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CENTER FOR CLIMATE CHANGE LAW

Climate Change Securities Disclosures in Australia

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EXECUTIVE SUMMARY

This working paper looks at the extent to which current securities filings regulations with the Australian securities authorities require (or alternatively, recommend) listed Australian Securities Exchange (**ASX**) entities to disclose climate change risks on the performance of a listed entity. The paper also reviews what in practice is being reported for the 2013 reporting year.

The ASX Corporate Governance Principles and Recommendations which ASX-listed entities are strongly encouraged to adopt are currently under review and a new proposed 3rd edition draft includes a recommendation that ASX-listed entities disclose environmental and social sustainability risks to investors. Further, the Australian Securities Investment Commission has issued guidance that recommends listed entities include in their annual reporting requirements a discussion of environmental and other sustainability risks where those risks could affect the entity's achievement of its financial performance or outcomes disclosed, taking into account the nature and business of the entity.

A review of the 2013 disclosures made in annual reports from a sample of ASX Top 20 listed entities by market capitalization evidence a lack of comprehensive risk identification and discussion which linked climate change risks to business strategy and financial performance. Many of the annual reports reviewed for the purposes of this work paper contained only limited basic information, if any at all, rather than any substantive disclosure on climate change risks and their materiality on existing or future operations and financial performance.

1. BACKGROUND

The Australian Securities and Investments Commission (**ASIC**) is Australia's corporate, markets and financial services regulator. It is an independent Commonwealth Government body and, similar to the U.S. Securities and Exchange Commission (SEC), provides guidance on corporate reporting requirements and monitors compliance of disclosure requirements. In addition, the ASX itself is operated by the ASX Group and its wholly owned subsidiary ASX Compliance Pty Limited is responsible for monitoring and enforcing compliance by ASX-listed entities with ASX operating rules. The ASX operating rules deal with the operation of the market, including access to market, trading rules and monitoring compliance.

Under Australian corporations law,[1] ASX-listed entities are contractually bound to the ASX to comply with its operating rules.

The ASX Corporate Governance Council, convened by the ASX in 2002, brings together a range of different business, shareholder and industry groups to develop and issue principles-based recommendations on the corporate governance practices to be adopted by ASX-listed entities designed to promote investor confidence and assist listed entities to meet stakeholder expectations.[2] The principles and recommendations are known formally as the Corporate Governance Principles and Recommendations (**ASX Principles and Recommendations**) and they apply to all ASX-listed entities through ASX Listing Rule 4.10.3, which requires listed entities to report on an "if not, why not" basis in respect of their compliance with the ASX Principles and Recommendations. In effect, ASX-listed companies are strongly encouraged to adopt the Council's recommended practices but they have some flexibility not to do so, and to explain the reasons for non-compliance in their annual report. Listed entities, amongst other regulated entities, are required to prepare an annual report and accompanying directors' report to shareholders for each financial year under section 314 of the Corporations Act. Annual Reports for ASX-listed entities are filed with the ASX and made publicly available.

The current version of the Council's Principles and Recommendations dated 30 June 2010 (2nd edition with amendments) came into effect on 1 January 2011[3] and are currently under review. A new consultation draft of the 3rd edition of the Principles and Recommendations (**Consultation Draft**) was released in August 2013[4] together with a consultation paper which provides context and commentary to the proposed changes. The current revision is intended to reflect lessons learned from the global financial crisis of 2008 as well as other local and international developments in corporate governance.

[1] *Corporations Act 2001* (Cth) (**Corporations Act**).
[2] Corporate Governance Council, see http://www.asxgroup.com.au/corporate-governance-council.htm.
[3] Corporate Governance Principles and Recommendations with 2010 Amendments, 2nd edition, ASX Corporate Governance Council, June 2010, http://www.asxgroup.com.au/media/cg_marked_up_amendments_30_june_10.pdf.
[4] Consultation Draft: Corporate Governance Principles and Recommendations, 3rd edition, ASX Corporate Governance Council, August 2013, http://www.asxgroup.com.au/media/PDFs/draft-cgc-3rd-edition.pdf; Review of the Corporate Governance Principles and Recommendations: Public Consultation, ASX Corporate Governance Council, August 2013, http://www.asxgroup.com.au/media/PDFs/cgc-3rd-edition-consultation-paper.pdf; Communique: 'Consultation on the proposed third edition of the Corporate Governance Principles and Recommendations', August 2013, http://www.asxgroup.com.au/media/PDFs/CGC_Communique_16_Aug_2013.pdf.

