy, et al. (1995b). Methodological themes: Constructing a research database of social and environmental reporting by UK companies, Accounting, Auditing and Accountability 8 (2): 78-101.

Guthrie, J. and L. D. Parker (1990). Corporate social disclosure practice: a comparative international analysis, Advances in Public Interest Accounting 3 (2): 159-176.

Hackston, D. and Milne, M. J. (1996). Some Determinant of Social and Environmental Disclosures In New Zealand Companies, Accounting, Auditing and Accountability Journal, 9 (1): 77-108

Ho, LC. and M. E Taylor (2007). An Empirical Analysis of Triple Bottom Line Reporting and its Determinants: Evidance from the United States and Japan, Journal of International management and accounting 18 (2) -

Holland, L. and Y. B. Foo (2003). Differences in environmental reporting practices in the UK and the US: The Legal and Regulatory Context, The British Accounting Review 35: 1-18.

KPMG (2002). KPMG International Survey of Corporate Responsibility reporting 2002, De Meern, the Netherlands: KPMG Global Sustainability Services.

KPMG (2005). KPMG International Survey of Corporate Responsibility reporting 2005, the Netherlands: KPMG Global Sustainability Services.

Perry, M. and T. T. Sheng (1999). An overview of trends related to environmental reporting in Singapore,

Environmental Management and Health 10 (5): 310-320

Priyadarshini, K. and O. K. Gupta (2003). Compliance to Environmental Regulations: The Indian Context, International Journal of Business and Economics, 2 (1): 9-26.

Raman, S. R. (2006). Corporate Social Reporting in India - A View from the Top, Global Business Review 7 (2): 313.

Rezaee Z., Szendi, J & Rajesh Aggarwal, R. (1995). Corporate governance and accountability for environmental concerns, Managerial Auditing Journal 10 (8): 27 – 33

Robbins, S. P., R. Bergman, et al. (2003). Management, Prentice-Hall: Sydney.

Sahay, A. (2004). Environmental reporting by Indian corporations, Corporate Social - Responsibility and Environmental Management 11 (1): 12.

Schaltegger, S and RL. Burritt, (2000). Contemporary Environmental Accounting, Greenleaf: Sheffield.

Solomon, A. and L. Lewis (2002). Incentives and disincentives for corporate environmental disclosure, Business Strategy and the Environment; May/Jun 2002 11 (3): 154.

Thompson, P. and Z. Zakaria (2004). Corporate Social Responsibility Reporting in Malaysia: Progress and Prospects, The Journal of Corporate Citizenship, 13: 125.

Tinker, T. and R. Gray, (2003). Beyond a critique of pure reason: From policy to politics to praxis in environmental and social research, Accounting, Auditing & Accountability Journal 16 (5): 727-761.

Venstraelen, A., M. Zarzeski and S. Robb, (2003). Corporate Non-financial Disclosure practices and Financial Analyst Forecast Across Three European Countries, Journal of International Financial management and Accounting 14 (3): 249-278.

Appendix 1

Social Disclosure Indicators used for Evaluating the Extent of Corporate Social Disclosure Compliance.

Employee

1. Company's statement of a corporate commitment to its shareholders and for society as a whole
2. Number of employees and their geographic distribution
3. Turnover of workforce
4. Levels of employee education
5. Employee benefits concerning health care, disability, or retirement
6. (Employee health and safety information such as number of lost workdays, accidents or deaths
7. Employee training and education

Diversity, opportunity and human rights

8. Any mention of policies or programs addressing workplace harassment and discrimination
9. Number or percentage of women and minorities in the organization
10. Policies or procedures dealing with human rights issues

Customers and communities

11. Any mention of policies for preserving customer health and safety
12. Company's involvement in community activities
13. Policies for prioritizing local employment

Integrity and ethics

14. Policies for compliance mechanisms for bribery and corruption
15. Policies for preventing anti-competitive behaviour
16. Policies for consumer privacy
17. Provision of business code

Environmental Disclosure Indicators used for Evaluating the Extent of Corporate Environmental Compliance.

