

# **DISCLOSURE OF CLIMATE CHANGE-RELATED CORPORATE GOVERNANCE PRACTICES**

Dr. Shamima Haque  
School of Accountancy, Queensland University of Technology  
(Corresponding email: [shamima.haque@qut.edu.au](mailto:shamima.haque@qut.edu.au))

Professor Craig Deegan  
School of Accounting, RMIT University  
(email: [craig.deegan@rmit.edu.au](mailto:craig.deegan@rmit.edu.au))

Associate Professor Robert Inglis  
School of Accounting, RMIT University  
(email: [robert.inglis@rmit.edu.au](mailto:robert.inglis@rmit.edu.au))

# DISCLOSURE OF CLIMATE CHANGE-RELATED CORPORATE GOVERNANCE PRACTICES

## *Abstract*

Based on a survey of climate change experts in different stakeholder groups and interviews with corporate climate change managers, this study provides insights into the gap between what information stakeholders expect and what Australian corporations disclose. This paper focuses on annual reports and sustainability reports with specific reference to the disclosure of climate change-related corporate governance practices. The findings culminate in the refinement of a best practice index for the disclosure of climate-change-related corporate governance practises. Interview results indicate that the low levels of disclosures made by Australian companies may be due to a number of factors. These include a potential expectations gap, the absence of pressure from powerful stakeholders, a concern for stakeholder information overload, the cost of providing information, limited perceived accountability for climate change, and preferring other media for disclosure.

**Keywords:** Climate change; corporate governance; climate change-related disclosure; stakeholders; expectations gap; cost-benefit; accountability; stakeholder power.

## 1. INTRODUCTION

Evidence from the accounting literature highlights an increasing demand from various stakeholder groups for corporate social and environmental performance information (see for example Blacconiere and Patten, 1994; Epstein and Freedman, 1994; Tilt, 1994, 2001; O'Dwyer, Unerman and Hession, 2005). More recently, stakeholder groups including NGOs, consumers, media, the scientific community, shareholders, suppliers, and professionals have highlighted their concern about climate change (Kolk and Pinkse, 2007; Pleon, 2007); a concern that also relates to one of the biggest risks facing business (Garnaut, 2008; CERES, 2002),<sup>1</sup> and which impacts corporate cashflows, profitability and value (Rolph and Prior, 2006). Researchers have argued that stakeholders need specific climate change-related information and, in particular, climate change-related corporate governance information (CERES, 2006; Solomon, 2010). In order to assess potential risks and opportunities, interested stakeholders require knowledge of the policies and procedures (governance structures) an organisation has in place to manage the climate change aspects of its business (climate change-related corporate governance practices) rather than just input or output measures of performance (for example, emission levels, energy consumption, etc). Reflective of the demand for information about an organisation's commitment to climate change, a 2008 report from KPMG International (2008, p.53) stated:

Companies are aware that real measures must be taken to address the problem of climate change, not just band-aid solutions. With the high profile that climate and carbon has presently - and with the shadow of regulation looming - we expect higher disclosure on carbon footprint, risk and related governance.

This view was also expressed by the leading law firm Morgan Lewis (2009, p. 5) which stated:

Disclosure about greenhouse gas emissions and strategies to reduce such emissions may become an expected part of the analysis of a company's material financial risks from climate change... In addition, the companies' disclosures about the roles of their boards of directors concerning climate change and the relationship between officer compensation and environmental performance may lead to demands for similar information from other public companies. Therefore, public companies should consider adopting these management practices and corporate governance measures if they face material financial risks from climate change.

To date, however, there is no known research that specifically investigates what information stakeholders believe companies should disclose in relation to climate change-related corporate governance practices. Also, other than research reported in Haque and Deegan (2010), there is a lack of research about what information company managers consider should be provided to stakeholders. For the purposes of this study, 'climate change-related governance disclosures' refers to corporate disclosures about the policies and procedures that organisations have in place for addressing climate change-related risks and opportunities.

Related research by Haque and Deegan (2010) reported that the level of climate change-related corporate governance disclosures by Australian companies is low. Reviewing a number of best practice guides, together with a review of corporate disclosure practices, Haque and Deegan (2010) synthesised a list of key reporting issues comprising 25 specific issues (referred to as a disclosure index). Using the disclosure index, Haque and Deegan analysed the contents of five of Australia's highest energy using companies' annual reports (from 1992 to 2007) and stand-alone social and environmental reports (from 2002 to 2007) and concluded that there was minimal reporting in relation to climate change-related corporate governance practices, although it has been increasing<sup>2</sup>.

While we have noted calls for increased climate change-related governance disclosures, the results from Haque and Deegan (2010) lead us to the following question: is the apparent lack of climate change-related

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<sup>1</sup> Included within such risks are regulatory risks (e.g. regulation aimed at emissions trading; emissions reductions and increased energy efficiency; regulatory uncertainty and duplication; increased costs and growing compliance costs; mandatory greenhouse and energy reporting), physical risks (e.g. extreme weather events; rising sea levels and water shortages; infrastructure damage and associated costs; availability of water and other resources; increased insurance costs; business disruptions either directly or via the supply chain), and other risks (e.g. change in consumer attitudes and demand; damage to reputation; difficulty in attaining investment) (Labatt and White, 2007; Carbon Disclosure Project, 2008).

<sup>2</sup> The companies in question were BHP Billiton, Caltex, Origin Energy, Rio Tinto and Santos.

corporate governance disclosure a matter of concern? If nobody actually sought or used information about a company's climate change-related corporate governance practices, then perhaps not (although from a sustainability perspective we might be concerned that people did not demand such information). Alternatively, perhaps the initial disclosure index developed and used by Haque and Deegan was incomplete and/or failed to fully capture important items of climate change-related corporate governance, and therefore was not a reasonable basis to assess the extent of corporate disclosure.

With the above issues in mind, in the first stage of this current study, we use the Haque and Deegan disclosure index as a basis to investigate what types of information different groups of 'expert' stakeholders (including institutional investors, government bodies, environmental NGOs, environmental consultancies, researchers, and accounting professionals) believe companies *should* disclose in relation to their climate change-related corporate governance practices. After taking into account the views of the experts, we re-consider the value of the Haque and Deegan index for reporting climate change-related corporate governance practices and the results of their study. In so doing, we extend and refine the index and undertake further analysis of the five companies originally examined by Haque and Deegan.

In the second stage of this study we propose a range of reasons for the low level of climate change-related corporate governance disclosures by Australian companies. We then seek to examine the plausibility of a range of explanations by undertaking in-depth interviews with senior executives from a sample of Australian publicly-listed companies.

**2. CLIMATE CHANGE-RELATED CORPORATE GOVERNANCE-MEASURING DISCLOSURE IN AUSTRALIAN COMPANIES** Previous research in the social and environmental accounting area has either used and/or developed disclosure indices for the purpose of classifying and measuring corporate social and environmental disclosures (see for example Ernst and Ernst, 1978; Guthrie and Parker 1990; Gray et al., 1995a; Hackston and Milne, 1996; Berthelot, Cormier and Magnan, 2003; Islam and Deegan, 2008). A review of these studies indicates that the respective indices were not sufficiently refined in terms of addressing the 'climate change' issue, and even less so in terms of the more focussed area of 'climate change-related corporate governance practices'. Haque and Deegan (2010) developed a disclosure index by identifying a list of climate change-related corporate governance practices from existing 'best practice governance guides' which were created by various research organisations and NGOs deemed to have expertise in the area<sup>3</sup>. The best practice guides synthesised by Haque and Deegan (2010) were released by CERES (2006), AMP Capital (2002), Business for Social Responsibility (2007), Carbon Disclosure Project (2006, 2007), GRI and KPMG (2007) and the Association of Chartered Certified Accountants (ACCA) (2007)<sup>4</sup>. These documents identified the governance practices one would expect to find in an organisation that was committed to minimising its impact on climate change. This index was then used by Haque and Deegan to review annual reports and other stand-alone reports of five major Australian emission-intensive companies' (listed on the Australian Securities Exchange (ASX)) over an extended period of 16 years (from 1992 to 2007). The study also identified additional disclosures items that warranted inclusion within the index. Haque and Deegan (2010) developed a final list of twenty-five specific issues under eight general categories (2010, p. 323):

*Drawing from these sources, we developed a list of climate change-related governance disclosure items. The basis for including a particular item in our disclosure index was that at least two of the six reports we reviewed must have included the item within their particular release or recommendations. After the commencement of the process of reviewing and coding disclosures from annual and sustainability reports, a limited number of additional*

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<sup>3</sup> That is, these guides were not specifically about disclosure but focussed on identifying what governance practices *should* be in place if an organisation was serious about attending to climate change. However, these guides provide the basis for a disclosure index given that if an organisation produced information about whether the particular governance policies were in place, or not, then an interested stakeholder would then be better placed to assess the climate change-related risks and opportunities associated with the organisation.

<sup>4</sup> Please see our list of references for details of the respective guides.

*climate change-related governance disclosure items (4) were identified. Consequently, the list incorporated these new items that give us a final index of 25 specific climate change-related governance issues under eight general themes.*

The index developed by Haque and Deegan (2010) is shown within Table 3<sup>5</sup>.

In order to assess whether Australian disclosures are below what might be described as ‘best practice’, this current study investigates whether climate change experts from various stakeholder groups considered the items in Haque and Deegan’s (2010) index to be important for assessing organisations’ commitment to managing climate change risks and opportunities. We embrace the view that, if these stakeholder groups consider these disclosures as necessary for evaluating the risks and opportunities associated with climate change, then the large Australian companies reviewed by Haque and Deegan had deficient disclosures.

### **3. RESEARCH METHODS**

There are two main aims in this study. First, to investigate the information different groups of stakeholders believe companies should disclose in relation to climate change-related corporate governance practices. We seek to validate and refine an existing climate change-related corporate governance index, which then forms the basis of a ‘best practice’ disclosure index. Second, we investigate the reasons for the potential low level of climate change-related corporate governance disclosures made by Australian companies through interviews with Australian company executives. The methods used to investigate these two aims are considered separately; the first in Section 4.1 and the second in Section 6.3.

#### **3.1 Survey of stakeholders**

This study utilised an online survey instrument to investigate whether climate change experts from various stakeholder groups consider the issues and items in the Haque and Deegan (2010) index – which was primarily built from a synthesis of various ‘best practice’ governance guides - to be important for assessing organisations’ commitment to managing climate change risks and opportunities. The survey also provides the opportunity for respondents to identify and discuss other issues of importance that they consider should be included in a ‘best practice’ climate change-related corporate governance index.