2. DRAFT RECOMMENDATION REGARDING DISCLOSURE OF ENVIRONMENTAL RISKS

Relevant to the issue of climate change disclosures, the Consultation Draft includes a proposed recommendation under revised Principle 7 that ASX-listed entities disclose environmental and social sustainability risks to investors.

> *Principle 7: Recognise and manage risk*
>
> *A listed entity should establish a sound risk management framework and periodically review the effectiveness of that framework.*
>
> *Recommendation 7.4*
>
> *A listed entity should disclose whether, and if so how, it has regard to economic, environmental and social sustainability risks.*

The commentary that follows Recommendation 7.4 refers to the increasing calls globally for the business community to address matters of economic, environmental and social sustainability and the increasing demand from investors, especially institutional investors, for greater transparency on these matters so that they can properly assess investment risk. A similar explanation is given in the Consultation Paper that accompanies the Consultation Draft.[5]

The ASX Council considers it currently premature to mandate listed entities in Australia to adopt "integrated reporting" addressing material financial information and sustainability issues until the international framework for such reporting is much better developed than it currently is. The Consultation Paper explains that the Council believes the international framework for integrated reporting needs to first adequately address issues such as relevance, materiality, timeframe, exclusion of commercially sensitive information and the compliance burden before listed entities can be reasonably expected to adopt integrated reporting.[6]

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[5] Review of the Corporate Governance Principles and Recommendations: Public Consultation, ASX Corporate Governance Council, August 2013, paragraph 85. http://www.asxgroup.com.au/media/PDFs/cgc-3rd-edition-consultation-paper.pdf.

[6] *Id.* at paragraph 88.

Submissions on the consultation draft Principles and Recommendations closed on November 15, 2013. It is intended that the amended Principles and Recommendations will replace the existing 2nd edition Principles and Recommendations in the first full reporting year for a listed entity commencing on or after July 1, 2014.[7]

3. ASIC REGULATORY GUIDE 247

Separate from the ASX Corporate Governance Council's Principles and Recommendations, ASIC published a regulatory guide in March 2013 intended for listed entities relating to what should be provided in an entity's operating and financial review which forms part of its annual reporting requirements: see ASIC Regulatory Guide 247.[8]

By way of background, ASIC Regulatory Guides provide guidance to listed entities on how ASIC interprets the law, explaining when and how ASIC will exercise specific powers under the legislation (primarily the Corporations Act). The ASIC Regulatory Guides include a description of principles underlying ASIC's approach and provide some practical guidance on how listed entities may decide to meet their obligations.[9]

An operating and financial review (**OFR**) forms part of the directors' report section of an annual report. ASIC Regulatory Guide 247 entitled "Effective Disclosure in an Operating and Financial Review" provides guidance to listed entities and their directors in meeting the requirements under section 299A of the Corporations Act (annual directors' report and additional general requirements for listed entities) and – relevant to the risk of climate change impacts – Regulatory Guide 247 provides the following guidance relating to disclosure of environmental risks in an operating and financial review:[10]

> *An OFR should include a discussion of environmental and other sustainability risks where those risks could affect the entity's achievement of its* financial *performance or outcomes disclosed,*

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[7] *Id.* at paragraph 16.
[8] ASIC Regulatory Guide 247 'Effective disclosure in an operating and financial review', Australian Securities and Investments Commission, March 2013. http://www.asic.gov.au/asic/asic.nsf/byheadline/Regulatory+Guide+247+Effective+disclosure+in+an+operating+and+financial+review?openDocument.
[9] ASIC Regulatory Guides, see http://www.asic.gov.au/rg.
[10] ASIC Regulatory Guide 247 'Effective disclosure in an operating and financial review', Australian Securities and Investments Commission, March 2013, paragraphs RG 247.63-RG 247.64. http://www.asic.gov.au/asic/asic.nsf/byheadline/Regulatory+Guide+247+Effective+disclosure+in+an+operating+and+financial+review?openDocument.

taking into account the nature and business of the entity and its business strategy. For example, environmental risks that may affect an entity's achievement of its financial prospects would be more likely for an industrial entity than for a financial services entity.

Each risk that is disclosed should:

(a) be described in its context (e.g. why the risk is important or significant, and its potential impact on the entity's financial prospects);

(b) include any relevant associated analytical comments (e.g. whether the risk is expected to increase or decrease in the foreseeable future); and

(c) where the risk relates to factors within the control of management, specify how these factors will be controlled or managed by the entity.