General

1. Company's statement of a corporate commitment to environmental protection
2. Environmental audit
3. Environmental awards
4. Incorporation of environmental concerns into business decisions (e.g., green purchasing)
5. Identification of a contact person for providing additional information

Energy, water, and materials

6. Energy usage information
7. Encouragement of renewable energy consumption
8. Water usage information
9. Information concerning the materials that are re-cycled or re-used
10. Any mention of strategies for the use of recycling product

Pollution and waste management

11. Information about the sources, types and remedy procedures of emissions
12. Pollution impacts of transportation equipment used for logistical purposes
13. Environmental impacts of principal products and services
14. Discussion on the amount, types of wastes and methods of waste management

Others

15. Any mention of environmental accounting policies
16. Environnemental expenditures
17. Fines/lawsuits/non-compliance incidents
18. Environmental contingent liabilities

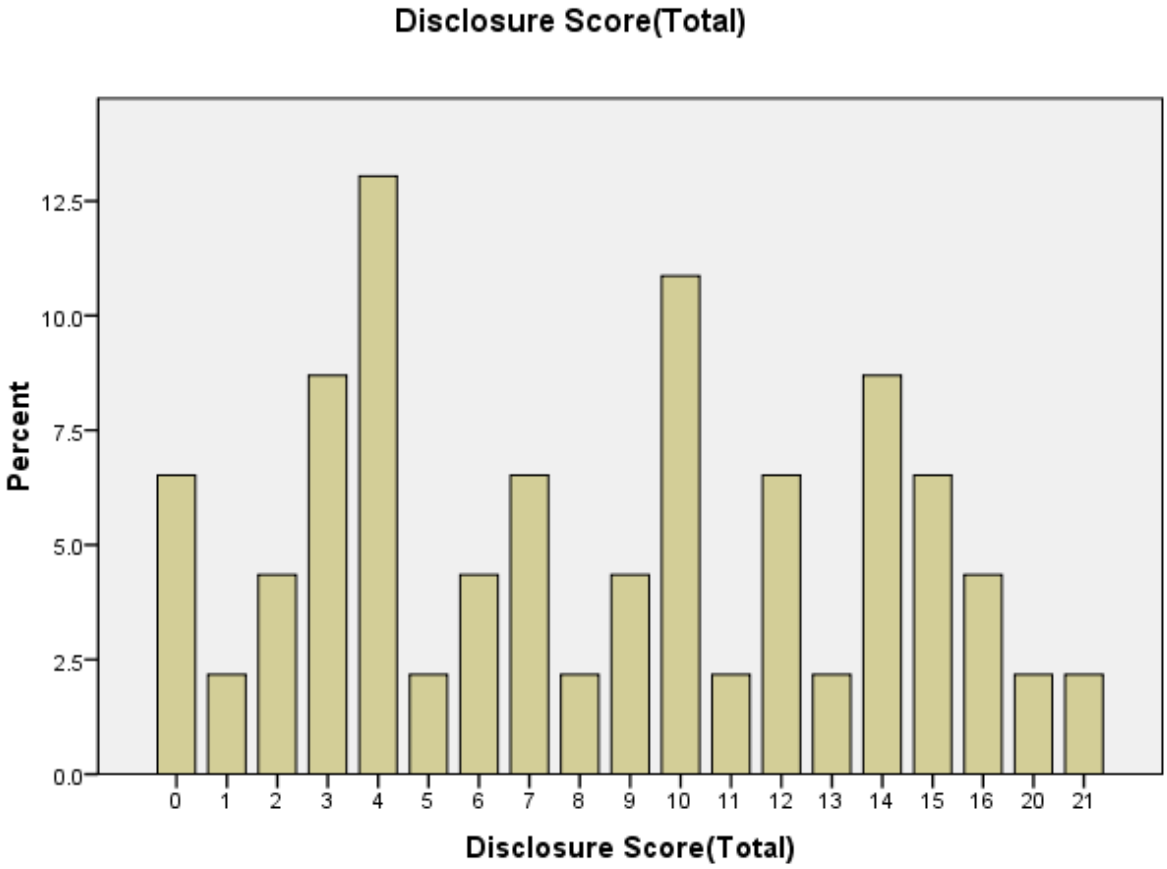
Appendix 2: Distribution of Indian companies according to their net total assets (NTA).