##### **3.1.1 Identifying the stakeholder groups and participants**

Based on a review of prior literature and numerous media releases and public documents, stakeholders who focus on environmental issues, particularly the issue of climate change, were identified (Friedman and Miles, 2001; Thompson and Cowton, 2004; ACF, 2006; Preston and Jones, 2006; Stern, 2006; CPA Australia, 2007; Hall and Taplin, 2007; Garnaut, 2008; KPMG, 2008; Deegan, 2010; Solomon, 2010). The organisations identified include both locally-based (Australian) and global organisations and includes individuals within the organisations who would appreciate what elements should be present if a corporate governance system is to adequately address the various risks associated with climate change.

Potential survey participants were identified from the websites of the respective stakeholder organisations. For example, we selected people in charge of organisations’ corporate environmental responsibility, climate change and sustainability services, climate change and risk management, greenhouse and energy reporting taskforce, climate change campaigns, and so forth. We balanced the selection of participants by drawing on a range of organisational backgrounds. We wanted to test whether the diversity in stakeholder background influences perceptions about the importance of suggested disclosure items. A list of 110 potential participants was compiled and they were all invited, through email, to participate.

##### **3.1.2 Questionnaire design, administration, and analysis**

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<sup>5</sup> Table 3 also incorporates additional items that we have added to the index as a result of the research conducted for this paper. These additional items are shown in italics within the table.

The questionnaire contained two sections. The first section requested demographic data in order to obtain a profile of the respondents. The second section sought respondents' views on climate change-related corporate governance disclosure practices, with respondents asked to rate each of the twenty five issues in the index in terms of its importance in enabling a reader to assess corporate risks and opportunities. In this survey we used a five point Likert-scale with one representing 'unimportant', three representing 'important', and five representing 'very important'. In addition, a number of open-ended questions were included in the questionnaire to give each respondent the opportunity to include other important issues they believe organisations need to address. Provision was made for respondents to make any additional comments on the issues being covered.

The questionnaire was pre-tested by a number of university academics and researchers knowledgeable about sustainability issues and questionnaire and survey development. We invited eight academics and researchers, not involved in the final sample, to comment on the questionnaire with respect to issues such as layout, style and wording. Following the pilot phase, the survey was revised and minor changes made. After piloting, the questionnaire was administered via a link contained in an introductory email to potential respondents through the on-line survey tool SurveyMonkey ([www.surveymonkey.com](http://www.surveymonkey.com)). Four weeks after the initial mail-out, a reminder email was sent to all potential participants. A descriptive analysis of quantitative data from the questionnaire was first conducted using SPSS 16.0 software. Qualitative analysis of data from open-ended sections of the questionnaire was conducted.

## **4. SURVEY DATA ANALYSIS AND DISCUSSION**

### **4.1 Respondents**

We surveyed 110 experts from different stakeholder groups. A total of 50 responses were received. Of these, four respondents filled in only the demographic part of the questionnaire, and therefore, were eliminated from the final sample. Two respondents declined to complete the questionnaire. A further two responses were received from individuals who advised they were no longer working in the area of environment/climate change, and three advised that they were on extended leave during the time of survey and unable to respond. This left a sample of 39 (a response rate of 35%). Of these, twenty-four responses were received within the first three weeks of the survey. A further fifteen responses were received after three weeks, and once a reminder e-mail was sent. A total response rate of 35% compares favourably to prior related research (Deegan and Rankin, 1997; Deegan and Rankin, 1999).

The problem of non-response error in this research was tested with late respondents being used as a proxy for non-respondents (Oppenheim, 1992). We employed the Mann-Whitney U test and found that there was no significant difference in the answers or demographic characteristics between early and late respondents.

The respondents can be divided into seven broad stakeholder groups: accounting professionals, environmental NGOs, environmental consultancies, government bodies, institutional investors, researcher organisations/researchers, and others (including consumer associations and media). The number of responses received per stakeholder group, and a full listing of all respondents (including their positions and organisations), is located in *Appendix 1*<sup>6</sup>.

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<sup>6</sup> The Appendix provides detailed information about the respondents. While it is somewhat uncommon to provide such detail about respondents, because we are developing a 'best practice' disclosure index on the basis of 'experts' views', we believe it is useful to provide this information as the 'value' of the index will be judged partly by who was involved in developing it.

## 4.2 Responses from the experts

The percentage distribution and average score given by all the respondents to the 25 specific climate change-related corporate governance issues under eight general categories are presented in *Table 1*. (Details of the abbreviations for the specific issues are shown Table 3).

### [Insert Table 1 about here]

All twenty-five issues in the climate change-related corporate governance index (as developed by Haque and Deegan, 2010) are perceived as important by the experts with no mean less than 3.5. Hence, the result of this form of interrogation suggests that the disclosure index that was developed from a synthesis of expert guides is a useful basis for assessing the risks and opportunities associated with climate change. Of the 25 five-point scale questions, in most cases (17 out of 25) the standard deviation was smaller than 1, providing evidence of the fairly equal ranking of the respective questions. There was a slight variation in the aggregate responses to specific issues across the general categories. Board oversight, senior management engagement, emissions accounting, and potential liability-related issues (mean score ranged from 3.6 to 4.5) were relatively more important compared to the issues in the categories related to research and development, reporting/benchmarking, carbon pricing and trading, and external affairs (mean score ranged from 3.5 to 4.0)<sup>7</sup>.

Further analysis of the rankings allocated to the various climate change-related corporate governance disclosure issues was undertaken, classifying the results under each group of experts and providing the respective mean scores to each specific issue (Table 2). The results reported in Table 2 indicate that there was much consistency in the responses among the expert groups regarding the issues within the index<sup>8</sup>. It is interesting to note that there is little difference in the rankings provided by the different stakeholder groups.

### [Insert Table 2 about here]

Overall, we find a high level of homogeneity among the experts' opinions regarding the importance of each climate change-related corporate governance disclosure issue. This provides evidence that the disclosure index developed by Haque and Deegan (from various expert guides) has some validity. However, in order to develop a 'best practice' disclosure index, we sought to identify any additional disclosure issues the experts considered to be important for inclusion.

## 4.3 Discussion of the findings for each category

The respondents were asked to identify additional items they perceive as important climate change-related corporate governance disclosures, as well as offer any comments in relation to each of our categories of disclosure. Consequently, any additionally important issues cited by two or more respondents will be included in the climate change-related corporate governance index we are developing. The discussion below examines the data in more detail by analysing issues within the eight broad categories.

### 4.3.1 Board Oversight

Our first broad category of disclosures related to 'board oversight' and consisted of three specific issues. There was consensus among the experts that the board-related issues are important information to be disclosed by business organisations (as shown in *Table 1*, the mean ranged from 3.8 to 4.5). One respondent highlighted that it is the board that "should ensure that all potentially material climate risks for the organisation are being addressed and disclosed" (environmental NGO). Another respondent from the environmental NGOs group indicated that:

Internally, as we make a transition to a low carbon economy, I would envisage the Board to be responsible for final decisions relating to the adoption of energy efficiency technologies and green energy contracts to replace brown energy off the grid.

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<sup>7</sup> Because of the limited sample size, it does not allow for serious statistical analysis. However, the survey data was further analysed using non-parametric testing, specifically the Kruskal-Wallis one-way ANOVA test, to identify whether there was differences in the relative importance of the respective information items. The tests indicated no statistically significant differences in the relative importance of the respective information items (p=0.462).

<sup>8</sup> A Kruskal-Wallis one-way ANOVA test was performed to determine if there was a significant difference in opinion among the various groups of experts surveyed and we found few significant differences.

### **Other board-related disclosures suggested by the respondents**

An important board-related issue raised by four respondents was that “the board should disclose the potential financial implications of any climate change policy affecting the company (for example, any proposed Carbon Pollution Reduction Scheme)”. Consequently, we incorporated this information item in our disclosure index.

### **4.3.2 Senior Management Engagement and Responsibility**

In this category, five items were rated. The mean ranged from 3.7 to 4.1 out of 5 (see *Table 1*). As one respondent from the accounting professional group stated:

The executive should be ensuring that environmental issues, including climate change, are incorporated into business decision-making as a matter of policy.

### **Other management-related disclosures suggested by the respondents**

Three respondents, however, took a broader view related to the issue **MNGRES8**, linking the general environmental targets with the management remuneration policy. Their views are reflected in the following quote:

Even though I believe the executive officers and senior managers’ compensation should be linked to the attainment of GHG targets, I believe this should be linked to broader environmental targets; otherwise, a perverse distortion could occur.

Consequently, we incorporated this information item into our index. Specifically, we added the requirement that disclosure should identify whether “the executive officers’ and/or senior managers’ compensation is/is not linked to attainment of broader environmental targets/ goals”.

### **4.3.3 Emissions Accounting**

Our next category, ‘emissions accounting’, consists of 8 specific issues. The mean score for this category ranged from 3.8 to 4.5 out of 5 (see *Table 1*), which indicates a high level of importance associated with each disclosure item. While the respondents acknowledged the need for disclosing the amount of GHG emissions, they also highlighted that companies need to calculate total emissions rather than emissions per tonne of product, or per dollar of sales.

### **Other emissions accounting-related disclosures suggested by the respondents**

Two respondents raised the issue of having standards for GHG product-labelling. As one of the experts from an environmental NGO stated:

It’s important that in any product information provided there is a standard form of communication which is accredited; otherwise this risks confusing consumers. Also, GHG emissions shouldn’t be the sole lens through which product choice is evaluated. Other environmental impacts are just as, if not more, important in some products, and ignoring them can lead to perverse outcomes.

We added another issue in our disclosure index, this being: “an organisation has/does not have an accredited labelling standard for providing information about the environmental impacts of the products.”

### **4.3.4 Research and Development**

All the issues under this category are considered as at least important and were rated from 3.6 to 4.0 (see *Table 1*). According to one of the respondents from the accounting professional group, “R&D is becoming a real opportunity for companies’ long term sustainability”. Another respondent argued that “it is the actual investment in, and implementation of, successful new low emissions technology” that should be counted.