An OFR complements the financial report provided in an annual report by providing a narrative analysis and discussion on the impact of transactions and other events that have occurred in the financial year as well as an analysis of the business' performance and operations. Underlying drivers of the business' performance as well as significant factors that have impacted the operations, an assessment of its business strategies and future prospects and material business risks are to be discussed. Accordingly, ASIC Regulatory Guide 247 recommends disclosure that includes significant areas of risk or uncertainty, including environmental risks.

4. CURRENT PRACTICE

Market-driven environmental and sustainability reporting is already undertaken to a limited extent amongst the largest ASX-listed companies, particularly those in the energy and resources sector. References to climate change risks to business operations are generally found in the risks section of a company's annual report. A summary of the nature of these disclosures is set out in the table at Appendix A which was drawn from a review of the 2013 annual report disclosures from selected ASX top 20 listed entities by market capitalization.

Generally speaking, where a company did make some reference to climate change impacts on the business operations and performance, it was either an insubstantial treatment of the matter or the company had no direct discussion at all on how climate change risks were being addressed or factored into the management of the company. For example, the BHP Billiton 2013 Annual Report referred to climate variability and the need for the company's operations to take adaptive responses. BHP Billiton did not include much more disclosure beyond this, although compared to the other companies reviewed in Appendix A, the company made relatively more disclosures in this regard (see Appendix A). Some companies made no climate change impact disclosures, or made cross-references to company website materials outside of its annual reporting obligations without much focus on its materiality. Ultimately, an individual company determines the level of details for any environmental disclosure with respect to climate change risks as it is not mandatorily prescribed. Companies may also form varying views about the materiality of potential climate change impacts on their operations and industry.

There exists guidance issued in June 2011 by the Australian Council of Superannuation Investors (**ACSI**) and the Financial Services Council (**FSC**) who represent asset-owners and investment managers respectively which highlight the importance of environment, social and governance factors to the long-term performance of the companies in which they invest. The guide refers in a general sense to the long term, physical effects of climate change such as changes in weather patterns, storm intensity and sea level rise that may put company assets at risk. It lists some 'commonly reported indicators' that investors are said to look for, including "an assessment of the physical risks from climate change" but do not provide any further detail on the methodology, data or level of analysis to be provided.[11]

For the past 6 years, ACSI has reviewed and reported on the sustainability reporting practices of companies listed in Standard & Poor's ASX200 Index which is made up of the largest listed eligible companies by market capitalization on the ASX.

In its 2013 report, it identifies a notable improvement in companies reporting to a level of 'Detailed' or 'Comprehensive' in the 2013 study period (such levels specifically defined in the report), but it remains the case that almost half of the ASX200 companies are still rated at a level of 'No Reporting' or 'Basic Reporting', again with such levels defined by ACSI within its report.[12] The 2013 report also again finds as per previous years, a significant variation between the practices of ASX 100 companies and ASX 200 companies with a correlation between company size and sustainability reporting level – there are a greater number of the larger companies of the ASX 100 making up the 'Comprehensive' and 'Detailed' reporting

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[11] ESG Reporting Guide for Australian Companies: Building the Foundation for Meaningful Reporting, 1st edition, Financial Services Council (FSC) and The Australian Council of Superannuation Investors (ACSI), June 2011. http://www.fsc.org.au/downloads/file/ResearchReportsFile/2011_0725_ESGREPORTINGGUIDEPRINTandPOSTPROOFVersion.pdf.

[12] Corporate Reporting in Australia: Disclosure of sustainability risks among S&P/ASX200 companies, Australian Council of Superannuation Investors (ACSI), May 2013, http://www.acsi.org.au/images/stories/ACSIDocuments/generalresearchpublic/Sustainability%20Reporting%20Journey%202013%20-%20public%20version.pdf.

levels compared to the smaller companies of the ASX101-200 (who make up a greater number of the companies with 'No Reporting' or 'Basic' reporting levels).[13]

For a company to be assessed as reporting on sustainability through its annual report under the ACSI study, it needed to provide some form of reporting as part of the management discussion contained in the full annual report or through a separate section on sustainability. Reporting on environmental issues from a compliance perspective was not considered as sustainability reporting for the purposes of this study, since entities already subject to particular environmental regulation are already legally required to report in respect of its compliance, such as with environmental license and project approval conditions.