Name of Companies/Large companies	Name of Companies/Small companies
Chemical Industry:	
Gwalior Chemical. industry. ltd.	Graphite India ltd.
Avon Organics ltd.	Lanxess A b s ltd.
Polyplex Corporation. ltd.	Fertiliser. & Chemicals. Travancore
Pidilite Industries ltd.	Gujarat. Narmada Vely. Fertiliser co.
Castrol India ltd.	
Sree Rayalaseema Chemicals.	
Forestry and Paper	
Rama Newsprint.& Papers ltd.	Bilcare ltd.
Seshasayee Paper& Boards	Andhra Pradesh Paper. Miles.
Ballarpur Industry ltd.	JK Paper ltd.
Star Paper Mills ltd.	Ws. Coast Paper Mills. ltd.
Tamilnadu News & Papers	
Sirpur Paper Mills ltd.	
Industrial Engineering	
Nesco	Manugraph ltd.
Praj Industries ltd.	Bharat Forge ltd.
Nile ltd.	Ennore Foundries ltd.
Prakash Industries ltd.	Kirloskar Brothers ltd.
Revathi Equipment ltd.	
Action Con. Equipment ltd.	
Industrial Transport	
Noida Toll Bridge co.ltd.	Bharati Shipyard ltd.
Allcargo Global. Logistics ltd.	Container Corporation of India ltd.
Sical Logistics ltd.	Great Eastern Ship co. ltd.
Seamec ltd.	Blue Dart Express ltd.
Ship Corporation of India ltd.	
Essar Shipping ltd.	
Mining	
Asian Star Company ltd.	Gujarat Mineral Development ltd.
Sesa Goa ltd.	Gitanjali Gems ltd.
Gujarat N R E Coke ltd.	
Ashapura Minechem ltd.	

Source: DataStream 4 (Data base), accessed on 06.09.07

Large and Small companies based on Net Total Assets in terms of millions of Indian rupees

Appendix 3. Total Disclosure Scores (Social and Environmental Combined) of the Sample of Indian Companies



Counting Forest Carbon Emissions for Forestry Tasmania's 'commercial' forests.

By

Roger Martin

A brief exploration of two recent reports on forest carbon follows. The reports suggest that logging public native forests in Tasmania is likely to be the most carbon intensive 'industry' in Australia, possibly, over the next 23 years, emitting as much as the roughly 10 million tonnes of CO2 per year from all of the state's other sources.

Carbon Stocks and planned emissions

MBAC Consultancy/Forestry Tasmania 2007 Forest Carbon report (p vi) calculates a decline in tree forest carbon stores to 2030 from the 'commercial forest' of 16mt (million tonnes) of carbon, a decline in soil/debris carbon of 11mt offset by an increase in storage in timber products of 6mt giving net emissions of 21mt. While if unlogged and the carbon in trees increased at the same rate (not counting the soil carbon, debris) as modelled for the 'non-commercial forest', an additional 12% or 7mt would have been sequestered, in total a minimum 28mt net carbon (=103mt of CO2) decline over 23 years or a 4.5mt of CO2 per year due to native forest logging operations.

This is a change from the 1996 Forestry Tasmania approach used to support the Regional Forestry Agreement of "Expecting that conversion of mature native forest to regrowth will maintain carbon storage" (Tasmanian PLUC, ESFM Report E, p.65) – ie that logging as practised has no impact on carbon stocks (to meet Criterion 5 of Montreal Process "Maintenance of forest contribution to global carbon cycles" which it is supposedly upholding).

The Mackey study (2008, see table below) on carbon in Australian native forests suggests much higher carbon stocks such that logging emissions could be several times higher than that modelled in the FT report. For example if the roughly 540,000 hectares of native forests for logging lost just 20% of 640t per ha over 23 years, that would be about 70mt carbon, 230mt CO2 or 10mt CO2 per year (without counting any increase that would otherwise have occurred).

NCAS summary of land use change 1988-2003 (p21) records Tasmania's emissions at an average of 6mt CO2 per year, for land area by far the highest in Australia and also showing lowest rate of emissions reduction over the period.

Carbon Emissions

To look from another perpective, the MBAC/FT report estimates merchantable timber at around 40% of total logging biomass (ie 77.1mt from 196mt in loggable area). Carbon content is around 500kg per tonne of biomass. Where forests are cleared then remnants burned, common practise for Forestry Tasmania, for each tonne of merchantable timber, the remaining biomass (1.5t = .75t Carbon) along with a portion of the soil carbon (0.5t ??) would be converted very quickly to CO2, suggesting 1.25t of carbon or 4.4t of CO2 emissions per tonne of wood harvested. The Mackey study again implies that the portion harvested is smaller so and the net emissions per tonne harvested much higher.