### **4.3.5 Potential Liability Reduction**



Respondents rated the issue of pursuing ‘strategies to minimise exposure to potential regulatory risks and physical threats to assets relating to climate change’ as very important (mean 4.5, see *Table 1*). As companies are moving towards an emerging regulatory economy, it would put companies at risk *not* to take action. This view was reflected in the following statement:

Some companies are placing themselves at risk in the longer term by their lack of action today when it may be argued in the future that there was adequate evidence that action was required despite ongoing uncertainties. Liabilities may relate to failure to prepare for changed environmental conditions, changed energy futures, or the allowance of the dominance of ideologically-based and vested interests over more responsive, community-relevant action. (Climate change consultant)

### **Other liability-related disclosures suggested by the respondents**

A new issue highlighted by three of the respondents related to ‘legal liability’. As indicated by one environmental NGO:

Climate risk is due to both the direct impacts of a changing climate as well as regulatory risks due to the inevitable imposition of carbon pricing. In addition, there are legal liability risks which have not yet been realised but will be in the future as the scientific relationship between emissions and climate impacts becomes clearer.

Another respondent stated that:

Legal liability should be minimised which includes the possibility of litigation being brought against a company for its impact on climate change (Climate change consultant).

Therefore, we added this issue in our index. We included it as “an organisation has in place/ does not have in place formal strategies to minimise the possibility of litigation being brought for its impact on climate change”.

### **4.3.6 Reporting/benchmarking**

This category consists of two issues, rated as 3.8 and 4.0 (see *Table 1*). One respondent argued that reporting guidelines such as the GHG Protocol and Australian National Greenhouse and Energy Reporting (NGER) Act are more important for companies than the GRI, whereas others argued that mandatory reporting should be triggered for large GHG emitters.

### **Other benchmarking-related disclosures suggested by the respondents**

An important concern arising from the comments of a number of experts is that benchmarking should come from industry associations and should evolve overtime. Consequently we included a new disclosure issue about industry benchmarking in the index, that is, “the organisation employs/does not employ industry benchmarking standards (if any) for reducing GHG emissions.”

### **4.3.7 Carbon Pricing and Trading**

The mean score of two issues under this category ranged between 3.5 and 3.6 (see *Table 1*). Respondents also perceived that companies can play a role to shape future government positions on this issue, thereby creating possible opportunities:

Carbon trading is but one of many mechanisms that will be required to change emissions profiles globally and nationally. To concentrate on the trading scheme alone would be a big mistake. Intervention will emphasise energy efficiency, alternative energy sources, or behavioural change. All of these offer opportunities for companies, if they are forward thinking and threats if they are not. In some cases, these options are not in the control of the company but they can play a part in the formulation of government positions on climate change. (Climate change consultant)

### **4.3.8 External Affairs**

Although rated as important (mean 3.7 and 3.6 (see *Table 1*), respondents generally considered that external affairs issues are not easy for the companies because of a lack of proper guidance. As argued by one of the respondents:

These are noble things but when stated in company reports are usually shallow/lip service. It is very difficult to provide clear guidance on how a company can or should report on these things. For an organisation with a retail interface undertaking issue 25 (i.e. An organisation has a policy to promote climate friendly behaviour within the community by raising awareness through environmental sustainability education) it would be reasonably easy (e.g. Woolworths), but for someone without this interface (e.g. Cochlear), any stakeholder awareness raising activity is almost “philanthropic”... i.e. it’s not directly adding value to the company’s brand. (Env. Consultancy)

### **Other external affairs-related disclosures suggested by the respondents**

One additional issue emerged from the comments of the three respondents relating to reporting about political lobbying on climate change (to ensure transparency):

Positive contributions by business to public policy development is critical, but unfortunately businesses never report on the full scope and nature of their lobbying activities. (Environmental NGO)

Its policy position needs to be consistent with its political lobbying. Many organisations can make a public statement about their collaboration to support solutions; however, their political lobbying is contrary to this. So a statement about their political lobbying position may be beneficial. (Environmental NGO)

Therefore, our disclosure index added an additional issue, this being “information about climate change-related political lobbying”.

### **4.4 The final version of the climate change-related corporate governance disclosure index**

Reviewing the suggestions and comments made by the experts, we have found six additional items that should be incorporated in a comprehensive disclosure index. *Table 3* represents the revised and final version of the climate change-related corporate governance disclosure index, including the additional issues (presented in bold italics) raised by the respondents.

#### **[Insert Table 3 about here]**

This refined and validated index of climate change-related corporate governance issues is the most complete index yet developed. While it will have its own limitations, it provides a useful basis for evaluating disclosures and a solid basis for other researchers and practitioners to refine and develop. According to the experts sampled in this study, firms should address the respective issues and disclose related information to assist users in the assessment of associated risks such as regulatory, physical, and business risks. Again, this index provides a benchmark of items that firms can use to assess the potential completeness of their own climate change-related corporate governance practices, and decide whether to make specific public disclosures, or consider and explain publicly why certain items are not relevant for disclosure.

But how many items within our index do organisations currently disclose? The majority of these items in the disclosure index (apart from 6 items) were in the original index developed by Haque and Deegan (2010) and applied against the annual reports and sustainability reports of five of Australia’s most energy intensive companies over the 1992-2007 period. As the authors reported, most companies (other than Rio Tinto, which disclosed 16 items in 2007) failed to disclose the majority of the items in the index across the years, although disclosure increased across time. For example, Caltex disclosed 7 out of 25 items in 2007, which was its highest level of disclosure across the period of the analysis (in the earlier years of their analysis, Caltex disclosed none of the items). We also checked whether any of the additional six items in our revised index were disclosed in the most recent annual and sustainability reports of these five companies (2011); none of the companies had made any disclosures in relation to the 6 new items.

Hence, drawing on the results of Haque and Deegan (2010), plus the further testing of our ‘refined index’, the results indicate that many ‘best practice’ disclosures are being omitted from annual and sustainability

reports. Why is this so? Is it realistic to expect companies to make all, or even most of these disclosures? Are there specific factors that stop or hinder companies from making such disclosures?

In the second stage of this study we now consider possible reasons for the lack of disclosure in relation to climate change-related corporate governance practices<sup>9</sup>.

## **5. POSSIBLE EXPLANATIONS FOR THE LOW LEVEL OF CLIMATE CHANGE-RELATED CORPORATE GOVERNANCE DISCLOSURES: MANAGERIAL PERSPECTIVE**

There are a number of plausible reasons for the lack of disclosure relating to climate change-related corporate governance practices. While not all-inclusive, the following discussion serves as a starting point for explaining the low level of corporate disclosure and as a guide for developing propositions that we investigate through interviews with senior corporate executives.

### **5.1 The notion of an expectations gap**

An expectations gap refers to a difference between the expectations users have in relation to particular information, and the expectations preparers believe users have with regard to that information (Deegan and Rankin 1999). Extant research in the accounting literature about the expectations gap falls into two broad areas: the audit expectations gap and the expectations gap relating to financial statements (Higson, 2003). Research concerning the existence of an audit expectations gap can be classified into three categories: 1) differences in perceptions between auditors and financial statement users regarding what auditors' should do (Lowe and Pany, 1993; Monroe and Woodliff, 1994; Porter, 1993; Epstein and Geiger, 1994); 2) differences in perceptions between auditors and financial statement users regarding what auditors' are able to accomplish (Libby, 1979; Bailey, 1981; Nair and Rittenberg, 1987; Porter, 1993); and 3) differences in the actual knowledge levels of both auditors and financial statement users regarding the audit situation (Hatherly, Innes and Brown, 1992; Porter, 1993).

Previous studies investigating the expectations gap relating to financial statements described the difference between the expectations of users and preparers of financial reports (AAA, 1990; Accountancy, 1993: 1; ASCPA and ICAA, 1994; Deegan and Rankin, 1999; the Financial Reporting Commission, 1992: 53; Liggio, 1974; Independent Audit Limited, 2006). For example, the Australian Society of Certified Practising Accountants and the Institute of Chartered Accountants (ASCPA and ICAA) (1994) describe the difference between the expectations of financial report users and the accounting profession with respect to the perceived quality of financial reporting and auditing services. Another report provided by Independent Audit Limited and ACCA found that there is a substantial expectations gap between the financial information provided by companies and the information sought by users and interested parties (Independent Audit Limited, 2006).

In considering the expectations gap of users and preparers of social and environmental information, very little research has been reported. An exception was the research undertaken by Deegan and Rankin (1999) who detailed the existence of an expectations gap between the users and preparers of annual reports in relation to corporate environmental performance information: users perceived environmental information to be more important relative to the preparers' perspective of its importance to report users' decision-making processes.

One reason why corporate managers might disclose less information than that considered important by stakeholders is that these managers are unaware of the perceived importance of the information items to the users. Consistent with the notion of an expectations gap, there may be a gap between the expectations

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<sup>9</sup> We acknowledge that there is the obvious possibility in studies such as this that users of information may tend to overstate their demand, or need, for specific information – particularly if it can be obtained at no direct cost to themselves. Therefore, a 'free-rider' problem may arise as users demand more than managers are prepared to voluntarily disclose. Further, it is to be expected that the demands of our 'expert' user groups would exceed the demands of the 'average' users or members of the community in general. Nevertheless, instances of very low or zero disclosure (as was the case for Caltex in a number of years, as reported earlier in this paper) would arguably not satisfy most stakeholders' needs.

stakeholders have with regard to the importance of climate change-related corporate governance information, and the expectations corporate managers believe stakeholders have in relation to that information. This discussion leads to the following proposition:

P1: A low level of climate change-related corporate governance disclosures by the sample companies is due to managers' perceptions that various stakeholder groups do not demand such information.

## **5.2 Cost-benefit analysis**

Deegan and Rankin (1999) argued that an important consideration in a company's decision to disclose environmental information within the annual report is the cost of gathering and presenting such information when compared to the perceived benefits of doing so' (p. 320). Similarly, Gray, Radebaugh and Roberts (1990, p. 617) found that voluntary disclosures depend largely upon the 'outcome of an assessment of the economic consequences of the proposed' disclosure items.

Corporate environmental information tends to be provided free of charge to the users of such information, with companies bearing the full cost of disclosure (Solomon, 2000; Solomon, 2010). Insights from previous studies on cost-benefit analysis indicate that information costs do influence the levels of corporate disclosure (Chandra and Greenball, 1977; Gray and Roberts, 1989; Entwistle, 1997).

There is currently no nationally consistent approach or regulatory requirement for reporting of climate change-related corporate governance information in Australia. Higher levels of climate change-related data integrity and accuracy increase the reporting costs for individual entities (Department of Climate Change, 2009). There might also be a commercial impact of potential energy consumption and production that suggests a cost associated with disclosure of energy emissions that subsequently leads to commercial disadvantage (EPA Victoria, 2006). Other costs include the possibility that various stakeholders will use information provided by the company to take actions (including legal actions) against the company due to the perceived shortcomings in its environmental performance (Deegan and Rankin, 1999). There may also be some potential reputation cost (EPA Victoria, 2006).