5. CONCLUSION

Reporting on sustainability and climate change risks has been on the increase in ASX companies. However, it is noted that information disclosed in the annual report or in an annual sustainability report is only meaningful to stakeholders if it is linked to the company's strategy and outcomes, and companies often fail to make this critical link. ACSI continues to observe many annual reports that state a company's commitment to sustainability policy, whilst providing no indication of their performance against this policy, or providing an indication of the materiality of factors included in such a policy.

The same was observed in the Appendix A company disclosures for 2013 which although may have included a reference to climate change risks on its business operations, did not disclose any meaningful measure of the relative risk, size of impact or how it had been factored into management's corporate strategy, as contemplated in ASIC's regulatory guidance as discussed in Section 3 above.

[13] *Id.* at page 8.

Appendix A: EXAMPLES OF CLIMATE CHANGE DISCLOSURES DURING 2013 REPORTING PERIOD FROM A SAMPLE OF ASX TOP 20 COMPANIES BY MARKET CAPITALIZATION[14]

Company (ASX Code)	**GICS / Sector**	**Source: 2013 Annual Report / standalone Sustainability Report**
BHP Billiton Limited (BHP)	Materials	**BHP Billiton Limited (ASX listing) Annual Report 2013[15]** – Risk factors section 1.7.1 – Operational risks includes possible adverse costs and earnings impact by rising cost or supply interruptions including unavailability of energy, fuel or water due to a variety of reasons, including fluctuations in climate. Sustainability Risks section states physical impacts of climate change on operations is highly uncertain and particular to the geographic circumstances in which the company operates around the world. These may include changes in rainfall patterns, water shortages, rising sea levels, increased storm intensities, higher temperatures – "these effects may adversely impact the productivity and financial performance of our operations." 'Climate change and energy' is a sustainability issue referenced in the Annual Report 2013 and the standalone BHP Billiton Sustainability Report 2013. The sustainability issues identified are given a rating in terms of its significance from a stakeholder perspective and

[14] As at October 14, 2013. Unless otherwise stated, the most recent annual report for the recent full financial reporting year was reviewed which was dated 2012 or 2013 depending on whether the listed entity had a June 30 or December 31 financial year end. In circumstances where an entity had a dual listing on a foreign stock exchange, only the Australian filings with the ASX were reviewed.
[15] http://www.bhpbilliton.com/home/investors/reports/Documents/2013/BHPBillitonAnnualReport2013.pdf.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		the potential impact on the organization as low, medium or high. Two meetings in FY2013 were chaired by the CEO with the Forum on Corporate Responsibility (advisory body) which included discussions about climate change scenarios and adaptation. Sustainability Committee Report contained in the Annual Report 2013's Corporate Governance Statement – states that the Committee spent considerable time considering environment and climate change scenarios. **Sustainability Report 2013**[16] – reference made to its discussion of regulatory, physical and other climate change risks and opportunities in BHP Billiton's 2013 response to the Carbon Disclosure Project (CDP) Investor Request on www.cdp.net.[17] The Sustainability Report's section on water risks and water management refers to climate change likely making patterns and cycles of water flow less predictable, requiring BHP's operations to have adaptive responses. It refers to examples of its Escondida operations in Chile (water scarcity) and Bowen Basin coal operations in Australia (water excess due to above average rainfall) (p 29). No discussion of financial impacts or materiality of climate change impacts on operations.
Origin Energy Limited (ORG)	Energy – gas and oil exploration and production, power	**Annual Report 2013**[18] – No specific discussion on climate change impacts – Operational risks section only contains general statement that "Unintended operating failures or harm to our employees, contractors, environment and local communities may adversely impact the

[16] http://www.bhpbilliton.com/home/investors/reports/Documents/2013/BHPBillitonAnnualReport2013.pdf.
[17] This has not been reviewed for the purpose of this paper.
[18] http://reports.originenergy.com.au/2013/shareholder/downloads-and-links/downloads-of-this-years-reports/.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
	generation, energy retailing	Company achieving its financial prospects." **Sustainability Report 2013**[19] – "Climate change and limiting environmental impacts from energy production and use are core concerns. For example, there is increasing demand from project financiers to understand the social and environmental impacts of their investments in energy projects. The International Energy Agency (IEA) predicts that renewable resources will grow from 20 per cent to represent 31 per cent of electricity generation by 2035. In Australia, there is bipartisan support to reduce carbon emissions by 5 per cent based on 2000 levels by 2020. The challenge involves implementing practical, cost effective and socially acceptable policies." No reference to assessment of climate change impacts or risks relating to temperature variability, etc on business operations.
QBE Insurance Group Limited (QBE)	Insurance	**Half Year Report 2013**[20] **–** No specific discussion of climate change impacts on business, only a reference to higher frequency of catastrophe claims in 2010 and 2011 and Superstorm Sandy in 2012 which impacted the financials of Equator Re (wholly owned captive reinsurer of QBE) which included "divisional retentions and deductibles on a number of divisional catastrophe and per risk excess of loss programs" increasing further in 2013, "causing a reduction in excess of loss income"(p 28).