Value of carbon emissions

The current European CO2 price is around A$30. However, by 2030 for example, a price of A$200 is likely to be required to discourage emissions intensive transport usage (if fuel prices have not dramatically increased). As a comparison, the current federal subsidy for domestic grid connected photovoltaic systems is $8000. The majority are 1kw systems which typically save 3.5kwh per day or 33Mwh over the 25year lifetime, or about 33t of CO2 at Australian average electricity carbon intensity or $240 per tonne of CO2.

Therefore the 103 or 230 mt emissions by 2030 could be valued at $3bn or even $50bn. Will Tasmania be eventually saddled with a

financial penalty for these emissions? "At the 2007 United Nations Climate Change Conference in Bali (UNFCCC CoP 13) ... the international community recognized the need to reduce emissions from deforestation and forest degradation (REDD) as a vital component of a comprehensive solution to the climate change problem" (Mackey, 2008, p.9)

For current logging operations this suggests a carbon emissions value for tonne of merchantable timber (that is sold by Forestry Tasmania at an average of $15) of $132 - $1188 (at 4.4.t Co2 per t timber). Alternately, about $3.50 of sales by Forestry Tasmania for every tonne of CO2 emissions - the most CO2 intensive aluminium production with electricity from brown coal realises about $135 sales per tonne of emissions (20t CO2 per t Aluminium, price at 28.11.2008 $A2700 per tonne).

Forest Carbon Stocks modelling

	ANU	FT	IPCC	Full cam
Carbon Stocks (t C/ha) - biomass	360		96	159
- Soil	280		121	57
- Total	640	105	217	216
Net carbon uptake (t C/ha/yr)	12	<1	7	

Mackey (2008) notes that the IPCC default figures are based on industrialised forests rather than native forests and that "The carbon stock of forests subject to commercial logging, and of monoculture plantations in particular, will always be significantly less on average (~40 to 60 per cent depending on the intensity of land use and forest type) than the carbon stock of natural, undisturbed forests." [p.6]. IPCC figures taken from Mackey. The Forestry Tasmania figures (p9) are for 'commercial forest'. Fullcam (a fully integrated Carbon Accounting Model, used by Australia's national carbon accounting system) figures are derived from Table 13 (p.16) in Forestry Tasmania report. Figures for Forestry Tasmania appear to be for living trees only, though this is not explicitly stated.

Paul, et al, (2004) NCAS technical report on soil carbon calculated debris – leaves, bark and wood – accumulates at about 5t per hectare per year, which decomposes into CO2 + soil carbon. Soil carbon oxidises very slowly over time (or rapidly if disturbed and burnt).

Policy

The federal government's green paper on carbon trading proposes an opt-in arrangement for forestry. Carbon accounting is difficult, as indicated by the widely different estimates for carbon stocks and uptake rates. However, it is perhaps surprising that even government bodies seem to ignore their own emissions.

References

Mackey, B.; H. Keith, S.L. Berry, and D.B. Lindenmayer (2008), Green carbon : the role of natural forests in carbon storage. Part 1, A green carbon account of Australia's south-eastern Eucalypt forest, and policy implications. ANU. Accessible at http://epress.anu.edu.au/green_carbon_citation.html

Tasmanian Public Land Use Commission (1996), Tasmanian Regional Forestry Agreement

Assessment of Ecologically Sustainable Forest Management Systems and Processes: Independent Expert Advisory Group Preliminary Report, Background Report Part E. Hobart

MBAC Consulting (2007). Forestry Tasmania's Carbon Position. Forestry Tasmania (2007). Accessible at www.forestrytas.com.au/uploads/File/pdf/2007-75%20FT%20Carbon%20Report%20Dec%202007.pdf

Paul, K., P. Polglase, J. Bauhus, J. Raison and P. Khanna (2004). Technical Report 40 - Modelling Change in Litter and Soil Carbon Following Afforestation or Reforestation: Calibration of the FullCAM 'Beta' Model. National Carbon

Accounting System. Accessible at http://www.climatechange.gov.au/ncas/reports/tr40final.html

Australian Greenhouse Office (2005), Greenhouse Gas Emissions from Land Use Change in Australia: Results of the National Carbon Accounting System 1988-2003, NCAS, Accessible at http://www.climatechange.gov.au/ncas/reports/ncasresults.html

All sites last accessed November 2008

Contribution by: Roger Martin (29/11/2008)

Australia in top 5 for environmental exploitation

29 Oct 2008

Australian's exploitation of the environment is worse then ever, with the nation now boasting the fifth largest ecological footprint per capita in the world - up from sixth worst just two years ago - according to a major international report released today.