Adams (2002) argued that the perceptions of companies about the business benefits of reporting influence the extent and nature of corporate social reporting. The benefits to business of disclosing climate change-related information may include an improvement in the management of the organisation's processes, and greater regulatory certainty (Deegan and Rankin, 1999; EPA Victoria, 2006). In addition, providing information helps to build credibility and trust within the community, along with increased investor support for the companies (EPA Victoria, 2006; Solomon, 2010).

Comparing the perceived costs and benefits associated with reporting is an important exercise for company managers. Therefore, deciding not to disclose particular information might be deemed by managers to be optimal in terms of enhancing the value of the company. This discussion leads to the following proposition:

P2: A low level of climate change-related corporate governance disclosures by the sample companies is due to a perception by corporate managers that the costs associated with making such disclosures exceed the related benefits.

## **5.3 The notion of Accountability**

The cost-benefit rationale discussed above is consistent with a view embraced within the positive accounting theory perspective (Watts and Zimmerman, 1978; Cormier and Magnan, 1999; Hope, 2003), where managers are portrayed as rational actors who calculate the net benefits of voluntary disclosure in order to decide whether to report, or not. This idea of assessing costs and benefits of disclosure is, however, counter to the notion of accountability which, by contrast, emphasises "the duty to provide an account or reckoning of those actions for which one is held responsible" (Gray, Owen and Adams, 1996, p. 38).

Gray et al. (1991) applied the notion of accountability to corporate social reporting and argue that the role of corporate social reporting is to inform society – not just shareholders - about the extent to which the organisation meets the responsibilities expected of it. The provision of voluntary reporting has net

benefits in that stakeholders' information needs are met and accountability requirements of the company are discharged. Corporate social reporting is therefore assumed to be responsibility-driven rather than demand or survival-driven, which implies that people in society have a right to be informed about certain aspects of an organisation's operations.

Deegan (2009) suggests that the right to information grounded in an accountability perspective as outlined by Gray et al. (1991; 1996a) is consistent with the normative branch of stakeholder theory. Based on ethical principles, normative stakeholder theory focuses on how managers *should* act. This approach provides the moral basis for stakeholder theory by stating, "Do (Don't do) this because it is the right (wrong) thing to do" (Donaldson and Preston, 1995, p.72). Normative stakeholder theory attempts to lay the ethical foundation for the suggestion that an organisation has an obligation to recognise the demands of all stakeholders.

Given that management is ultimately responsible for their company's contribution to global climate change, and implicitly accountable for implementing climate change-related corporate governance practices, the accountability perspective would argue that companies should account for their actions or inactions in some form of report provided to the stakeholders. However, the current climate change-related corporate governance reporting practices of Australian companies (Haque and Deegan, 2010) offers little evidence to demonstrate that such a normative duty towards stakeholders has been embraced. Therefore, perhaps one reason for the relatively low level of disclosure is that managers consider they have limited accountability in relation to the governance policies they have in place to address climate change. This discussion leads to the following proposition:

P3: A low level of climate change-related corporate governance disclosures by the sample companies is due to a perception by corporate managers that they have limited accountability (obligations or duties to report) in respect of this facet of their operations.

#### **5.4 Stakeholder power**

While the normative branch of stakeholder theory (on which the notion of 'accountability' is based) emphasises that all stakeholders have the right to be treated fairly by an organisation, it does not consider issues of stakeholder power (Deegan, 2009). A counter view is that organisations will respond to the expectations of those stakeholders with the most power over the organisation (Buhr, 2002; Baily, Harte and Sugden, 2000; Deegan and Blomquist, 2006).

The notion of stakeholder power is evident within the managerial branch of stakeholder theory which predicts that management is more likely to focus on meeting the expectations of powerful stakeholders who have the greatest potential to influence organisations' ability to generate maximum financial returns. The power of a particular stakeholder to influence corporate management depends on the extent that the stakeholder has control over the resources required by the organisation (Ullmann, 1985; Mitchell, Agle and Wood, 1997). With this perspective in mind, if managers perceive particular stakeholders to be both powerful and demanding of information about the policies and procedures that the company has in place to address climate change, then it would disclose information to conform to such demands. This discussion leads to the following proposition:

P4: A low level of climate change-related corporate governance disclosures by the sample companies is due to a perception by corporate managers that those stakeholders considered as powerful in influencing the operations of the entity do not demand, or seek, such disclosures.

In this section we have identified a number of potential reasons why companies' disclosure levels might be low in relation to climate change-related governance practices. Rather than assuming that there is a single reason for a lack of disclosure, it is proposed that there is a range of reasons to explain it. These potential reasons were linked to a potential expectations gap, the cost-benefit rationale, the notion of accountability, and the concept of stakeholder power. This study now explores the plausibility of these potential reasons by interviewing corporate managers from a number of publicly-listed Australian companies.

## **6. RESEARCH METHOD-INTERVIEWS WITH AUSTRALIAN COMPANY EXECUTIVES**

### **6.1. Identifying and selection of participants**

This study selected participants from the companies used in the related study conducted by Haque and Deegan (2010), which investigated the climate change-related corporate governance disclosure practices of five Australian companies: BHP Billiton (manufacturing/mining), Caltex (oil refinery), Origin Energy (oil, gas, electricity), Rio Tinto (manufacturing/mining), and Santos Limited (oil and gas). As indicated in Haque and Deegan (2010), the selection was based on the criteria that the companies operate in industries that would likely be highly exposed to risks and opportunities associated with climate change and consequently more likely to disclose climate change-related governance policies. Their study concluded, however, that these companies provided fairly low levels of disclosure when measured against a disclosure index (Haque and Deegan, 2010). Hence, our intended sample of respondents included managers from companies that have a relatively high exposure to risks associated with climate change as well as being companies that are generally seen to be disclosing low levels of climate change-related governance information.

In identifying company managers who could ably comment on their company's climate change-related corporate governance policies and related reporting practices, a review of the websites of the companies was undertaken. The positions of the selected interviewees reflect their expertise and competency to evaluate the respective company's climate change-related corporate governance practices and related disclosure practices (details of the interviewees appear in *Appendix 2*). With confidentiality in mind, the interviewees are referred to within this study by a coded number, the order of which does not necessarily reflect the order in which they appear in the Appendix<sup>10</sup>.

### **6.2. Interview questions**

An interview guide was prepared (*Appendix 3*), which incorporates open-ended questions designed to encourage discussion about the potential reasons for the lack of climate change-related corporate governance information. Particular questions sought to examine the extent to which the lack of climate change corporate governance disclosure might be explained by the four propositions developed earlier.

### **6.3 Data collection and analysis**

Six in-depth interviews with the representatives of the selected companies were undertaken over a two month period from September 2010 to October 2010<sup>11</sup>. Unfortunately, it was not possible to interview a representative from Caltex<sup>12</sup>. While our sample size is relatively small, we believe that the views provided by the managers of the sample companies (all of which are very large organisations with major exposure to risk and opportunities associated with climate change) provide valuable insights into climate change-related reporting practices. Those who were invited to participate in the interviews received an email invitation that explained the purposes and nature of the research study, along with a sample interview guide. The interviews ranged between 40 to 60 minutes. Four of the six interviews were conducted by telephone<sup>13</sup>. All interviews were tape-recorded with the consent of interviewees, and subsequently transcribed and coded. Following Miles and Huberman (1994), a provisional 'start list' of codes was developed based upon the four key propositions (or themes – expectations, cost/benefit, accountability and power – see section 5) around which interview data was organised (Walker, 1985; Charmaz, 1990; Maxwell, 1996; Creswell, 1998). Additional codes were developed to capture alternative explanations or themes that might emerge from the interview data.

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<sup>10</sup> However, the number allocated to the interviewee will be consistently applied in this paper. For example, while an interviewee might be listed at second position in the Appendix, all quoted responses from that person might be consistently referred to as coming from Interviewee #4.

<sup>11</sup> The companies were BHP Billiton, Origin Energy, Santos Limited, and Rio Tinto.

<sup>12</sup> Various attempts to reach corporate representative from Caltex Limited were made but to no avail.

<sup>13</sup> There is no significant difference between face-to face and telephone interviewing when the nature of the topic does not need the observation of body language for its understanding (Sommer and Sommer 2002; Sturges and Hanrahan 2004).

We have elected to provide detailed quotes from interviewees to make clear our interpretation of the data and allow for consideration of alternative explanations (Ferreira and Merchant, 1992; Deegan and Blomquist, 2006). The quotes we have replicated were those that represent the typical view of the interviewees. Details of any view provided by an interviewee that is in contrast to the other participants are also highlighted.

## 7. INTERVIEW FINDINGS AND DISCUSSION

The interviews began by seeking a general understanding of the companies' rationale for their current level of climate-change corporate governance disclosure. Respondents unanimously indicated that their reporting practices were motivated by increasing stakeholders' interest.

Certainly there is interest from stakeholders. If you go back to the early 2000s, we did not receive many investors' surveys. We did not receive that many questions from the community. Employees were not even interested. But certainly the last ten years have seen an increase in stakeholders' interest, not just about what our carbon emissions are, but what governance policies we use internally to manage our contribution to climate change. (Interviewee #5)

I think we are seeing an increase in requests from the stakeholders for disclosure about how much GHG we emit, how we could reduce the carbon intensity of our products, and how we manage our GHG emissions. In our annual and sustainability reports, the change in reporting is based on the increasing request for information about our performances and targets. (Interviewee #4)

The responses reveal a perceived change in stakeholder's interest that has moved from information about general carbon emissions to information about how companies manage climate change via their governance policies. A range of stakeholders seeking climate-change related corporate governance information were identified:

I suppose the obvious one to come to mind is government. Our community is obviously another significant stakeholder. All the community around our operations are very interested in everything we do around climate change. Employees are another group interested to know what we are doing, broadly around sustainability, not just climate change. (Interviewee #1)

There are interests from various stakeholders for information. Investors are looking at companies to see how well they are managing this climate change issue. And there is also interest from external groups like NGOs. NGOs are following companies' statements and performance on reducing GHG emissions and monitoring whether companies are doing a good job, or need to do more. (Interviewee #3)

We have four stakeholders. Number one is our shareholders. Number two is our customers. Number three is the community that we operate in, and number four is our employees. Then there are NGOs. I probably would say that our reporting is mostly aimed at our community and our shareholders. Our company has a responsibility to show how we respond and how we deal with climate change (Interviewee #4)

At this stage of the interview, each participant was informed about the survey conducted with expert stakeholders and provided with the disclosure index containing the list of information items considered as important in assessing an organisation's climate change-related corporate governance practises (Table 3)<sup>14</sup>. The respondents were informed that many of the information items within the index were missing from their company's annual and sustainability reports. The intention here was to discover whether the respective company representatives were aware of the sorts of expectations such stakeholders have with respect to climate change-related corporate governance information. Four out of six of the interviewees indicated they had considered many of the items on our index, but had elected not to disclose many of the items. Typical responses included:

I am not trying to say we answer every question that everyone wants to know. I am sure there are some gaps. But I believe any gaps are not that significant. (Interviewee #3)

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<sup>14</sup> For telephone interviews, the best practice disclosure index was provided beforehand via e-mail.