[19] http://www.originenergy.com.au/files/origin-sustainability-report-2013.pdf.
[20] http://www.group.qbe.com/system/files_force/Default%20Media/2013%20Half%20Year%20Report.pdf?download=1.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		Annual Report 2012[21] – 'Environmental risk management' section in compliance with ASX Corporate Governance Council's Principle 7 (*Recognise and manage risk*) refers to Group Chief Risk Officer's responsibility for "monitoring and managing ongoing risks and opportunities relating to climate change in order to mitigate any adverse effect on QBE's businesses and to protect shareholders' funds. Reports have been provided to the former Audit and Risk Committee" (p 79). Outlook for 2013 – North American Operations – "The devastation caused by Superstorm Sandy on top of several years of volatile weather events is driving the US insurance industry to challenge its approach to risk selection, catastrophe modeling and pricing. The combination of adverse claims experience and the continuing low investment yield environment is supporting the moderate firming of premium rates across most property and certain casualty classes in the US. We expect to see premium rate firming of around 5% across the North American property and casualty business in 2013." No specific reference to climate change risk in the Risks section – reference to "natural or man-made catastrophic events" as a driver of Insurance risk – Mitigation measures include "maintaining historical pricing and claims analysis", "setting a tolerance to concentration risk", "reinsurance", amongst others (p 68).

[21] http://www.group.qbe.com/system/files_force/Default%20Media/QBE_AR12_Web%20Version_0.pdf?download=1.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		QBE's response to Carbon Disclosure Project (CDP) 2012 questionnaire[22] – this is not disclosed in the Annual Report but is cross-referred to at p 79 of the Annual Report. Question 2.1 questionnaire response – Option that best describes QBE's risk management procedures with regard to climate change risks and opportunities: "Integrated into multi-disciplinary company wide risk management processes. Assessment of the implications of climate change is part of a larger risk management framework. … Climate change is integrated into QBE's business strategy … QBE has a Group Committee which monitors and reports on sustainability issues based on information from the individual divisions. There are QBE staff in the divisions that are focused on measuring and managing operational costs and identifying opportunities to increase efficiencies. Consideration of the financial implications of climate change risks and opportunities is built into our review of business processes. Every six months, each division conducts a list of climate change related underwriting initiatives undertaken within the area and a nominated senior manager provides a report to the Group Chief Risk Officer as input to a paper presented to the QBE Group board." Identification of risks to business operations, revenue or expenditure from changes in physical climate parameters, risk driver being "uncertainty of physical risks" with "unknown" timeframe, magnitude of impact "low", likelihood assessed as "about as likely as not".

[22] http://www.group.qbe.com/sites/default/files/Default%20Media/CDP%20questionnaire%202012.pdf.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		Question 5.1(d) – Description of potential financial implications of risk before taking action, methods used to manage this risk and costs associated: “We monitor our aggregate exposures and the amount of reinsurance protection we buy depends upon the estimates of probable maximum loss. These estimates may prove to be incorrect and our aggregate claims may exceed our estimates. In addition, we take into account the projected implications of climate change on the frequency, severity and potential locations of natural catastrophes and on our business in general. Over the last several years, changing weather patterns and climate change may have added to the unpredictability and frequency of natural disasters in certain parts of the world and created additional uncertainty as to future trends and exposures. The international geographic distribution of our business subjects us to catastrophe exposure from natural events occurring in a number of areas throughout the world. The claims experience of catastrophe insurers and reinsurers has historically been characterised as low frequency but high severity in nature. One of the more significant risks is the potential under-estimation of the impact of catastrophic events related to change in weather patterns on us and the insurance industry in general. There is also the operational risk of increased claims costs due to the impact of the climate change scenarios.”
Rio Tinto Limited (RIO)	Materials	**Annual Report 2012**[23] – Operational risks section (p 12) states that Group’s operations are vulnerable to a range of interruptions, not all of which are covered fully by insurance. This includes “Natural disasters and events: Mining, smelting, refining and infrastructure