WWF's *Living Planet Report*, the organisation's biennial assessment of the state of the natural world, paints a bleak picture for Australia, showing declining wildlife, a continued reduction in natural resources and accelerating waste of remaining natural resources.

Each Australian uses more land and water per person than the UK, China, Russia and India and it now takes 7.81 hectares to maintain the lifestyle of each Australian - up from 6.76 hectares per person in 2006. Only the United Arab Emirates, USA, Kuwait and Denmark rated worse.

"We cannot ignore the dire picture this report paints for Australia if we continue to exploit our natural resources without any thought for the future," said Greg Bourne, CEO, WWF-Australia.

"We currently have the technology and capital to turn around our destructive excesses - the real question is, do we have the will?

"Industry and Government must take urgent action to preserve Australia's natural resources that remain," he said.

Australia's carbon emissions, along with its cropping and grazing practices are the largest contributors to our massive ecological footprint, together accounting for 86 per cent of the total.

The nation's water use is more than the global average and our agricultural industries use more water for production than any other industry sector in the country.

Australia's native species continue to decline at an alarming rate due to habitat loss and increased competition from feral animals and exotic plants. There has been a 24 per cent decline in mammals, a 13 per cent decline in birds and a six per cent decline in reptile species since white settlement.

According to Mr Bourne, preserving our environment is vital to maintain our economic prosperity. He said agri-businesses were already learning the hard way how exploitation of the environment could endanger the future viability of rural economies.

"The unfolding disaster in the Murray-Darling Basin shows what happens when we continue to overdraw on the environment," said Mr Bourne. He outlined that industries with an eye on sustainability would be the only winners in future and offered Australians the best chance of maintaining their high standard of living.

"The current financial crisis, like all those before it, will pass but the threats presented by global warming will continue to grow if we do nothing," said Mr Bourne said.

"We must act now to reduce our emissions by 25 per cent by 2020, so that our children and grandchildren won't pay a grim cost for the waste of this generation as it continues to overdraw on the environment.

Key Australian statistics from the Living Planet Report:

Living Species

- In Australia, 91 mammal species are listed as threatened and 27 are extinct.

For birds the numbers are 108 threatened and 23 are extinct and even 53 reptile species are under threat.

- The key reasons for the loss of species are habitat loss, invasive alien species, over exploitation and pollution.

Biocapacity

- Australia has the fourth greatest biocapacity in the world. It is more than 150 per cent greater than the amount we currently use.
- However, this ecological asset declines every year and if there is no alteration in the current trends Australians will be using more than we have in around 50 years.

Water Footprint

- Our water footprint of 1.39 million litres used by each person every year is higher than the world average of 1.24 million litres per person per year.
- Most of our water is used in agriculture. Australia has the 22nd highest use of water for production in the world and 15th for use in agriculture.

Further Information is available from: Alvin Stone, WWF-Australia Press Office. Phone: 02 8202 1259 or mobile 0410 221 068

Turnover in the Dow Jones Sustainability Index. Review 2008

September 2008

SAM, Dow Jones Indexes and STOXX Ltd. announced the results of their annual review of the Dow Jones Sustainability and Dow Jones STOXX Sustainability Indexes at the beginning of September. Effective on 22 September, 33 companies will be added to the Dow Jones Sustainability World Index (DJSI World), while 25 firms will be deleted. This brings the number of worldwide sustainability leaders included in the DJSI World to 320.

The pan-European Dow Jones STOXX Sustainability Index grows from 153 to 162 members following the addition of 30 companies and the removal of 21. The number of members of the Dow Jones Sustainability North America Index rises from 116 to 125 with 18 companies being added and 9 excluded. The new makeup of the indexes is the result of the 10th annual SAM assessment. The DJSI family provides an increasing number of asset managers with objective and professional benchmarks for sustainability investments.

For further information about the additions and deletions in your country see: Dow Jones Sustainability Indexes

http://www.sustainability-indexes.com/djsi_pdf/news/PressReleases/SAM_PressReleases_080904_Review08.pdf

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Global Reporting Initiative establishes new Australian base at St James Ethics Centre

17 October 2008, Sydney

The Global Reporting Initiative (GRI) and St James Ethics Centre (the Centre) have signed an agreement to establish an Australian base for GRI.