I know there is some information missing. But it does not mean that we will not consider it in the process. (Interviewee #4)

We then sought to investigate the reasons why the companies had chosen to *not* disclose items in the index.

### **7.1 Existence of an expectations gap**

In further exploring the lack of disclosure of climate-change corporate governance information, respondents indicated that stakeholders were not interested to know much of the information in the index. This was a typical response:

I can't see there would be a lot of issues people would want to know. People don't want to know all these specific climate change-related corporate governance issues [in the index]. Rather I guess they are more interested in broader climate change issues. (Interviewee# 2)

Respondents argued that stakeholders did not consider such information to be important:

Look, the information needs [of the stakeholders] should also be realistic. Some of them [information items within the best practice index], I believe, are neither important, nor what any stakeholder really would be interested in. (Interviewee #5)

I don't think all this information is necessarily important for stakeholders' decision making. For example, regarding separate board committee, we thought about it. But at the same time thought what a separate board committee is going to do? I would particularly argue that you need some kind of board committee where some of the difficult decisions are getting the right feasibility that would drive your organisation forward. If you look at an organisation like us, carbon is such an important business driver for us, both on the opportunities and the risks that it is an inherent part of what we do and the decisions we make and the way we think.. (Interviewee #4)

Deegan and Rankin (1999) found that an environmental reporting expectations gap arises when the users considered environmental information as more important for their decisions than is perceived by the preparers. The best practice index was developed based on the perception of experts within different stakeholder groups who were considered as users as well as having expertise in relation to what is required to make informed decisions about an organisation's commitment to reducing its impact on climate change. Despite the differences in the backgrounds of the various respondents, there was a high degree of consistency in the perceptions of the various experts in relation to the relevance of particular items of information. The information demands of these stakeholders might be reflective of broader information demands within the community (though, as mentioned earlier, it is to be expected that the demands of the expert user group would exceed the demands of the 'average' member of the community). One of the reasons for the low level of disclosure practices by companies compared to what is considered 'best practice' is that corporate representatives perceive that stakeholders do not want to know all the issues in the index as these are not considered important for their decision making. Consistent with our first proposition (P1), it appears that the notion of an 'expectations gap' offers some explanation for the current lack of climate change-related corporate governance disclosure. Further research could consider the information demands and expectations of a broader range of stakeholders that those used by us to develop our 'best practice' index to see whether, with a broader and perhaps 'less sophisticated' group of stakeholders, their remains an apparent gap in expectations.

### **7.2 Cost-benefit consideration**

Respondents were asked to comment on whether they would disclose the information in the index if it was demonstrated that a broad group of stakeholders wanted such information. There was an overwhelming consensus among the respondents about some information being commercially sensitive, meaning they would not disclose such information even if there was a clear demand for it:

On further reflection, I understand that these issues [items in the index] might be important to many stakeholders and there might be a need on behalf of our stakeholders for us to disclose that information. We have lots of stakeholders all around the world. So you know our reporting is obviously in response to the needs



of our stakeholders. But again, there is always going to be an example of certain information a stakeholder group wants to know that we elect not to report. There is some information which is in-confidence for commercial reasons, therefore it cannot be shared publicly. (Interviewee #1)

There is certain information in your index that we simply cannot disclose. There is some commercially sensitive information that does not project the company in the best possible way. If it is one such area then we would not disclose that information. (Interviewee #5)

When asked what kind of information they considered as confidential, the typical responses were:

In the index you mentioned that stakeholders want us to disclose *the potential financial implications of any climate change policy affecting the organisation*. But whilst this might be useful we do not disclose this information for competitive reasons. We have discussed this in our internal system but decided not to disclose. We cannot disclose, for example, very specific information about the energy consumption by our specific operations because that might be valuable to our competitor, how we are doing certain operations, how much energy it takes. So, because of our competitive concern we cannot necessarily release information. (Interviewee #3)

I think that sometimes declaring certain information can get you into trouble because people can take that data and go do things with it. It might also be misinterpreted. Information about energy consumption and production can be particularly sensitive. (Interviewee #2)

We might be doing some stuff that we do not want to talk about. This might relate to some strategic programs that we might develop in next few years. We probably don't want to put them in reports if we think that it would bring us competitive disadvantage. We don't want our competitors to know that we are doing this. There is also a risk of influencing the market value of the company [disclosing sensitive information publicly]. (Interviewee #4)

The response indicates that companies will avoid providing information if they think it can be used for advantage by competitors, or where potential misrepresentation of particularly sensitive information might be costly to the organisation. This finding is consistent with earlier research reported by Solomon and Lewis (2002). This 'commercially sensitive' argument could be window-dressing for not wanting to disclose 'bad' or 'negative' information about the respective companies' climate change-related corporate governance practices. Prior studies found that Australian companies are generally more likely to disclose 'good' or 'positive' information, rather than 'bad' or 'negative' information (Guthrie and Parker, 1990; Deegan and Gordon, 1996; Deegan et al., 2002). Deegan et al. (2002) argue that companies perceive that providing 'bad' information could attract criticism from media and activists groups, so they are reluctant to disclose such information. Solomon (2010) argues that if companies consider social and environmental disclosure as a marketing tool, then they are unlikely to market themselves by providing unfavourable information on their environmental activities, thereby preferring to focus on the positive aspects only.

Regarding the financial cost of disclosures, respondents indicated that there are some data collection and distribution costs associated with reporting. However, one respondent argued that this cost of disclosure is not that material as it is a part of their 'business as usual' approach:

There are costs associated with reporting, for example, data collection and distribution costs. But would it be a significant cost in relation to all of our other costs? No, it would not be. Is it significant compared to the cost we pay for energy? No, it is not. Clearly it's a small proportion of our energy costs each year. However, there are some significant costs. As you know, it takes quite a lot of work and involves a lot of time and people within the organisation to make sure the information is appropriate and correct. But this cost would not be material, as well as it is certainly not insignificant. (Interviewee #1)

Others, however, perceived that the cost of producing information is material for their decision to disclose information. Respondents argued that in producing annual and sustainability reports, data gathering and processing is usually much higher than its benefits warrant. Respondents indicated that because many of the benefits of reporting are internal (e.g. better data, identification of opportunities for improvement, boosting employee morale), and because these benefits are difficult to quantify (e.g. in building

credibility and transparency within the community and other stakeholders, including shareholders), companies tend to underestimate their importance.

Where it is easy to work out what the cost is, it's sometimes hard to work out what the benefit is. I would say the benefit is somewhat intangible. Disclosing information can help stakeholders to make informed decisions. But it's hard to quantify. We have some understanding of what a cost would be for our reporting system. But we don't really know how to put a dollar value on the benefits. (Interviewee #6)

When asked whether they considered that the cost and benefits of reporting have any impact on their decision to report information, the typical response was:

I think such an analysis does have an impact. Of course for the disclosure we have to make sure that the benefits outweigh the costs. Otherwise why would we disclose? (Interviewee #3)

In summary, the findings here suggest that there are three broad reasons for the non-disclosure of particular climate-change related information. The first is that the perceived costs associated with the data identification, collection and dissemination of climate change-related governance information outweighs the (hard to quantify) benefits of disclosure. Second, the disclosure may significantly impact the strategic competitive advantage of the organisation and, third, that certain disclosures may be misinterpreted and potentially damage the value or reputation of the organisation.

Based on the interview responses we find support for our second proposition (P2) that the low level of disclosure is due to a perception that the costs associated with making disclosures exceeds the perceived benefits.

### **7.3 Notion of accountability**

Another potential reason companies do not disclose particular climate change-related corporate governance information is that the primary aim of companies is to maximise profit for the benefit of their shareholders, rather than accepting a broader accountability to other stakeholders. The interview responses suggested that disclosing commercially sensitive information has a potential impact on the profitability of companies. Thus, corporate representatives projected a shareholder-oriented view by focusing on the commercial return of the companies. The following comments reveal some of the interviewees' thoughts regarding this issue:

We have to balance commercial sensitivity. The company can only report what is in the best interests of the shareholders and we have commercial information that needs to be protected. Commercial profit is one aspect which is often forgotten when people ask for information. If stakeholders have all the information [in the index], and if they approach us with those needs, we would consider to respond accordingly and on most occasions, if it's not commercially sensitive, then we simply provide this information. (Interviewee #1)

Shareholders, especially institutional shareholders, want us to make commercially sensible decisions. You know we are not a philanthropic institution. A lot of decisions that we take are based on the business case. So when we make a decision to disclose information we have to make sure that shareholders' interests are not compromised. We cannot disclose information that might have a negative impact on our commercial return. Disclosure of confidential and commercially sensitive information may not be necessarily beneficial to the shareholders. (Interviewee 4)

The above statements emphasise that the managers' decision whether to disclose information is often based on an 'economic' rationale rather than a broader accountability towards a wider stakeholder audience. However, demands for transparency often relate to social and environmental matters as opposed to commercial issues (Crane and Matten, 2007). Avoiding the disclosure of commercially sensitive information might protect the interests of the shareholders, but it is very difficult to envisage stakeholder accountability being established in a situation where managers have such a concern for maximising shareholder value (Cooper and Owen, 2007). A related issue here is that an entity's contribution to climate change impacts stakeholders beyond shareholders: that is, the entity imposes externalities on parties that do not financially benefit (as do the shareholders). Yet, the companies tend to prioritise the interests of shareholders. The best practice disclosures indicate an ideal situation where companies should

disclose information to fulfil all stakeholders' rights to information (Gray et al, 1996). However, by deciding to protect commercially sensitive information, companies are prioritising shareholders' interests. From the views expressed here, it seems reasonable to conclude that the companies' did not feel ethically obliged to report certain information particularly the type of information included within the best practice disclosure index developed in this study. Their positions imply that an economic motivation plays a dominant role relative to the broader issues associated with accountability. Thus, we find support for our third proposition (P3) that a low level of climate change-related corporate governance disclosures by the sample companies is due to a perception by corporate managers that they have limited accountability beyond that which is perceived to be in the interests of shareholders (obligations or duties to report) with respect to providing climate change-related corporate governance information.