[23] http://www.riotinto.com/documents/rio_tinto_2012_annual_report.pdf.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		installations are vulnerable to natural events including earthquakes, drought, flood, fire, storm and the possible effects of climate change." Sustainable development section (p 19) reports on the performance of the Group with respect to water use and states: "We are developing post-2013 water targets which focus on the improved management of water within different climatic and environmental settings." Energy product group division's 'Outlook' section (p 29) states: "Under even the most ambitious climate change policy scenarios, Rio Tinto expects demand for energy to increase significantly with future global growth dominated by Asia. …" Reference made to Rio Tinto's Sustainability Committee's activities in upcoming 2013 including "review key risks, associate with … energy, environment and climate change and management's plan for tackling them" (p 77). **Local sustainable development report – Corporate 2012**[24] **–** "We recognise the need to understand and adapt to the physical impacts of climate change, which will affect our operations, particularly through the availability of water and the occurrence of extreme weather events. We believe the global energy and climate challenges are best met by companies, governments and society working together. Energy demand growth will require increased

[24] http://www.riotinto.com/documents/rio_tinto_2012_sustainable_development_report.pdf.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		energy efficiency, and the use of all available energy sources: fossil fuels, nuclear and renewable energy sources. The goal should be to continually improve the cost-security low emissions equation, by fully recognising and addressing the risks involved and benefits achievable. As a capital intensive business, changing our emissions profile and the transition to low-carbon assets and products is a long-term challenge. We have targets to improve the energy- and GHG-intensity of all our operations. New technologies offer step-change opportunities to improve our performance when developing large projects. During this transition, we focus on securing competitively priced energy supply, and influencing policy design. The mitigation of energy security risk could either conflict with or complement climate change risk management, but the two have to be managed simultaneously." Energy section: "We recognise that climate change is occurring and that it is largely caused by human activities. It poses significant risks for a broad range of human and natural systems, and is already affecting them. Climate change will create risks and opportunities for our businesses that will affect shareholder value. It will lead to significant changes in the physical environments in which we operate. Over the longer term, climate change threatens the stability of natural, social, economic and political systems, which risks significantly damaging the prospects for our businesses." Discussion which follows this introduction is in

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		relation to GHG emissions reduction from operations only. No discussion in respect of climate change risks on business operations. Water section (p 1): "Over the past five years, Rio Tinto has experienced some production losses as a result of water-related impacts, for example, storm water flooding our mines. The potential impacts of climate change will bring greater uncertainty to our water supplies and water management into the future. We have developed a number of programmes to help improve our performance, including: • A Group water target that aims to reduce freshwater use per tonne of product by six per cent by 2013 from a 2008 baseline. • A water standard that is audited and sets the minimum expectations for each operation when managing water. As part of the standard, each operation is required to measure water use, to reduce potential impacts on water resources, and to understand current and future water requirements of upstream and downstream stakeholders. They are also required to maintain compliance with government water quality limits for mine discharges. • A water risk review that helps an operation assess its water risk and opportunities. • Long-term water strategies and water management plans for businesses with significant water risk. For our approach to water to succeed, we need good working relationships with those directly or indirectly affected by our businesses, for example indigenous and other land

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		owners, communities, governments, investors, the scientific and financial communities, and employees. We have worked with international organisations committed to sustainable water management, the International Council for Mining and Metals (ICMM), governments and national industry water organisations to support the development of water policy. … We have used the World Business Council for Sustainable Development global water tool to identify which of our operations and projects are located in water scarce environments. Approximately 12 per cent of our freshwater withdrawal is from 25 operations in water scarce environments. …" "Our water target We are targeting a six per cent reduction in our freshwater use per tonne of product between 2008 and 2013. Between 2008 and 2012, our freshwater use per tonne of product has decreased by 3.6 per cent. Businesses have improved water efficiency during the target period through specific programmes, such as improved water metering, and improved methodologies for recovering water from tailings which is then recycled. The decrease in freshwater user per tonne of product also reflects higher production levels, and lower rainfall than in 2011. The Group freshwater use efficiency target is heavily influenced by local climatic conditions, which can result in higher or lower freshwater use independent of efficiencies in core production processes. We are developing post-2013 water targets which focus on