GRI is the developer of the world's most widely-used sustainability reporting guidelines – the G3 Guidelines - that allow companies and other organizations to make meaningful public transparent disclosure on their economic, environmental and social performance. Over 1600 organizations globally use the Guidelines as the framework through which to disclose their sustainability performance.

The G3 reporting framework sets out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. Taken together, this information is increasingly demanded by consumers, employees, industrial buyers, investment analysts and NGOs when making decisions about whether or not to buy from, work for or invest in a particular firm.

"In the broader context of market meltdown and climate change concerns the importance of trusted, responsible, sustainable and transparent business practice has never been

greater" says Dr Simon Longstaff, Executive Director, St James Ethics Centre.

Australia is already a regional leader – it is currently in the top five countries globally in terms of the number of sustainability reports produced by organizations based there.

"Australia has much to contribute in this space" says Rosemary Sainty, Head Responsible Business Practice at the Centre, "and we are keen to see Australia further grow as a trusted regional hub for business".

GRI is a network organization. In developing relevant guidance for the disclosure of sustainability performance it brings together businesses, NGOs and Civil Society Organizations, academics, trade unions and other labour organizations and other stakeholders. In having a permanent Australian base GRI seeks to further engage a wide group of such stakeholders in the region.

"With this collaboration with the SJEC, we hope to strengthen and broaden the active and dynamic community in Australia that create, read and use sustainability reports," said Leontien Plugge, Network Relations Manager at GRI.

GRI chose to partner with St James Ethics Centre due to its strong links with key players in regional corporate responsibility and sustainability, including its trusteeship of the Corporate Responsibility Index (CRI) – an initiative of Business in the Community (UK) and its longstanding partnership with the National Business Leader's Forum on Sustainable Development.

The collaborative initiative will serve to strengthen the collective goals of both organizations – increasing the uptake of responsible business practice and making reporting on economic, environmental and social performance by all organizations as routine and comparable as financial reporting.

GRI and the St James Ethics Centre are grateful to the Australian Federal Government, through Treasury for funding the collaboration as part of the broader Responsible Business Practice funded project.

GRI and the Centre are also delighted to announce that Australia's largest accounting body, CPA Australia, will assist in the resourcing of a position in the newly founded GRI base as part of its commitment to the corporate responsibility agenda.

Its Chief Executive Officer Geoff Rankin says "As a member of the GRI, CPA Australia strongly supports its approach to sustainable business practice. We've brought its leaders to Australia to speak at our congresses so that businesspeople can learn firsthand about the benefits and the importance of the GRI's approach. We are delighted to provide seed funding to help the St James Ethics Centre get an Australian base up and running."

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CSR, Environmental Programs Good for the Bottom Line, Report Finds

GreenBiz.com, 19 November 2008 - With the global financial meltdown sending every company "back to the blackboard," a new report from the Economist Intelligence Unit finds that almost three-quarters of businesses with CSR programs in place are seeing financial benefits as a result of achieving environmental goals

Further information:
http://www.wbcsd.org/includes/getTarget.asp?type=DocDet&id=MzI0MjU

CALLS FOR PAPERS

British Accounting Association Annual Conference 2009 - University of Dundee, UK - 21st - 23rd April 2009
http://www.baa.group.shef.ac.uk/

EMAN 2009 Conference: `*Environmental Accounting - Sustainable Development Indicators*' - Prague, The Czech Republic - 23rd - 24th April 2009
http://www.ea-sdi.ujep.cz/

European Accounting Association (EAA) 32nd Annual Congress - Tampere, Finland - 12th - 15th May 2009
http://www.eaa-online.org/

1st International Conference on Sustainable Management of Public and Not for Profit Organisations Conference - Bologna, Forli Campus, Italy - 1st - 3rd July 2009
http://smog.econ.usyd.edu.au/

15th Annual International Sustainable Development Research Society Annual Conference - Utrecht, The Netherlands - 5th - 8th July 2009
http://www.isdrs.org/

9th Interdisciplinary Perspectives on Accounting Conference (IPA) - Innsbruck University School of Management, Austria - 9th - 11th July 2009. The Emerging Scholars Colloquium will be held on 7th - 8th July 2009
http://www.uibk.ac.at/atr/ipa2009/