#### **7.4 Lack of demand from powerful stakeholders**

In the course of the interviews, respondents identified several stakeholder groups who they believed were interested in climate change-related governance information. In seeking to further explore this aspect, respondents' were asked about the extent to which the stakeholders influenced their disclosures.

Respondents argued that different stakeholders are powerful in different ways. Among them, investors and government were considered as the most powerful stakeholders and likely to influence disclosures.

It's hard to narrow down that one is more important than the others. They are all different and they have slightly different interests in what we are reporting. Certainly investors are one of the most important stakeholders. What is really important is that investors can understand that we are managing climate change adequately so that they will not feel unsafe with their investment (Interviewee #5)

If investors want to know any information then, broadly speaking, we have to provide it to them because we need funds from them. We need to demonstrate that we can manage our emissions and reduce our emissions as much as possible from the projects that they are investing in. We need to demonstrate that the projects are safe, so they are not going to lose their money. Otherwise, they do not want to invest in our businesses. (Interviewee #3)

While indicating the power of investors in terms of providing resources, the respondents' indicated that investors are perceived to be not particularly interested in improving the climate change-related practices of companies and related disclosures. Rather, they are more interested in profits:

I think investors are certainly powerful stakeholders as they provide funds. If there is any specific query we are happy to provide that information. However in case of commercially sensitive information we cannot even disclose to our investors. I guess investors also understand that. They do not usually require any information that would not be in the best interest of the company or the investors. I think they are more interested in commercial profitability of the business rather than social responsibility types of things. They are more concerned about the business risks we face from climate change, whether it's going to impact profit, or how we can utilise the opportunities to gain profit. (Interviewee #5)

We try to make sure that we consider the concerns of environmental NGOs, our employees, our customers, the community in general who are more interested in our climate change-related performances, as well as the concerns of our investors, who are more interested in our commercial return. So, sometimes there might be some conflicts between which concerns you should prioritise. (Interviewee #4)

The responses suggest that investors are perceived as unlikely to demand information that would have an impact on the commercial profitability of the companies in which they invest. This concern for profitability versus concerns for environmental responsibility (Oliver, 1991) has an influence on corporations' business practices, including reporting practices.

Another perceived powerful stakeholder group with regards to influencing disclosure is government because of their potential impact on issues such as legal compliance:

Governments are obviously a very important stakeholder. All kinds of governments including state, federal and even local. If you have a legal obligation then government have power to make you report. If government wants any information we provide them that. (Interviewee #2)

However, the following response suggests that at present companies do not perceive a great deal of pressure from the government because of the lack of current regulatory requirements pertaining to climate change-related corporate governance disclosures:

[Not exactly] I don't see it [government] as providing much pressure. We have constant engagement with the government and it is more like an ongoing discussion around policy development, around mechanics of reporting in relation to climate change. I don't think we feel any pressure. Government sometimes asks information like 'do you have information on the emissions impact of your solar project, or do you have actual information around that'. But there is not that much pressure on the way we report. Our climate change-related reporting in annual and sustainability reports is totally voluntary. There is no legal obligation for us to report on our climate change-related governance practices. (Interviewee #4)

While companies do not perceive pressure from the government right now, there was a consensus about the future regulatory environment in relation to climate change-related business practices. Respondents suggested that government regulation would be the biggest influence in future periods for their climate change-related governance practices:

I think given where government policies are heading there is potential for the government policies to have a big impact on businesses. Now we are operating in a more voluntary environment. And it will change as we move to a more regulated environment [such as price on carbon, taxes, and international trading on carbon]. (Interviewee #4)

Cowan and Deegan (2011) argued that although it is likely that the implementation of regulations like the NGER Act 2007 and the proposed Carbon Pollution Reduction Scheme may increase voluntary emissions disclosure in annual reports and other media, it is similarly likely that such disclosures will continue to be incomplete and inconsistent. When asked how respondents perceived that the future regulatory environment might affect company's reporting practices, the following perception emerged (which was reflective of the argument also made by Cowan and Deegan, 2011):

I do not believe that our voluntary reporting practices will be changed much because of government regulation. We are already disclosing our emissions publicly, and doing compliance reporting as well. (Interviewee #5)

Other stakeholder groups considered as powerful included the 'community' in general, employees, customers, and NGOs. The following comment is reflective of this view:

Community is the one group who can stop us going ahead and expanding into new projects through the *licence to grow, or license to operate*. We also focus on employee engagement. Employees have certainly been taking a lot of interest in what we are doing. We have engagement programs to share our ideas, to make sure employees know what they are doing. Customers are probably the one we listen to more because at the end of the day they pay for everything. So we make sure to do what makes them happy. And that's probably where we focus more and more to meet the customer needs. So I think they are all powerful but in different ways. ...and then there are NGO groups that are interested. We have received a lot of queries from environmental NGOs, especially when government policy gets released. There is always a request for more information from NGOs for our strategic positioning towards climate change. But it's hard to say one is really more important than the other. (Interviewee #4)

Based on the above responses by the corporate representatives, it appears that companies perceived that the community is a powerful stakeholder because without communities' approval they cannot gain a 'community license to operate'. Other powerful stakeholder groups are employees and customers who are interested in organisations' climate change-related business practices. NGOs are another interested group. However, the interviewee responses suggest that the stakeholders considered as powerful do not seek more information than already provided:

No, we don't feel any real pressure. I don't think their influence is great. There haven't been any NGOs or any consumer groups or communities coming to us and complaining that we are not doing enough in terms of climate change reporting. We have no pressure from our stakeholders that we need to disclose more on climate change issues. (Interviewee #4)

I will not necessarily say we feel pressure to disclose more information from our stakeholders. We have never received any complaint that we are not working enough or not disclosing enough on climate change. We believe that there is value in us providing information as we can have better relations with our stakeholders and they will have a better view of our company if we make information available. But our stakeholders do not seek more information than we already disclose. (Interviewee #3)

I would say in terms of our stakeholders such as environmental NGOs, or consumer groups, I am not aware that many of them are actively seeking further information about our performance. So I wouldn't say that we have got environmental NGOs coming to see us and say there is particular information they would like to know. And it's not that we feel any pressure for this public disclosure. (Interviewee #2)

Prior literature found that because of the demand from the powerful stakeholder groups such as investors, NGOs, and community in general, there was a change in companies reporting of some specific aspects of social and environmental performance (Deegan and Blomquist, 2006; Epstein and Freedman, 1994; Tilt, 1994). Thus, the influence of the powerful stakeholder groups can potentially bring change to organisation's corporate practices. However, although considered as powerful, corporate respondents had not perceived any great pressure from their key stakeholders such as government, investors, NGOs, and the community in general to disclose more information in relation to climate change-related corporate governance practices. We find support for our proposition (P4) that a low level of climate change-related corporate governance disclosures by the sample companies is due to a perception by corporate managers that those stakeholders considered as powerful in influencing the operations of the entity do not demand or seek such disclosures.

## **7.5 Other reasons for low levels of disclosure**

While we find support for the four proposed reasons for limited disclosure of climate change-related corporate governance information, our interviewees also provided a number of other reasons that potentially limit the extent of disclosure. Keeping the respondent companies concerns to maintain competitive advantage (and protect sensitive information) in the foreground, additional explanations for the limited disclosures relate to a central theme of "communication" (i.e., how much, how, and what information to communicate to stakeholders). In relation to *how much* information to communicate, respondents emphasised the need to keep annual and sustainability reports as brief and concise as possible. As stated by respondents:

We do not seek to make our sustainability reports a fully comprehensive document that would meet the need of every potential stakeholder because it would be 1000 pages and therefore, it would be less useful because there would be too much information. (Interviewee #1)

For some of the information, particularly within the annual and sustainability reports, we always get the battle to try to keep them as short and concise as possible. The general feedback we are getting is that the shorter the better. So, sometimes it's not possible to include all information in annual or sustainability reports. (Interviewee #5)

In terms of *how* and *what* information to disclose to stakeholders, the interviewees downplayed the usefulness of the annual and sustainability reports, indicating that there are other ways to communicate with stakeholders. This stands in contrast to the significance regularly attributed to annual and sustainability reports as a primary communication source of information for users. Respondents indicated that different ways or forms of reporting may be chosen to meet the differing information needs of different stakeholders:

There are many ways of providing such information. Annual reports are the lowest means of communication when it comes to meeting information needs. When we have a specific information requirement from stakeholders, we try to meet that request in the most efficient and effective way possible. So, you know, if you

only look at one element of our communication, annual and sustainability reports are a pretty blunt instrument. (Interviewee #1)

These findings support recent studies that emphasise the increasing importance and potentiality of reporting via other media, such as online communications and websites, (Frost, Jones AND Van der Laan, 2005; Lodhia, 2006), which make information more readily accessible and provide the opportunity for two-way interaction between participants (Gallhofer et al. 2006).

These interview findings suggest that explanations for the limited annual and sustainability report disclosures may also be linked to societal and technological changes; there are new and readily accepted forms of disclosure that are more efficient and effective in communicating with various stakeholders and mutually beneficial to providers and users.

## 8. CONCLUSION

The first stage of this study investigates the types of information different groups of stakeholders believe to be useful in assessing the risks and opportunities companies face in relation to climate change. We conducted an online survey to explore experts' opinions as to the importance and relevance of issues identified in a disclosure index constructed by Haque and Deegan (2010). The disclosure index was developed by Haque and Deegan (2010) through synthesising a number of indexes and documents identifying perceived best practices for climate change-related corporate governance practices. No external expert validation was undertaken by Haque and Deegan (2010). Feedback provided by expert respondents in this study culminated in a revised climate change-related corporate governance disclosure index that incorporated six additional issues, with the final index comprising 31 issues under eight general categories.

The potential value of a 'best practice' disclosure index is that it provides a contemporary and singular point of reference to evaluate climate change-related corporate governance disclosures. While we would acknowledge that organisations would not necessarily be expected to disclose all items in our index, we believe that disclosing more of these items will enable users to make a more informed assessment of what the entity is doing to address climate change. Therefore our index provides a measure of disclosure quality validated by a group of experts. Because of the growing significance of climate change, our disclosure index will also be of relevance to organisations seeking to evaluate corporate disclosures. For example, organisations such as the Association of Chartered Certified Accountants, which has an annual *Australian Sustainability Reporting Award* (the ACCA award also is operated in a number of other countries), could incorporate the index into their judging criteria. Further, industry bodies could also consider this index when developing their sustainability-related codes of conduct, which typically include a disclosure component<sup>15</sup>.