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		improved management of water within different climatic and environmental settings." **It is noted that this more detailed information about how operations have been changed to meet climate change risk has been included in a stand alone sustainable development report which is not cross-referenced in the entity's annual report itself.* **Sustainable Development Report 2012:** [25] Iron Ore Western Australia – (sample only, other local sustainable development reports available on company website) – "The effects of climate change are likely to impact our operations and communities in a variety of ways over time, including more severe cyclones and storm events and changes to rainfall patterns" (p 24). **Our Commitment: sub-section Environment** – published on company website[26] not ASX filing: "Energy and climate change: Rio Tinto is both a user and a producer of energy. We recognise the need to understand and adapt to the physical impacts of climate change, which will affect our operations through the availability of water resources and the occurrence of extreme weather events.

[25] http://www.riotinto.com/ourcommitment/local-sustainable-development-reports-3145.aspx.
[26] http://www.riotinto.com/ourcommitment/environment-4794.aspx.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		We work in an energy-intensive industry, and continue to rely heavily on fossil fuels. However, the majority of our energy now comes from greenhouse gas-friendly hydro and nuclear power. We have set targets to further reduce our greenhouse gas emissions intensity as well as our energy efficiency performance. …"
Santos Limited (STO)	Energy	**Annual Report 2012**[27] – no reference to climate change impacts or risks to business operations. **Sustainability Report 2012**[28] – 'Adapting to Climate Change' section (at p 21): "Climate change is the change in the average pattern of weather over a long time period. Potential risks include rising sea levels, increasing frequency and severity of extreme weather events and changes in local weather. For example, our central Australia operations are likely to experience more days over 40°C. Extreme weather also means greater demand for our products, representing both an opportunity and a challenge to meet potential demand growth and peaks.

[27] http://www.santosannualreport2012.com.au/pdfs/Full_AR.pdf.
[28] http://www.santosannualreport2012.com.au/pdfs/Full_SR.pdf.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		We have adopted the precautionary principle and considered the risks associated with climate change in our business decisions. Climate change is considered in our corporate risk assessments, reflected in our engineering standards and we have adopted mitigation strategies to manage potentially extreme weather events, such as heat stress awareness training provided to all of our employees working in the field.” ‘Integrated Approach’ sub-section of Economic: Managing Risks (p 43): “We adopt an integrated approach to manage risk systematically throughout the company via a series of discrete yet interrelated strategies including: • … • identifying and reviewing risks that affect our business annually, particularly during periods of internal or external change – for example, new acquisitions and climate change scenarios • …” Santos Climate Change Policy effective December 2008 – As part of pursuing strategies that address climate change, Santos’ climate change policy includes the following: “Understand, manage and monitor climate change risk and develop appropriate adaptation strategies for our business.”
Suncorp Group Limited (SUN)	Insurance	**2012/13 Directors’ Report and Financial Statements (i.e. annual report 2013)**[29] – no specific reference to climate change risk to business operations.

[29] http://www.suncorpgroup.com.au/annual-report-2013/assets/pdf/2012-13-suncorp-directors-report-and-financial-statements.pdf.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
Telstra Corporation Limited (TLS)	Telecommunication Services	**Annual Report 2013**[30] – no specific reference to climate change risk to business operations. **Bigger Picture Telstra 2013 Sustainability Reporting Series**[31] **– chapter on Environmental Impact** (similar to sustainability report of other listed entities reviewed) – no specific reference to climate change risk to business operations or physical impacts on infrastructure network.
Westpac Banking Corporation (WBC)	Banks	**Annual Report 2012**[32] – Directors' Report includes section 5 (Environmental Disclosure) – Cross-reference made to Westpac's website for "further details on our environmental performance, including progress against our climate change strategy and details of our emissions profile are available on our website at http://www.westpac.com.au/about-westpac/sustainability-and-community/. **See extract in this box below. No detailed explanation on climate change risks on business operations, only a reference to climate change impacts affecting finance sector investment and lending risks.* **Annual Review and Sustainability Report 2012**[33] – 'Sustainability objective 4' states as follows (at p 21) "Provide products and services to help customers adapt to environmental challenges." No reference to climate change risks on Westpac's own operations, only climate change impacts which impact Westpac's customers and need products and services to manage such environmental challenges.