The findings of the survey in the first stage of this study also support the suggestion that Australian companies' disclosure practices (found in Haque and Deegan, 2010) fall short of possible 'best practice' given that the majority of the companies in our sample disclose fewer than half of the items in the index. While we acknowledge that our sample may not be representative of many Australian organisations, given the nature of the organisations in the sample (large and energy-intensive), we consider that they would be more likely to disclose than organisations that are not so energy intensive. With this in mind, stage two of this study explored the potential reasons for low levels of disclosure by undertaking interviews with senior executives of a number of Australian publicly-listed companies. The interview responses suggest that: the existence of an expectations gap; the perceived costs of providing certain information; a limited acknowledgement by managers of an accountability in relation to climate change; and a perceived lack of demand from powerful stakeholders for climate change-related information, either singly or in combination, appear to contribute to the apparent lack of climate change-related corporate governance disclosures within the Australian context. The interview responses also suggest other factors

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<sup>15</sup> For example, within Australia, the property industry, minerals industry, energy sector, and chemicals industry have all developed sustainability-related codes of conduct that include reporting requirements for signatories.

might also be responsible for the current lack of disclosures, including companies' perception that there are other, more effective ways than the annual and sustainability reports to communicate with stakeholders. They also believe they are preventing user information overload by keeping annual and sustainability reports short and concise.

Reflecting the potential existence of an expectations gap, interviewees believed that disclosing some of the information items from the index was not particularly important for users' decision making. Information would be disclosed if the companies were aware of the importance of the information required by their stakeholders, unless it was deemed 'commercially sensitive'. Perceptions of commercial sensitivity appeared to be one of the major constraining factors. Because of their intangible nature, companies tend to underestimate the benefits of disclosure. In considering the likely costs associated with disclosing information (due to its commercial sensitivity) corporate managers appeared to be advancing the interests of shareholders over and above the interests of other stakeholder groups (who arguably have a right-to-know about an organisation's climate change-related governance structures). For stakeholder accountability to be established, a less 'economic' focus needs to be embraced by the companies.

The interview data also reveals that, due to a lack of demand from powerful stakeholders, companies are not motivated to disclose a great deal of climate change-related corporate governance information. That is, stakeholders were not perceived to be likely to punish organisations economically if particular climate change-related information was not disclosed. Therefore, if particular stakeholders desire such information, it is incumbent upon them to indicate clearly to the company that such information is expected. Otherwise, management might continue to perceive a lack of demand for such disclosures.

This second stage of this study suggests that there is a potential need for more stakeholder-company engagement to ensure that company managers are aware of issues of importance to stakeholders, as well as to assist users in determining what information is reasonable to expect, given the pressures and constraints under which corporations operate (Deegan and Rankin, 1999). The findings also suggest that the powerful stakeholder groups must act and put pressure on Australian companies to disclose information, including commercially sensitive information. In this regard, consider the case of Nike. In the 1990s, Nike refused to disclose the identity and location of their suppliers because of perceptions about it being commercially sensitive information that could be exploited by their competitors (Crane and Matten, 2007). Yet, concerns from powerful stakeholder groups ultimately led to pressure being exerted on Nike to disclose this information, and it ultimately agreed to do so (Crane and Matten, 2007).

While the reasons for the current lack of climate change-related corporate governance disclosures are identified, the lack of disclosures will continue if disclosure practices are left to the discretion of management. It could be argued that in the absence of regulation requiring disclosures, companies that do not disclose information might not survive. Solomon (2010) argues that, given recent developments in which environmental, social and governance responsibility and related disclosure practices are being encouraged, stakeholders (especially institutional investors') expectations will change, and these changes can occur quickly. Organisations that are slow to adapt will be left behind. Companies that change their disclosure behaviour accordingly will achieve a competitive advantage. It can be argued, then, that the current scarcity of disclosure may not be sustainable for any length of time, as organisations cannot survive without the support of powerful stakeholder groups.

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## Appendix 1: Respondent profiles

<i>Experts within Different Groups (N %)</i>	<i>Positions</i>	<i>Organisations</i>
<b>Accounting professionals (8, 20.5%)</b>	1. Senior Policy Adviser (devised CPA Australia's policy statement about emissions trading, involved in development of new financial reporting standards for emissions trading)	CPA Australia
	2. Head of corporate social responsibility and sustainability	Anonymous
	3. Partner-climate change and sustainability services, national climate change leader	Ernst and Young
	4. Partner-climate change and sustainability service	Ernst and Young
	5. Policy adviser on corporate regulation (including reporting and assurance frameworks for climate change issues)	CPA Australia
	6. Anonymous	Institute of Chartered Accountants in Australia
	7. Policy adviser	Anonymous
	8. Director, environment and sustainability services	Anonymous
<b>Environmental NGOs (9, 23.1%)</b>	9. Director/Founder, climate change activist group	LIVE (LIVE supports and works with leading environmental groups and other community based climate change action groups to reduce greenhouse gas emissions are reduced)
	10. Integrated Sustainability Services Manager (working with local government)	ICLEI Oceania, Environmental and sustainability NGO
	11. Director of Strategic ideas, Legal advisor- (leads ACF's advocacy on corporate environmental responsibility issues)	Australian Conservation Foundation
	12. Director (has 15 years experience in industry, government and the environment movement developing environmental policies and working in communications, works with State Governments, industry and other organisations on advancing action on climate change)	The Climate Group
	13. Climate and Energy Campaigner (develops and communicates plans, policies and other materials that illustrate how Australia can move from a fossil-fuel to a renewable energy-based society, co-authored several reports whilst at Greenpeace about climate change)	Greenpeace Australia Pacific
	14. Director (working at the community level to address the issues of global warming)	Cool Melbourne
	15. Manager, States and Region program	The Climate Group
	16. Co-ordinator, Climate and Energy Campaign	Greenpeace
<b>Environmental consultancies (3, 7.7%)</b>	17. Anonymous	Anonymous
	18. Associate (sustainability assurance and advice/consultancy)	Banarra
	19. Director	THRIVE Sustainability Services
	20. Director (climate change consultancy) (was	Graeme Pearman

	presented a UN Environment Program Global 500 Award in 1989)	Consulting Pty Ltd.
<b>Government bodies</b> (2, 5.1%)	21. Superintendent, National Climate Centre	Bureau of Meteorology
	22. Anonymous	Anonymous
<b>Institutional investors</b> (5, 12.8 %)	23. Managing Director	Risk Metrics Group, Innovest Strategic Value Advisors
	24. Director (also worked in partnership with Zurich-based Sustainable Asset Management (SAM), established and managed SAM's operations in Australia)	Generation Investment Management
	25. Research Analyst	AMP Capital Investors
	26. Head of Corporate Responsibility and Sustainability	Westpac
	27. CEO, (governance research and engagement service provider)	Regnan
<b>Researchers</b> (9, 23.1%)	28. Emeritus Professor	Griffith University (also President of Australian Conservation Foundation)
	29. Director	ARIES (Research Institute in Education for Sustainability)
	30. Academic (expertise in environmental and sustainability issues)	RMIT University
	31. Professor, Innovation Leader Sustainability	Anonymous
	32. Coordinator, Australian Climate Change Science Program,	CSIRO Marine & Atmospheric Research
	33. Principal Research Scientist, (also Chair of the Joint Scientific Committee of the Geneva-based World Climate Research Programme)	CSIRO Marine & Atmospheric Research
	34. Research Program Leader	Anonymous
	35. Theme Leader - Adaptive Primary Industries, Enterprises and Communities Climate Adaptation Flagship	CSIRO Marine & Atmospheric Research
	36. Anonymous	Anonymous
<b>Others</b> (3, 7.7%)	37. Senior Associate, Climate Change, Renewable Energy Law, Environmental Advisory	Baker & McKenzie
	38. Senior Policy Advisor Sustainability	CHOICE (consumer association)
	39. Group Manager, Environment and Climate Change (held the position of Manager of News Limited's Environment and Climate Change Department since the company first formally began to address environment in 1990)	News Limited
<b>Total (39, 100%)</b>		



## Appendix 2

<b><i>Company</i></b>	<b><i>Position</i></b>
<b>Rio Tinto Coal Australia</b>	<b>Manager, Climate Change, External Relations</b>
<b>Rio Tinto Alcan</b>	<b>Manager, Climate &amp; External Policy</b>
<b>BHP Billiton Group</b>	<b>Group Manager, Climate Change and Energy</b>
<b>BHP Billiton Mitsubishi Coal Alliance</b>	<b>Manager, Climate Change</b>
<b>Origin Energy</b>	<b>Head of Innovation, Retail, Origin Carbon</b>
<b>Santos Limited</b>	<b>Climate Change Analyst, Climate Change &amp; Sustainability</b>

*Note: as indicated within the text, to maintain anonymity interviewee labels 1-5 within the text do not necessarily apply in the order in which the interviewees appear in the appendix.*

## Appendix 3: Interview guide

**(More questions may arise based on the answers provided to the following questions)**

1. What are the policies the company has introduced to its corporate governance practices in response to climate change? For example does the company discuss climate change at the board level? Please describe
2. As I have found in your company's annual reports, your reporting practices in relation to climate change-related governance practices has changed over the years. For example, in annual reports some new information can be found that were absent before, such as ..... Could you please explain what brings about these changes?
3. Could you please identify the stakeholder group who wants to know such information?
4. How often is there engagement with the stakeholders when these reporting needs are considered and in what ways? Please provide details.
5. What are the key climate change issues raised by the stakeholders (if at all)? Does your company respond to all the climate change issues raised by stakeholders?
6. I conducted a survey on different stakeholder groups such as institutional investors, environmental NGOs, government bodies, and found that they want to know many climate change-related governance information such as... As I have found in company's annual reports, and as you mentioned about your governance practices, some of these information are missing ...what is your opinion about this? Could you please explain why this information is not being disclosed?
7. Does the power of a stakeholder have any impact on you decision to report information? Who do you consider as a powerful stakeholder regarding this reporting issue, and why?
8. Does the company feel any pressure to account for its impact on climate change? Who imposes the pressure? How does the company react to the pressure, and what are the actions taken?
9. What is your opinion about the benefits associated with the reporting of climate change-related information, especially climate change-related governance information? Do you think reporting of information brings any benefit for the company? What are the major benefits included in reporting? Please describe.
10. What is your opinion about the costs associated with reporting (preparing and presenting the information)? What are the major costs included in reporting? Please describe.
11. Do the perceived costs and benefits of reporting have any impact on your decision to report information?
12. What factors do you think will be the biggest influences on climate change-related issues, especially reporting issue, in the next five years and why? How do you think this might affect your company's reporting practices?

**Table 1: Aggregated mean responses of all respondents**

GENERAL CATEGORIES	SPECIFIC ISSUES	N	Response (%)*					Mean	Std. Deviation
			5	4	3	2	1		
BOARD OVERSIGHT	BDOV1	39	51.3	35.9	10.3	2.6	0.0	<b>4.3846</b>	.78188
	BDOV2	38	31.6	26.3	31.6	7.9	2.6	<b>3.7895</b>	1.09441
	BDOV3	37	64.9	24.3	8.1	2.7	0.0	<b>4.5405</b>	.76720
SENIOR MANAGEMENT ENGAGEMENT AND RESPONSIBILITY	MNGRES4	39	41.0	33.3	23.1	2.6	0.0	<b>4.1282</b>	.86388
	MNGRES5	39	43.6	35.9	15.4	5.1	0.0	<b>4.0769</b>	1.01007
	MNGRES6	39	17.9	46.2	25.6	7.7	2.6	<b>3.6923</b>	.95018
	MNGRES7	39	41.0	38.5	17.9	2.6	0.0	<b>4.0769</b>	.95655
	MNGRES8	37	35.1	32.4	18.9	10.8	2.7	<b>3.8649</b>	1.10961
EMISSIONS ACCOUNTING	EMSAC9	39	66.7	23.1	7.7	2.6	0.0	<b>4.5385</b>	.75555
	EMSAC10	39	48.7	35.9	12.8	2.6	0.0	<b>4.3077</b>	.79980
	EMSAC11	39	53.8	28.2	15.4	2.6	0.0	<b>4.3333</b>	.83771
	EMSAC12	39	48.7	28.2	15.4	5.1	0.0	<b>4.2051</b>	.92280
	EMSAC13	38	47.4	34.2	13.2	5.3	0.0	<b>4.2368</b>	.88330
	EMSAC14	39	30.8	33.3	28.2	5.1	2.6	<b>3.8462</b>	1.01407
	EMSAC15	38	28.9	47.4	21.1	2.6	0.0	<b>4.0263</b>	.78798
	EMSAC16	39	28.2	35.9	28.2	7.7	0.0	<b>3.8462</b>	.93298
RESEARCH AND DEVELOPMENT	RND17	39	33.3	46.2	12.8	5.1	2.6	<b>4.0256</b>	.95936
	RND18	39	20.5	33.3	30.8	12.8	2.6	<b>3.5641</b>	1.04617
POTENTIAL LIABILITY REDUCTION	POTLBRD19	39	66.7	23.1	5.1	5.1	0.0	<b>4.5128</b>	.82308
REPORTING AND BENCHMARKING	REP BEN20	39	23.1	41.0	33.3	2.6	0.0	<b>3.8462</b>	.81235
	REP BEN21	39	38.5	35.9	23.1	2.6	0.0	<b>4.0026</b>	.85208
CARBON PRICING AND TRADING	CRNPRTRD22	39	17.9	43.6	28.2	5.1	5.1	<b>3.6410</b>	1.01274
	CRNPRTRD23	39	17.9	35.9	30.8	10.3	5.1	<b>3.5128</b>	1.07292
EXTERNAL AFFAIRS	EXAFF24	39	20.5	43.6	23.1	12.8	0.0	<b>3.7179</b>	.94448
	EXAFF25	38	23.1	30.8	30.8	12.8	2.6	<b>3.5897</b>	1.06914

\*1= Unimportant; 3= Important; 5= Very important



**Table 2: Mean responses from respective expert groups**

<i>Mean *</i>							
<i>Specific Issues</i>	<i>Accounting Professional</i>	<i>Environmental NGO</i>	<i>Environmental Consultancy</i>	<i>Government Body</i>	<i>Institutional Investor</i>	<i>Research Org/Researcher</i>	<i>Others</i>
BDOV1	4.3750	4.5556	4.3333	3.5000	4.6000	4.4444	4.0000
BDOV2	3.3750	4.1111	4.6667	3.5000	3.8000	3.7500	3.3333
BDOV3	4.5000	4.5000	4.6667	3.0000	4.0000	4.8889	4.6667
MNGRES4	4.0000	4.4444	4.0000	4.0000	3.6000	4.2222	4.3333
MNGRES5	4.1250	4.1111	4.6667	3.0000	3.6000	4.3333	4.0000
MNGRES6	3.6250	4.1111	3.6667	2.0000	2.8000	4.1111	4.0000
MNGRES7	3.8750	4.2222	4.3333	3.5000	3.6000	4.5556	3.6667
MNGRES8	3.5000	4.3750	4.0000	3.0000	4.0000	3.6667	4.0000
EMSAC9	4.6250	4.5556	4.3333	4.5000	4.2000	4.5556	5.0000
EMSAC10	4.2500	4.1111	4.3333	4.5000	4.0000	4.6667	4.3333
EMSAC11	4.5000	4.5556	4.6667	4.0000	3.4000	4.5556	4.0000
EMSAC12	4.0000	4.4444	4.0000	4.0000	3.6000	4.5556	4.3333
EMSAC13	4.6250	4.4444	4.3333	3.5000	3.8000	4.1111	4.0000
EMSAC14	3.8750	4.1111	3.3333	3.0000	3.6000	4.2222	3.3333
EMSAC15	3.8750	4.3333	3.6667	4.0000	3.8000	4.2222	3.6667
EMSAC16	3.6250	3.8889	4.0000	4.0000	3.2000	4.3333	3.6667
RND17	3.5000	4.0000	4.6667	4.0000	3.8000	4.3333	4.3333
RND18	3.6250	3.8889	2.6667	3.5000	3.0000	3.7778	3.6667
POTLBRD19	4.6250	4.5556	5.0000	4.5000	4.2000	4.3333	4.6667
REPEN20	4.1250	3.7778	3.6667	3.0000	3.6000	4.2222	3.3333
REPEN21	4.3750	4.0000	4.3333	3.0000	3.8000	4.4444	3.6667
CRNPRTRD22	3.7500	3.6667	2.6667	3.0000	3.4000	4.0000	4.0000
CRNPRTRD23	3.3750	3.6667	2.6667	3.5000	3.6000	3.8889	3.0000
EXAFF24	3.7500	3.7778	3.0000	3.5000	3.6000	4.1111	3.3333
EXAFF25	3.3750	3.8889	3.0000	3.5000	3.2000	3.8889	3.5000

\* 1= Unimportant; 3= Important; 5= Very important

**Table 3: Revised index of climate change-related corporate governance disclosures (additions to the original list of 25 issues developed by Haque and Deegan (2010) shown in bold italics)**

General Categories	Specific Issues
<b>BOARD OVERSIGHT</b>	1) organisation has/does not have a board committee with explicit oversight responsibility for environmental affairs.
	2) organisation has/does not have a specific board committee for climate change and greenhouse gas (GHG) affairs.
	3) The Board conducts/does not conduct periodic reviews of climate change performance.
	<b>4) organisation discloses the potential financial implications of any climate change policy affecting the organisation.</b>
<b>SENIOR MANAGEMENT ENGAGEMENT AND RESPONSIBILITY</b>	5) Chairman/CEO articulates the organisation's views on the issue of climate change through publicly available documents such as annual reports, sustainability reports, and websites.
	6) organisation has/does not have an executive risk management team, dealing specifically with GHG issues.
	7) whether senior executives have specific responsibility for relationships with government, the media and the community with a specific focus on climate change issues.
	8) An organisation has/does not have a performance assessment tool to identify current gaps in greenhouse gas management.
	<b>9) The executive officers' and/or senior managers' compensation is/is not linked to attainment of environmental goals.</b>
	10) The executive officers' and/or senior managers' compensation is/is not linked to attainment of GHG targets.
<b>EMISSIONS ACCOUNTING</b>	11) organisation conducts/does not conduct annual inventory of total direct/indirect GHG emissions from operations.
	12) organisation calculates/does not calculate GHG emissions savings and offsets from its projects
	13) organisation has/ has not set an emissions baseline year by which to estimate future GHG emissions trends.
	14) organisation sets/does not set absolute GHG emission reduction targets for facilities and products.
	15) organisation has/does not have third party verification processes for GHG emissions data.
	16) organisation has/does not have a specific policy to purchase and/or develop renewable energy sources.
	17) organisation has/does not have specific requirements for suppliers to reduce greenhouse gas emissions associated with their operations.
	18) organisation has/does not have a policy of providing product information including emissions reduction information to the customers through product labelling.
	<b>19. organisation has/does not have an accredited labelling standard for providing information about the environmental impacts of the products.</b>
<b>RESEARCH AND DEVELOPMENT</b>	20) organisation has/does not have a specific policy to develop energy efficiency by utilising/acquiring low-emission technologies.
	21) organisation has/does not have a policy of investment to accelerate the research and development of low-emissions technologies and support energy efficient projects.
<b>POTENTIAL LIABILITY REDUCTION</b>	22) organisation pursues/does not pursue strategies to minimise exposure to potential regulatory risks and/or physical threats to assets relating to climate change.
	<b>23. organisation pursues/ does not pursue strategies to minimise the possibility of litigation being brought against for its impact on climate change.</b>
<b>REPORTING/ BENCHMARKING</b>	24) organisation has/does not have specific frameworks to benchmark its greenhouse gas emissions against other companies and competitors.
	<b>25. organisation employs/does not employ industry benchmarking standards for reducing GHG emissions.</b>
	26) organisation has/does not have a policy of compliance with Global Reporting Initiatives (GRI) Guidelines or a comparable Triple Bottom Line format (e.g. GHG Protocol) to report its greenhouse gas emissions and trends.
<b>CARBON PRICING AND TRADING</b>	27) organisation has/does not have a policy for trading in regional and/or international emission trading schemes.
	28) organisation has/does not have a policy to assist government and other stakeholders on the design of effective climate change policies such as carbon pricing and/or National Emission Trading Scheme.
<b>EXTERNAL AFFAIRS</b>	29) organisation has/does not have a public policy to support collaborative solutions (e.g. work with the government and other organisations in voluntary emission reduction projects) for climate change.
	30) organisation has/does not have a policy to promote climate friendly behaviour within the community by raising awareness through environmental sustainability education.
	<b>31) disclosure of policy and incidence of climate change-related political lobbying</b>