[30] http://www.telstra.com.au/abouttelstra/download/document/Telstra-Annual-Report-2013.pdf.
[31] http://www.telstra.com.au/abouttelstra/sustainability/reports-and-downloads/.
[32] http://www.westpac.com.au/docs/pdf/aw/ic/2012_Annual_Report.pdf.
[33] http://www.westpac.com.au/docs/pdf/aw/ic/2012_Annual_Review_and_Sustainability_Report.pdf.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		Westpac company website – Sustainability & Community page[34] "Environment: Managing climate risks and building capacity The finance sector is exposed to new climate change-related investment and lending risks across the economy, including: • Physical risk - the direct impacts of increasing weather volatility and changing climatic conditions • Regulatory risk - the impact of government regulation at the global, regional, national or local level • Market and reputational risk - shifting consumer expectations and the ability of business to respond. All of these risks can impact investment value or future earnings. We need to understand these risks within our customer and investment base, model the specific effects on key sectors such as agriculture and tourism, and be prepared both for shifting industry dynamics - which affect the market value of assets - and unpredictable impacts on global markets. On the other hand there are opportunities - which include the financing of clean technologies and new infrastructure, renewable energy and green consumer products, and the emergence of emissions trading.

[34] http://www.westpac.com.au/about-westpac/sustainability-and-community/environment/climate-change/managing-risks-capacity/

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		What we're doing • Working with customers to develop and deliver practical solutions to assist in managing the transition to a low carbon operating environment • Implementing an Environmental, Social and Governance (ESG) risk framework *(link provided)*, incorporating climate change considerations • Embedding potential exposure to climate and environmental change within sectoral, country and company analysis • Managing carbon exposure and risk (*link provided)* within lending and investment activities • Providing ongoing climate change and carbon risk training to key people across the Group, including the Board and Executive Team."
Westfield Group (WDC)	Real Estate – shopping centers	**Annual Report 2012**[35] – cross reference to Sustainability Report 2012 (p 2 of Director's report: Sustainability). **Sustainability Report 2012**[36] – references only to Westpac's impact on the environment (e.g. design modifications put in place to reduce energy consumption in maintaining Westfield's Derby, UK, shopping center's temperature). No reference to climate change risks to business operations.
Wesfarmers Limited (WES)	Food & Staples Retailing	**Annual Report 2013**[37] – reference to new Coles supermarkets at Ipswich and Bundaberg in Queensland which opened two years after they were devastated by cyclone and flood (no

[35] http://cdn.corporate.westfield.com/wp-content/uploads/2013/02/AR12-Group-Financials.pdf.
[36] http://westfield2012.sustainability-report.com.au/sites/westfield2012.sustainability-report.com.au/files/downloads/westfield_sr_2012.pdf.
[37] http://media.corporate-ir.net/media_files/IROL/14/144042/wes/WESFARMERS%20ANNUAL%20REPORT%202013.pdf.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		reference to mitigation/adaptation measures to future climate change risk) (p 24). Reference to Sustainability Report 2013 for more detail which will be published in November 2013 (not reviewed). Reference to its wholly owned Coles supermarkets increasing its sourcing of fresh produce from Australia and its continuing to enter into longer-term contracts with preferred suppliers giving them greater certainty to support future investment (p 55). This may include climate change adaptation measures but has not been expressly stated in the Annual Report. **Sustainability Report 2012**[38] (report for 2013 expected in November 2013) – no specific reference to climate change impacts on business operations.
Woolworths Limited (WOW)	Food & Staples Retailing	**Annual Report 2013**[39] – an identified material business risk includes various "Environmental" risks including "Woolworths is subject to risks from natural disasters and adverse weather conditions that could adversely affect Woolworths results of operations" (p 39). **Corporate Responsibility Report 2012**[40] – No specific reference to climate change risk to business operations, but a reference to Woolworths' reporting "to the Carbon Disclosure

[38] http://westfield2012.sustainability-report.com.au/sites/westfield2012.sustainability-report.com.au/files/downloads/westfield_sr_2012.pdf.
[39] http://www.woolworthslimited.com.au/icms_docs/137198_Annual_Report_2013.pdf.
[40] http://woolworthslimited.com.au/CRReport/2012/our-approach.html. Accessed October 14, 2013. Report for 2013 not yet released on company website at time of review.

Company (ASX Code)	GICS / Sector	Source: 2013 Annual Report / standalone Sustainability Report
		Project (CDP), both on Carbon Disclosure and Water Disclosure. The CDP is an investor driven disclosure initiative enabling companies to report on risk identification and mitigation processes related to climate change and water security.”